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The mechanisms conditioning
doctoral supervision development
in public universities across South Africa

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Supervisor

Prof Sioux McKenna

Declaration

I hereby declare that this thesis is a presentation of my original work, and I am the sole author. This work has not previously been presented for an award at this, or any other, University. All sources are acknowledged as references.

Puleng Motshoane
December 2021

Dedication

I dedicate this PhD to my uncle, **Mr George Medupe Ntoane**.

Acknowledgements

The success of this journey is bestowed on the collective, as it was not an individual journey. I would, therefore, like to express my sincere gratitude to the following people for their support, without which this study would not have been possible. To God, the Almighty, for heavenly wisdom, guidance, strength, and the opportunities He brought along my path.

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To God be the Glory He deserves

Abstract

This study offers a social realist account of how South African public institutions develop emerging supervisors. The study addresses the need for supervision development across South African public higher education universities. The purpose of the study was to answer the question *"What mechanisms condition the development and support of emerging doctoral supervisors across South African public universities?"* To examine this question, analytical dualism was used to separate the roles of the 'people' (agents) from the 'parts' (structure and culture) to examine their interplay. The study was qualitative, and the data was generated through documents, an online survey, and semi-structured interviews. One hundred and eighty-six participants responded to the survey and fifty-four people were interviewed. The participants came from twenty of the twenty-six public higher education universities and represent a large range of disciplines.

The study findings revealed that emerging supervisors were often simply 'thrown into the deep-end' as they had to work out how to supervise by learning from their students and using the experience gained while they were being supervised. This was experienced as highly problematic by the participants who shared this understanding. Secondly, the findings suggest that where there were developmental events in place, some were not well received. For example where those providing the training were not regarded as credible because they lacked the supervision experience or because the interventions were seen to be too ad hoc and generic. There were calls for more discipline-specific interventions and collaborative spaces where emerging supervisors could engage with experienced supervisors rather than being instructed in a generic best-practice of 'how to supervise'.

The findings indicated that the lines between co-supervision and mentoring were often blurred, and both were used as another form of supervision development. Such relationships provided a useful means for emerging supervisors to come to understand the complex pedagogy of postgraduate supervision but were at times constrained by power imbalances. It was evident across the data that supervision is a special form of teaching and needs to be conceptualised at least in part as a pedagogy. Moreover, the issue of institutional differentiation needs to be considered for the sector to achieve its intended goals of increasing doctoral output and to be able to participate fully in the knowledge economy.

Kakaretso

Phuputso ena e fana ka tlaleho ea 'nete ea kahisano ea kamoo litsi tsa Afrika Boroa li ntlafatsang batsamaisi ba ntseng ba hlaha. Phuputso ena e sebetsana le tlhokeho ya ntshetsopele ya bolebedi ho tswa ho diyunibesithing tsa thuto e phahameng tsa setjhaba tsa Aforika Borwa. Sepheo sa phuputso e ne e le ho araba potso e mabapi le "Ke mekhoa efe e behang nts'etsopele le tšehetso ea baokameli ba ntseng ba tsoela pele ho pholletsa le liunivesithi tsa sechaba tsa Afrika Boroa?" E le ho hlahloba potso ena, ho ile ha sebelisoa li-analytical dualism ho arola likarolo tsa "batho" (baemeli) ho "likarolo" (sebopeho le setso) ho hlahloba likamano tsa bona. Thuto e ne e le ea boleng, 'me lintlha li ile tsa hlahisoa ka litokomane, phuputso ea inthaneteng, le lipuisano tse hlophisitsoeng hantle. Barupeluoa ba lekholo le mashome a robeli a metso e tšeletseng ba ile ba arabela phuputsong eo, 'me batho ba 54 ba botsoa. Barupeluoa ba ne ba tsoa liunivesithing tse mashome a mabeli ho tse mashome a mabeli a metso e tšeletseng tsa thuto e phahameng ea sechaba 'me ba emetse mefuta e mengata ea lithuto.

Liphuputso tsa phuputso li senotse hore baokameli ba ntseng ba hlaha hangata ba ne ba 'lahleloa botebong ba pelo kaha ba ne ba lokela ho etsa qeto ea ho laola ka ho ithuta ho liithuti tsa bona le ho sebelisa phihlelo eo ba e fumaneng ha ba ntse ba behiloe leihlo. Phihlelo ena e bile bothata haholo ho barupeluoa ba arolelanang boiphihlelo bona. Taba ea bobeli, liphuputso li fana ka maikutlo a hore ha liketsahalo tsa nts'etsopele li ntse li le teng, tse ling ha lia ka tsa amoheloa hantle, mohlala, hobane ba fanang ka koetliso ba ne ba sa nkoe e le ba ka tšeptjoang hobane ba ne ba se na boiphihlelo ba bolebeli kapa hobane ho ne ho bonahala hore ho na le mehato ea nakoana. . Ho bile le meipiletso ea hore ho be le litšebetso tse khethehileng tsa khalemelo le libaka tse kopanetsoeng moo baokameli ba neng ba ka buisana le baokameli ba nang le phihlelo ho e-na le ho rutoa ka mokhoa o tloaelehileng oa 'ho laola'.

Liphuputso li bonts'itse hore litsela tse pakeng tsa ts'ebelisano-'moho le boeletsi hangata li ne li sa hlaka. Ho feta moo, ka bobeli li ne li sebelisoa e le mofuta o mong oa ntlafatso ea tlhokomelo. Likamano tse joalo li ne li fana ka mokhoa oa bohlokoa bakeng sa baokameli ba ba qalang ho utloisisa thuto e rarahaneng ea bolebeli ba morao-rao empa ka linako tse ling ba ne ba sitisoa ke ho se leka-lekane ha matla. Ho ile ha totobala ho pholletsa le data hore tsamaiso ke mokhoa o ikhethileng oa ho ruta 'me o hloka ho nahanoa bonyane e le mokhoa oa ho ruta. Ho feta moo, taba ea karohano ea litsi e lokela ho shejoa hore lekala le fihlele lipheo tsa lona tse reriloeng tsa ho eketsa tlhahiso ea bongaka le ho kenya letsoho ka botlalo moruong oa tsebo.

Previous Publications

During the course of my research journey, I was lucky enough to benefit from feedback from various individuals and groups and to disseminate the knowledge I was creating as I went along. The following is a list of conference presentations and publications from during my PhD journey. I have also drawn on these in this thesis.

Motshoane, P. & McKenna, S. (2014). More than agency: the multiple mechanisms affecting postgraduate education. In **Bitzer** (Ed). Pushing Boundaries in Postgraduate Supervision. Stellenbosch, Sun Media Publishers

Motshoane, P. (2016). The benefits of being part of a project team: a postgraduate student perspective. Stellenbosch, Sun Media Publishers

Motshoane, P. & McKenna, S. (2021). Crossing the border from candidate to supervisor: The need for appropriate development. Teaching in Higher Education 26(7):1-17.
Edited Book

McMaster, C. Murphy, C. Frick, L and Motshoane, P. (Editors) (2016). The postgraduate study in South Africa: Surviving and Succeeding. Stellenbosch: Sun Media Publishers

Book Reviews

Motshoane, P. (2016). Thomson, P. and Kamler, B. 2016. Detox your writing: Strategies for doctoral researchers. London: Routledge.

Motshoane, P. Muthama, E. & McKenna, S. (2015). Growing the next generation of researchers: A handbook for emerging researchers and their mentors. Holness, L. 2015

Conference presentations
Postgraduate Supervision: 2013. More than agency: the multiple mechanisms affecting postgraduate education
ICDE: March 2015. Supervision of doctoral students: Looking at institutional support
QPR: 2016. More than agency: an analysis of the research supervision development in the South African higher education audit reports.
Postgraduate Supervision: 2017. Challenges and obstacles in attaining ethical clearance for PhD research in the differentiated institutions

List of Acronyms and Abbreviations

ASSAf	Academy of Science South Africa
CEP	Cultural Emergent Properties
CHE	Council for Higher Education
CHET	Council for Higher Education and Training
CREST	Centre for Research on Evaluation Science and Technology
DHET	Department of Higher Education and Training
DST	Department of Science and Technology
EUA	European University Association
HAI	Historically Advantaged Institutions (also known as HWUs)
HBU	Historically Black Universities (also known as HDIs)
HDI	Historically Disadvantaged Institutions (also known as HBUs)
HEIs	Higher Education Institutions
HEMIS	Higher Education Management Information System
HEQSF	Higher Education Qualification Sub-Framework
HESA	Higher Education South Africa
HWU	Historically White Universities (also known as HAIs)
ICPD	International Conference on Professional Doctorates
IDERN	International Doctoral Education Research Network
NDP	National Development Plan
NPHE	National Plan for Higher Education
NQF	National Qualification Framework
NRF	National Research Fund
PEP	Personal Emergent Properties
QPR	Quality Postgraduate Research
SA	South Africa
SANPAD	South Africa-Netherlands Research Programme on Alternatives in Development
SANTRUST	South African-Netherlands Trust
SEP	Structural Emergent Properties
SPS	Strengthening Postgraduate Supervision
TDG	Teaching and Development Grant
UoT	University of Technology

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Chapter 1: Setting the scene of supervision development

The pre-requisite [to supervise] was that I had a PhD (S-Trad32).

1.1. Introduction

Doctoral education and its supervision are in a state of flux. At the same time, postgraduate education is critical in strengthening academic and professional expertise in universities and increasingly beyond, as more and more industries call for doctoral level researchers. Higher education institutions globally play the most significant role in enabling postgraduate research and providing supervision. The 1990s saw a marked global increase of interest in the doctorates from South African universities, science councils and government (Council for Higher Education) (CHE, 2018). Like many countries around the world, South Africa recognised the need for more significant investment in research to boost the country's economic, social, and cultural development, as well as its competitiveness in a global knowledge economy (Academy of Science South Africa) (ASSAf, 2010) National Development Plan (NDP, 2012). The current levels of doctoral throughput in South African universities are generally low, including amongst academic staff who are trying to obtain their own doctoral level qualifications (Isike, 2018).

The ASSAf, (2010) reported a need for a comprehensive understanding of postgraduate education dynamics in South Africa in the face of our poor and racially uneven participation, throughput, and retention numbers. The South African system faces multiple challenges; for example, most doctoral students are part-time with full-time employment, and funding is an issue, amongst many others. The isolation of studying both part-time and at a distance can be both depressing and discouraging (Motshoane, 2016). Postgraduate study is at least in part about meeting the needs of the economy and producing new knowledge and so this was identified in the White Paper of 2013 and various national documents before then as a strategic area for growth in the country. The social needs of the country and the scarcity of public resources make it impossible for our institutions to imitate strategies of our developed counterparts (Muller, 2012). There is thus a need for us to make sense of how doctoral education happens in this country and what might be done to develop it further (Cloete et al., 2015a).

Bak (2011) indicates that "the doctoral degree is a demonstration of proven epistemic credibility" but argues that what is at issue is "how the supervisor should support the student to attain the degree. Supervisors need various skills to learn to supervise long before starting the process (Herman, 2012). As Lategan, (2009) reasons, skilled supervisors are needed who can guide postgraduate candidates to complete their studies successfully but, as various national studies have shown (for example CHE 2009, ASSAf 2010, Cloete et al., 2015a), the quality of supervision remains a challenge and is a key constraint on doctoral education in the country.

This introductory chapter aims to lay the foundations for this thesis as a whole. It introduces the fundamental concept of the doctoral supervision development, which is the main focus of this thesis and underscores its growing importance in higher education.

1.2. Study rationale

The South African public higher education is seen as a significant driver of the knowledge economy and its role in redressing historical racial and gender inequities improves the quality of life of graduates and all of society, which, in turn, benefits from having highly educated citizens (NDP, 2011). Therefore, knowledge is an essential output of higher education, and this demand for high-level knowledge drives the demand for more doctorates. The doctorate itself offers new and significant knowledge, and the doctoral graduate can go on to produce more and higher-level knowledge.

There are however some challenges to this conception of the doctorate as being about providing outputs for the knowledge economy. Higgins, (2014) suggests that this idea then makes it seem that the primary purpose of higher education is to provide skilled labour for the market to ensure economic growth. He argues that this narrow understanding of the university as the producer of goods for the knowledge economy is dangerous because it then silences the other vital roles the university should serve as a public good. Boughey and McKenna, (2021) similarly raise concerns that the focus on the university broadly and the doctorate in particular as being about economic growth can lead to it becoming instrumentalist and reducing the possibilities for the university being a place of creativity and social engagement. Furthermore, the knowledge produced at doctoral level should be good for the public at large, one of the reasons why it accrues a high subsidy from the state. But a focus on immediate economic benefits could even lead to it becoming a public bad, whereby the knowledge produced allows for industrial

plundering of the planet or the development of business models that harm the poor, for example (McKenna, 2021). Most would argue that the doctorate is a prominent place of knowledge creation, but the literature suggests that not all see this as being necessarily about knowledge creation for industry.

The ASSAf, (2010) reported an urgent need for a national drive to grow postgraduate education, which needs to be guided by considerations of how institutional differentiation affects postgraduate education in terms of kinds and quantity of output. Institutional differentiation refers to the different university types in South Africa: traditional universities, universities of technology and comprehensive universities. Differentiation has historically been used to divide institutions along lines of race and such divides continue to plague the system. There was also a division along lines of knowledge with universities being responsible for the development of formative and professional degrees and the offering of postgraduate qualifications and the undertaking of research, while technikons were focused on immediate workplace training through national diplomas, approved by the apartheid state, and were not permitted much by way of postgraduate qualifications and research. I return to the issue of institutional differentiation in more depth in Chapter 2.

In order to achieve its stated goal of 100 doctoral graduates per million per year by 2030, compared with 20 doctoral graduates per million per year in 2010, the South African government set a target of 5000 PhD graduates per year, as compared to 1420 graduates produced in 2010 (NPC, 2012, p. 278). It is of interest to note that the output is now at 3 445 in 2019 (CHE, 2021), eleven years before the set target, which is an indication that the target might be achieved. However, in reaching the set targets, the quality should not be compromised, and questions have been raised in this regard. In 2020, the CHE undertook a national review of the ways in which universities assure the quality of their doctorates. It is expected that the forthcoming national report may raise concerns about the rapid rise in doctoral numbers, given the much slower rise in numbers of potential supervisors.

According to the Higher Education Qualifications Sub-Framework (HEQSF, 2013), which outlines all the higher education qualifications within the National Qualifications Framework, postgraduate qualifications, include postgraduate diplomas, honours, and master's and doctoral degrees. However, only Master's (level 9 on NQF) and Doctoral (level 10 on NQF) education

are subsidised as research outputs, with other NQF levels all funded as teaching outputs. The purpose of the doctorate is stated in the (*Higher Education Qualifications Sub-Framework*, 2013) as:

> A doctorate requires a candidate to research the most advanced academic levels culminating in submitting, assessing, and accepting a thesis. However, candidates may also present peer-reviewed academic articles and papers and, in specific fields, creative work such as artefacts, compositions, public performances and public exhibitions in partial fulfilment of the research requirements. The work must be of a quality to satisfy peer review and merit publication. The degree may be earned through pure discipline-based or multidisciplinary research or applied research. This degree requires a minimum of two years' full-time study, usually after completing a master's degree. A graduate should be able to supervise and evaluate the research of others in the specialisation concerned.

The last part is the most interesting for this study, as will be shown later. Almost all doctorates are registered as traditional doctorates in South Africa and therefore expected to follow the description above, although there is a legislated 'professional doctorate' described thus:

> … provides education and training for a career in the professions and industry and is designed around the development of high-level performance and innovation in a professional context. The research component should comprise at least 60% of the degree. Professional Doctorates may also include appropriate forms of work-integrated learning. The defining characteristic of this qualification is that in addition to the demonstration of high-level research capability it requires the ability to integrate theory with practice through the application of theoretical knowledge to complex problems in a wide range of professional contexts. (*Higher Education Qualifications Sub-Framework*, 2013).

The latter form of the doctorate has been possible within the country for some years, even though it remains uncommon. It is also at level 10 of the NQF with 360 credits, which equates to 3 600 notional hours.

Supervisors are expected to support students in developing studies that meet the descriptions in the HEQSF as quoted above. The dilemma facing many supervisors in this regard is similar

across industrialised countries, as many of the fundamental issues are similar and disciplinary identities are often more potent than national differences (Pearson & Brew, 2002). Certainly, much of the literature on doctoral supervision and supervision development within South Africa echoes that from beyond our borders (for example Manyike, (2017), Cloete et al. (2015a) ASSAf (2010), all highlight the role supervision plays in doctoral education. (Rath, 2008) argues that more in-depth research is required into how supervision development happens and what form presents the most credible models to ensure that supervisors are supported in their professional roles. This study contributes towards such a call.

Despite the need to consider similarities around doctoral education and supervision development (Habib & Morrow, 2007) argue that the country pays minimum attention to the historical legacies and current problems of South Africa's varied and unequal higher educational and research environment. Consequently, this thesis aims to explore the extent to which different institutions develop and support emerging supervisors before they take on the supervision role or as they first do so. I have endeavoured to consider the varied institutional types and histories in my exploration of how supervision development happens in the country and some of the findings do indeed suggest that historical and current institutional structures and cultures play a role in how supervision development plays out.

Mouton (2011, p. 13) notes that in the National Plan for Higher Education, published in February 2001, a number of goals were included under the heading of 'research', for example, there was a specific recommendation to increase the outputs of postgraduate students, especially at master's and doctoral levels. This has thus been a key national goal ever since the demise of apartheid. This study seeks to look more broadly to understand how the various South African public higher education institutions develop and support their emerging supervisors in such a way as to contribute meaningfully to increasing both the number and quality of doctoral graduates.

1.3. Research question

The demand for more doctoral students places pressure on universities to put in place sufficient resources, including the availability of research supervisors and other forms of support (Clarence, 2021). So far, most of the research conducted on doctoral supervision focuses mainly

on the relationship between supervisors and the students and on the problems that are experienced, with far less focus on the institution's responsibility in supporting the supervision process. Alongside research into postgraduate education, several guidebooks aim to support both supervisor and student in this complex pedagogical space see, for example, (Eley & Jennings, 2005); (Kamler & Thomson, 2014) (Lee, 2009) (Murray, 2013); (Phillips & Pugh, 2010) (Thomson & Walker, 2010); (Trafford & Leshem, 2008) (Delamont, Atkinson & Parry, 2005). Several books address the supervision aspect of pedagogy see, for example, (Kamler & Thomson, 2014); (Wisker, 2012); (Lee, 2018); (Manathunga, 2005) (Manathunga, 2007) (Manathunga & Goozée, 2007); (Pearson & Brew, 2002) to mention only a few. In addition to these guidebooks, there are several studies in South Africa that point to doctoral education and the need for the country to increase the number of doctoral graduates (CHE/CREST, 2009); (ASSAf, 2010); HESA, 2012). While this literature (to which I return throughout the study) allow us to understand the complexity of doctoral education and the need to make sense of the supervision relationship and its effects on the doctoral journey, it does not provide much by way of consideration of the role of the university as a social structure. This is an argument which I return to later but for now, it is sufficient to say that this study endeavours to reflect on the supervisor *within* a university, with the understanding that what supervisors can do is conditioned by the contexts in which they work.

Numerous studies have contributed to understanding the challenges facing South African higher education (Bitzer, 2016, p. 285). However, to my knowledge, no direct study has been conducted in South Africa, of how institutions develop emerging supervisors. If we are to attain the ambitious targets set for doctoral outputs, which are both numeric and qualitative, we need to have an understanding as to how the sector prepares its supervisors. This study offers a look at the various approaches being used across the sector.

This research is based on a far larger scale than previous studies that have considered supervision in the country and includes a consideration of the issue of institutional differentiation. This too is an issue I return to (in Chapter 4) but for now, it is worth noting that this study is national in scope. In 2009, Deacon, Osman and Buchler undertook a review of all educational research funded by the National Research Foundation (NRF). They found that 99% of studies were small-scale or case studies. While such studies are undoubtedly important and can offer rich understandings of individual experiences, Deacon et al. (2009) argued that it was problematic that so few studies helped us to understand any aspect of education at a national

level. This study attempts to do just that by looking at supervision development across the whole country.

The phenomenon under study, supervision development in South Africa, is a recently new practice in the country and there is very little research into it at a national level (and I discuss what is available in Chapter 2). Bitzer (2016) specifically calls for future research into how supervision development is facilitated and conducted across institutional types in the country.

This study investigates how various South African higher education institutions develop and support emerging supervisors. Simultaneously, the study aims to better understand the enabling and constraining conditions for the development of supervisors across different institutional types in South African higher education institutions. The study further sought to establish how emerging supervisors experienced these opportunities. In this study context, the terms 'emerging supervisors' is used to refer to those supervisors who have just completed their doctorates and are now expected to supervise at this level. Participants in the data are referred to as both emerging supervisors and supervisors in general for the experienced ones. The research question of the study is:

> *What are the mechanisms that condition postgraduate supervision development across South African public universities?*

The study also has sub-questions which will be discussed in more depth in Chapter 4 in relation to the underpinning social realist theory, and which are:
- What structural mechanisms condition postgraduate supervision development?
- What cultural mechanisms condition postgraduate supervision development?
- What agential mechanisms condition supervision development activities?
- How does postgraduate supervision development emerge from the interplay of structure, culture, and agency?

This study goes beyond describing emerging supervisors' experiences of development opportunities to include the structural and cultural conditions from which they emerge. Good supervision is central to successful graduate research, yet it is a pedagogy that is poorly

understood (Grant, 2003b). In the next section I briefly discuss the research study approach before I turn to a description of the context of the South African higher education landscape.

1.4. Research approach

A number of different structures impact the postgraduate education process. This study argues that these have often been narrowly considered in existing research and I argue for a need for a more wide-ranging understanding of postgraduate supervision in South African public universities. As will unfold in the chapters that follow, this study contends that much of the existing research on postgraduate supervision is guilty of what Archer (1995) terms "upwards conflation" (discussed in detail in Chapter 3.4), where the role of context is absented or minimised, and causal efficacy is only granted to the supervisors and students. Explanations of successful or unsuccessful supervision then seem to focus on the supervisor and student and their relationship, with scant consideration of how this relationship occurs within a national, institutional, and disciplinary context which conditions how it plays out. Previous research on doctoral supervision often seems to place all the explanation of what happens in the supervision process in the hands of the 'people' (supervisor and student).

While this study concludes that the existing research offers a sophisticated picture of the roles played by these people and the impact of their emotions and personalities, I come to argue that, in focusing on the 'people', the literature often fails to consider the role of the 'parts' (Archer, 1995). Much of the research on doctoral education, postgraduate supervision and supervision development barely mentions the structure and cultural context of institutional ethos and research culture. It was in response to this need for research that considered the roles that structure and culture play in doctoral education and supervision development that I drew on the work of social realist, Margaret Archer (which I discuss in detail in Chapter 3.3).

The study was predominantly qualitative, and the data were generated through institutional documents, an open-ended online survey, and semi-structured interviews with supervisors at twenty South African higher education institutions. The survey yielded 186 responses, while 54 participants were interviewed from across institutional types and disciplines. Three main themes emerged from the data analysis, and these are offered in Chapters 5, 6 and 7.

1.5. Study context

As indicated, the study context is the South African higher education system, which was fragmented and developed to serve the racist ideology of apartheid. The history of apartheid and coloniality has culturally and structurally conditioned South African universities. Technikons, for example, were developed to play specific skills development roles (Garraway & Winberg, 2019), and Afrikaans medium institutions were structured to reproduce the ideologies of nationalism (Bunting, 2013). However, the historically disadvantaged institutions bore the brunt of apartheid thinking because they were denied a range of material resources (Boughey & McKenna, 2012).

Supervision capacity and the development of a research ethos were, accordingly, not part of the practice found in historically disadvantaged institutions until recently. Research by Boughey and McKenna, (2012) suggests that such capacity has not yet been sufficiently developed to redress these structural inequities. "South African universities are highly differentiated in knowledge production and capacity is measured by such indicators as master's and doctoral enrolments and graduates, proportion of staff with doctorates, proportion of PhD graduates to permanent staff and accredited publication output" (Molla & Cuthbert, 2016, p10).

The 1997, White Paper 3 outlined the framework for change; that is, it was indicated that the higher education system must be planned, governed, and funded as a single national coordinated system (Department of Education [DOE], 1997) in ways that would redress the stark divides of the past. There were advantaged (historically White) and disadvantaged (historically Black) institutions when apartheid ended and the distinctions between them were enormous. Historically White Universities (HWUs) enjoyed significant freedoms in terms of employing staff, determining programmes and syllabus content, and engaging in research (Bunting, 2002). They also received far greater funds per capita than their disadvantaged counterparts. Furthermore, they were able to spend and invest these funds as they saw fit. In contrast, historically Black universities (HBUs) endured state interference and were unable to retain any of their meagre funds at the end of the year.

The second post-apartheid education minister, Professor Kader Asmal, decided to use mergers of post-secondary institutions across the board to restructure the apartheid landscape. Higher

education institutions had previously comprised of universities, technikons, and specialised vocational colleges of education and nursing (Jansen, 2003). A series of institutional mergers, including between previously advantaged (White) and disadvantaged (Black) universities, were undertaken. These mergers led to the emergence of three types of universities in place of the previous binary division into universities and technikons. The old racist apartheid system of South Africa preconditioned historically disadvantaged universities by means of special planning policies that would categorize them as solely meant for black and socio-economically marginalized communities (Dwayi, 2021).

Some of the current differentiation has been the result of historical legacies that have not been adequately addressed, resulting in a great inequality among universities, some of which still find themselves with inadequate resources and capacity to provide for the basic needs of their students and other stakeholders. Despite the recent implementation of an earmarked grant for HBUs, these universities often remain understaffed and have failing infrastructure. The university spaces are for the public good and such goods should be dispensed to the advantage of everyone.

The number of institutions decreased from 36 to 23 through incorporations and mergers (CHET 2008). There are now 26 universities after three new comprehensive universities were launched in 2013, two of which were brand new institutions to serve specific geographic regions that did not have a university, one of which is a medical university that had been merged with a university and then de-linked a few years later. These various merger and incorporation processes resulted in South Africa having eleven traditional universities, six universities of technology, and six comprehensive universities. Some forms of differentiation have been policy driven, particularly the categorisation of universities into one of these three types. These institutions are each meant to have different focus areas with traditional universities focused on degrees with a strong postgraduate and research focus. , Universities of technology offer vocational training and students enrolled at these institutions would, in most cases, have been registered for a national diploma. Comprehensive universities offer a combination of the two, diploma and degree courses. Like many former polytechnics in the UK, universities of technology emerged from an amalgamation of several colleges with a focus on professional and vocational education. The extent to which the three institutional types have indeed emerged as having specific characteristics is however debatable, with many researchers pointing out the

overlaps in vision, mission and programme offerings (Garraway & Winberg, 2019; Kraak, 2006; Muthama, 2018).

The White Paper 3 concluded that the "higher education system must be transformed to redress past inequalities, to serve a new social order, to meet pressing national needs and to respond to new realities and opportunities" (DOE, 1997, p. 3). Significant policy and structural changes have had severe implications for postgraduate education as different institutional missions and visions were developed to support different focus areas. It is also important to note that some traditional universities did not undergo mergers at all, with the argument that such universities produced the bulk of the research output for the country and should not be disrupted by the challenges of mergers. This resulted in some historically White universities being untouched by the process designed to restructure the apartheid landscape. Despite the attempts to redress and rearrange the sector, Molla and Cuthbert (2016, p. 10) argue that "South African universities are differently positioned in terms of material resources, historical legacies, and critical mass of qualified staff to supervise doctoral students and undertake quality research". Despite two decades of democracy and the use of mergers to restructure the higher education sector, the histories of the universities remain very much in evidence and continue to have a bearing on the offering of postgraduate education.

Having a differentiated higher education system is generally understood as necessary for "widening participation and increasing user choice [and] attaining competitive excellence in-country or across countries and making targeted contributions to national and regional development" (Singh, 2008, p. 245) . Badsha and Cloete, (2011) report that a broad spectrum of the South African higher education community accepted differentiation as a strategy to bring greater diversity and fitness for purpose into the system. However, Singh (2008) indicates that contestations about the forms and benefits of differentiation abound and may be more acute in developing countries like South Africa. Singh notes that institutional differentiation in South Africa is made more complicated by the contextual conditionalities of our past. While problematic hierarchies of institutions – where a particular institutional type is seen to hold higher or lower status – are an international phenomenon, and we can thus assume "a greater socio-political edge in a country like South Africa, given its history of structural inequality and racial profiling" (Singh, 2008, p. 247).

Such groupings of institutions within a type are thus clustered around qualifications offered and purpose. In University World News (2008), Gibbon notes, for example, that research is conducted in universities of technology in applied fields, and while the number of students in postgraduate programmes in universities of technology (UoTs) are growing rapidly, they remain small within the sector as a whole, and research output is low. The ASSAf study that reported that in 2007, 80% of all doctoral graduates were produced by traditional universities, with only 20% coming from comprehensives and UoTs collectively (ASSAf, 2010). The following table made up from statistics provided on an annual basis by the Council on Higher Education (CHE 2013, 2014, 2021) shows the growth rate of percentage of the student body who are postgraduate for each institutional type.

Table 1.1: Percentage of student body that is Postgraduate (postgraduate diploma, honours, master's, and doctoral level)

	2010	2019
Universities of Technology	3%	5%
Comprehensive Universities	10%	14%
Traditional Universities	27%	26%
UNISA (distance education)	11%	13%

Over this same period (2010 to 2019), the student body (postgraduate and undergraduate) grew by 17%. These institutions were thus having to manage multiple changes simultaneously. They were grappling with increasing numbers of more diverse students, mergers and new institutional identities, new policies related to institutional types, and the demands to offer postgraduate studies and produce research even in cases where this had historically not been part of their institutional mandate. Each of these institutional types has its history and occupies its place in the current higher education landscape. The institutional history is undoubtedly one of the many structures that affects how postgraduate supervision plays out and how supervision development is conceptualised and implemented.

Institutional differentiation has only been weakly steered through enrolment planning, rather than through a decree as to which programmes can be offered or instructions as to where the institution should focus on growth. This lack of firm management by the Department of Education (later named the Department of Higher Education and Training when it split from

the ministry overseeing the national schooling system) was coupled with a relatively blunt funding formula that makes little distinction between institutional types. Aside from the recent and small allocation of earmarked 'Historically Disadvantaged Institution Grant' and a few other earmarked grants, all universities are funded through the same formula which is based on a complex calculation of student enrolments, graduations and research output. This funding formula privileges postgraduate education and research publications and so it is unsurprising that all institutional types have focused on building capacity in these areas (Boughey & McKenna, 2021).

Government funding of research at universities thus takes place through the annual block grant, which includes the research output formula Ministry of Education. New Funding Framework, (NFF) (2004). Master's and doctoral degrees are the only qualifications funded across the 'teaching input' and 'research output' funding categories (with all other qualifications being funded through 'teaching input' and 'teaching output'). This structure of postgraduate funding suggests the dual nature of master's and doctorates as comprising both research and teaching – an issue I return to later in the thesis.

The funding formula suggests that the doctorate takes three years and funding is allocated accordingly, even though most countries offer the doctorate over four years, full-time. Moreover, those four years are on top of solid schooling and university foundations, which is often not the case in the South African context considering the past injustices (McKenna, 2019). Mouton (2011) clarifies the argument by stating that the average time to completion for the South African doctorate is 4.8 years, though a substantial 13% of all doctoral graduates take more than six years to complete their studies. He explains that the funding timeframe of three years is unreasonable, especially considering that the typical South African doctoral candidate is mature and studying part-time alongside a full-time job. He further argued that even international candidates, who as a category often study full-time, generally finish their studies in four years or more (Mouton, 2011). In South Africa, there was no funding that distinguishes between full-time and part-time students. Until recently, the Higher Education Management Information System (HEMIS) also did not distinguish between full-time and part-time students at doctoral level.

The South African funding framework can also be argued to be problematic in the way it fails to acknowledge the extent to which some universities lack physical infrastructure for research, research capacity among its staff, or a culture of research. The formula treats all universities equally in ways that are arguably unjust (Moyo, 2018), although there has been a strong resistance to firmer differentiation (through a differentiated funding formula for example) because this was seen to possibly reinforce the differentiation of the past.

The significant funding attached to postgraduate education in the funding formula is intended to drive postgraduate growth but does so in a uniform way that both undermines the development of differentiation and neglects consideration of the past. This funding formula was intended to enable the country to overcome fragmentation, inequality and inefficiency, which are the legacies of our apartheid past (Ministry of Education [MoE], 2004).

For many years, the current framework also seems to have perpetuated the notion that research output is more valuable than other roles of higher education such as teaching and learning and community engagement, as it allocates greater weight to research output than teaching (NFF, 2004). The current framework thus affords more reward to research activities than teaching and community engagement. It was in part, in response to this concern about the valuing of research over teaching in the higher education system, that the earmarked Teaching Development Grant (TDG) was introduced to enhance the poor retention and throughput rates at undergraduate level. However, the TDG has now been merged with the Research Development Grant to form the University Capacity Grant (DHET, 2013). It remains to be seen whether the merger of these earmarked grants and the continued valuing of postgraduate studies and research in the funding formula will have negative consequences for the valuing of teaching, community engagement and other university activities.

The funds allocated according to the number of research master's degrees, doctoral degrees, and accredited research publications that an institution produces each year drive *all* institutions to focus on building capacity in this area, regardless of their history, type and geographical contexts. The decision to develop the 2004 funding formula in this way should be seen as a response to the need to join the international academic community after the apartheid sanctions against the country came to an end, given the emergence of the so-called 'knowledge economy' (Boughey & McKenna, 2021).

The newly democratic South Africa rapidly moved from a focus on social redress and pro-poor policies and processes to a focus on the need for 'high skills' to ensure participation in the 'knowledge economy' with the understanding that this could drive economic growth. System-wide funding incentives that fail to consider differentiation, may however, prove to be counterproductive. Unfortunately, the UoT and the historically disadvantaged universities, which are less able to benefit from a funding formula that privileges postgraduate study and research are also far less able to generate funding from the third-stream income, as they are not producing enough research output to convince the funders. Third-stream income refers to all university income derived from sources other than state subsidy or student tuition fees.

1.6. Doctoral education in South Africa

Under the heading of 'Research', the National Development Plan (Commission, 2013) had several goals, for example, a specific recommendation to increase postgraduate students' outputs, especially at doctoral levels. It was further argued that an increase in research output was needed for the higher education system to meet the country's research and development plan (Commission, 2013). Nevertheless, in their 2009 report on postgraduate education, the CHE and the Centre for Research on Evaluation, Science and Technology's 2010 report on doctoral education (CHE/CREST, 2009) note that South African academics are increasingly burdened with an unrealistically high load of postgraduate students to supervise.

The NDP (2013) also called for the number of masters and PhD students collaborating with partnerships for research, to increase. It further set the goal that by 2030, over 25% of university enrolments should be at the postgraduate level. It also stated that international exchange partnerships should be pursued and encouraged. Furthermore, the NDP enjoined institutions to produce enough doctoral graduates to make up more than 100 doctoral graduates per million by 2030. Considering that only 48% of South African academics hold a doctoral degree (ranging from 13.2% at one of the UoTs to 69.9% at one of the traditional universities), reaching such goals is a challenge. Such institutional discrepancies and general sector capacity issues have severe implications for doctoral education (Cloete et al., 2015a).

Doctoral education and the mobility of doctoral candidates are central to academic staff retention and concerns about brain drain issues. The National Plan for Higher Education (Ministry of Education, 2001) for instance, recommended that institutions increase the recruitment of students from the Southern African Development Community (SADC), especially at the postgraduate level. Sehoole (2011) suggests that one of the reasons for attracting international students might be that South Africa generally uses English as a teaching-learning medium. Mouton (2011)noted that South Africa attracts students from the SADC region and the rest of Africa because it is more affordable than other international institutions. Students from the SADC region have indicated their preference for studying at South African universities (Cloete et al., 2015a). although in recent years this seems to have decreased. However, the 2021 Internationalisation Bill is intended to address this and to continue to grow numbers of international postgraduate students from across the continent studying in South Africa. The pan-African agenda has been greatly tarnished by xenophobia in South Africa, which has at times emerged as violent attacks on Black foreigners (Harris, 2001)The Department of Home Affairs has also made it a challenge for foreign students to get study permits for South Africa, an issue which the 2021 Internationalisation Policy (Department of Home Affairs, 2021) seeks to address.

There are concerns expressed related to the growth in international student numbers in South Africa given that many universities arguably mask the lack of transformation of their student and staff demographics by counting Black foreign individuals within the category 'Black students' and thereby do not address the need to include more South African Black students. Whether the government ensures a consideration of equity concerns by having students from the SADC region is questionable as many of these students are likely to return to their countries upon graduation (Mouton, 2011).

A report on postgraduate education by the CHE and CREST (CHE/CREST, 2009) noted that South African academics are burdened with an unrealistically high load of postgraduate students to supervise. They reported that the number of postgraduate students had more than doubled over the previous fifteen years, while permanent academics had only increased by 40%. The NDP set a target of improving the percentage of academics with doctoral qualifications from 34% to 75% by 2030 to ease the supervision burden (NDP, 2013). Table 1.2 indicates that by 2019, the number of academics with doctorates per university had risen to 48% (CHE, 2021b) which suggests a great increase in potential supervision capacity from the 34% at the

time the National Development Plan was promulgated in 2011, but this increase needs to be considered alongside the far greater increase in postgraduate student numbers.

Table 1.2: Supervision Capacity per University (DHET, 2019)

Traditional Universities	Academic Staff	Academic Staff with Doctorate	% Academics with Doctorate
UP	1224	853	70%
WITS	1204	795	66%
NWU	1575	795	50%
UKZN	1249	768	61%
UCT	1184	738	62%
SU	1181	671	57%
UFS	947	459	48%
UWC	675	404	60%
RU	357	212	59%
UL	615	202	33%
UFH	354	168	47%
Total Trad Uni	10565	6065	57%
Comp Uni	**Total Academic Staff**	**Academic Staff with Doctorate**	**% Academics with Doctorate**
UJ	1330	660	50%
NMU	678	290	43%
UNIVEN	431	185	43%
UNIZULU	319	149	47%
WSU	616	87	14%
Total Comp Uni	3374	1371	41%
Universities of Technology	**Total Academic Staff**	**Academic Staff with Doctorate**	**% Academics with Doctorate**
TUT	928	206	22%
CPUT	776	196	25%
DUT	609	193	32%
CUT	306	99	32%

VUT	378	75	20%
Total UoT	2997	769	26%
UNISA (Distance Comp Uni)	1866	792	42%

In 2019, there were 1622 doctoral candidates enrolled at Universities of Technology, 2961 in Comprehensive Universities (excluding Unisa) and 17 322 in Traditional Universities (CHE, 2021). This suggests that the ratio of possible doctoral supervisors[1] to enrolled students is approximately as follows:

UoT - 2.1 students to 1 supervisor

Comprehensive University - 2.2 students to 1 supervisor

Traditional University - 2.9 students to 1 supervisor

This study moves beyond individual accounts of supervision development to include an in-depth consideration of how the structures and cultures related to supervision development can condition its conceptualisation, implementation, and uptake. This study, therefore, seeks to look across the higher education landscape to include historically advantaged and historically disadvantaged institutions and to include traditional universities, UoTs, and comprehensive universities.

1.7. Thesis overview

This thesis consists of eight further chapters. Following the introduction and expanding on the need for a study investigating supervision development and support, ***Chapter 2*** sets the scene for a deliberation about postgraduate supervision development and takes a look at the different supervision models and approaches to doctoral education. In this chapter, I situate the research within the related literature on supervision development and discuss the theoretical underpinnings of doctoral education, globally and nationally. Doctoral education, current

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[1] This is about potential ratios. As Cloete et al. (2015) indicate, the reality is that supervision loads are very unevenly spread because of disciplinary differences, workload issues and departmental capacity.

practice and the various models that inform successful supervision processes are unpacked. Furthermore, a critical review of the South African higher education landscape is presented in more detail than what is briefly presented here. Finally, the effect of the institutional differentiation aspects on supervision development are discussed.

In *Chapter 3,* the ontological, epistemological, and methodological underpinnings of this research project are articulated. The rationale for selecting critical realism as a meta-theory and social realism as the thesis's substantive theory is provided. Furthermore, the use of analytical dualism as the means of analysing the data and reaching findings is justified. The use of the specific theoretical perspectives within this thesis is explained in this chapter. The chapter concludes with a critique of both critical and social realism and how the theoretical shortcomings were managed.

The methodology of the study is described in *Chapter 4*. The implications of the design and the methods employed are explored. The principles of case study research and the role of theory in research methodology are tackled, with an explanation of the data collection methods and means of analysis, which revisits the notion of analytical dualism outlined in Chapter 3. The study was focused on establishing the enabling and constraining mechanisms from which the study phenomenon of 'supervision development' has emerged. Deciding on an 'intensive research design' (Sayer, 2010a) allowed me to interpret the meanings participants accorded their experiences and then search for generative mechanisms in context. The sections that follow in Chapter 4 present the ways of seeking ethical clearance from participating institutions and ethical issues related to the study, which was a major constraint on this study. The study limitations conclude the chapter.

The results are presented and discussed in the subsequent Chapters 5, 6 and 7. The lack of development opportunities for novice supervisors to develop their supervision practices is the primary focus of *Chapter 5*. I present the results that respond to the issue of *How are emerging supervisors being prepared for the supervision role*? The common thread that ran through participants' narratives discussed in this chapter is an inadequate supervision development before taking on supervision. It is here that the supervisors express their positions and how they navigated through the supervision role without much by way of support. I arrived at several conclusions to make sense of the emerging supervisors' experiences from across institutional

types, while acknowledging the different individual experiences. Unsurprisingly, it became clear that some emerging supervisors relied on their own supervision experience as doctoral candidates, to supervise their students. The issue of workloads and incentives concludes the chapter. The payment of incentives to supervisors was in some cases seen as a beneficial driver of postgraduate education but it also emerged as a concern as it promoted a focus on quantity rather than on quality supervision.

Chapter 6 reports on the available forms of development and how these initiatives were conditioned by their contexts in how development and support was provided for emerging supervisors. The available initiatives reported on in this chapter were in the form of workshops and seminars. Participants preferred the interventions to be discipline-specific (or at least acknowledge the discipline-specific nature of knowledge making with implications for supervision) rather than generic (with an assumption that there was 'best practice' that could be implemented in any context). There was also a preference for longer-term, as opposed to short-term interventions, some of which were only a half-day, and which were in a few cases seen to be about compliance for human resource training. There was a resistance to what were seen as skills approaches, particularly where the facilitators were not experienced supervisors themselves. Discussions about whether such initiatives should be compulsory or voluntary also emerged and seemed to indicate differences in institutional contexts. I conclude the chapter by addressing the call participants made for safe intellectual spaces where they could share experiences and learn from each other.

Chapter7 presents the third main theme that emerged from the data: co-supervision and mentoring as another site for supervision development. Despite the lines between the two being blurred, I attempted to address them separately in order to consider the implications of each. The data indicated that mentoring happened mostly through co-supervision, although this was not always the case. Emerging supervisors expressed both positive and negative experiences in co-supervision and mentoring relationships and the extent to which these were voluntary seems to have had an impact on the extent to which they were beneficial and not marred by power imbalances. Nonetheless, there was a strong call for mentoring to be institutionalised.

The findings around the available forms of supervision development or lack thereof are synthesised in *Chapter 8*. The extent to which institutional and other structures and cultures conditioned the forms they took is reflected upon, including the relevance of institutional

differentiation in the kinds of initiatives on offer. This chapter concludes the study and unpacks the interplay between structure, culture, and agency and the generative mechanisms that conditioned the different events at each institution. This thesis ends with recommendations for further research together with my own reflections on the doctoral journey.

Chapter 2: Context of the study

... to consider alternate models of supervision (S-CU18).

2.1   Introduction

This chapter addresses a few of the debates in the literature around postgraduate supervision, whereby I argue that postgraduate supervision is a complex pedagogy and needs to be conceptualised as such. The chapter starts by looking at the history of the doctorate and the different forms thereof. Secondly, it discusses the shifting purpose of the doctorate and how, according to the literature, postgraduate supervision is understood, detailing a few issues related to the funding of the doctorate. Thirdly, it deliberates on the idea of supervision as pedagogy and the different supervision models. The chapter is concluded by discussing the literature that directly engages with the study phenomenon: supervision development.

2.2   History of the doctorate

In South Africa, Breier and Herman (2017) tracked the history of the South African doctorate to its roots in 1899 at the University of Cape Good Hope, which is today known as the University of Cape Town. Herman, (2012) further explains that doctoral education has only recently begun to receive attention as an area of study, which led to national documents such as the CHE/CREST (2009) report on postgraduate education and the ASSAf report on the PhD (ASSAf, 2010) study.

While there are numerous national and institutional differences in how the doctorate is understood, there are also a number of similarities. The Salzburg Principle in the European Union recommends that the goal of doctoral education is to cultivate a research mindset; to nurture flexibility of thought, creativity, and intellectual autonomy through an original, concrete research project (European University Association [EUA], 2010). It further states that "doctoral education is an individual journey, and structures must give support to separate development, and not produce uniformity or predictability" (EUA, 2010, p. 4). The doctoral student is to

conduct independent research and is to benefit from the guidance of, preferably, an experienced supervisor, and the research conducted is to contribute to knowledge creation. Badat (2010) noted the purpose of higher education as knowledge production, dissemination of knowledge and community engagement. Wenneberg (2001) suggests that the purpose of the university is to produce accurate knowledge and educate graduates who have acquired this knowledge with the doctorate being the epitome of such graduate development. Many of the discussions about the role of the university in society thus include characteristics that are of great relevance to the doctorate.

Around the world, the doctorate is the highest formal qualification in the academy. In South Africa, it is at level 10, the highest level of the Higher Education Qualifications Sub-Framework, a portion of the National Qualifications Framework (2012). The research doctorate, typically known as the PhD, is universally acknowledged as representing the 'pinnacle of scholarship' (Gilbert, 2004). Around the world, the most international definition of the doctorate is the idea that it is produces new knowledge (Aitchison, 2009; Trafford & Leshem, 2008). Despite the general agreement that the doctorate is about producing 'new knowledge', there is little wider agreement about the purpose and structure of the doctorate.

While the traditional doctorate (which is by far the most common doctorate in South Africa) cannot include coursework for credit (HEQSF, 2012), the 'taught doctorate' consists of a substantial proportion of coursework and is increasingly offered in the United States of America, the United Kingdom, and various other countries in Europe and further afield (Golde & Walker, 2006). In South Africa, the professional doctorate, which allows for up to 40% of credits awarded for examined coursework or workplace learning (CHE, 2018), has been part of the HEQSF since 2012 but remains a very unusual offering and very few universities offer this.

Traditionally, the primary purpose of the doctorate has been to advance disciplinary knowledge production through training new stewards of the discipline and thus to replenish communities of scholars within universities (Boud & Lee, 2009; Bitzer, 2012). However, there has been a shift as the PhD is now highly regarded in many industries. Archer, (2008) notes that the field of higher education, like any other field, is not static but constantly shifting, evolving, and changing, and so is doctoral education. Industry and employer groups have been calling for a broader skillset for research and related employment in the industry (Pearson & Brew, 2002). Jegede (2021) also affirms that the PhD has evolved and developed into a prestigious and most

desirable academic honour with different universities, countries, and regions of the world adapting their PhDs to suit their needs. The shifting notions of what the doctorate is for and pressures to get students through in minimum time while in this context, means that supervisors are under pressure to improve their practice. Nerad (2010) calls for doctoral programmes to position their students to become mobile and capable of functioning anywhere in the world: as PhDs in business, industry, and non-governmental organisations, and doctoral graduates in the academy.

Furthermore, the massification and internationalisation of doctoral education have resulted in a changing demographic of doctoral candidates worldwide. The doctorate has changed from a small elite endeavour to a strong and growing international enterprise (Danby & Lee, 2012). Similarly, Cloete et al. (2015a) argue that the purpose of the doctorate is much broader than the training of future academics and includes the identification of talent for participation in a knowledge economy. (Park, 2007) distinguishes five broad types of doctorates:

- the traditional research-based PhDs, often referred to as the British model;
- the PhD by publication via a series of peer-reviewed academic papers;
- the taught PhDs, often referred to as the American model;
- professional or work-based PhDs, where the field of study is within a profession rather than an academic discipline; and
- practice-based PhDs typically awarded in the creative and performing arts.

Doctoral degree holders are in demand in knowledge-intensive sectors of the economy and other fields, such as services, public administration, and media (Golde & Walker, 2006). They further argue that Universities, as knowledge-intensive organisations, can be seen to participate in the production of knowledge, the licensing of knowledge workers and economic development. Thus, in essence, the goal of the PhD is to produce a body of knowledge worthy of the degree. But there is a great deal of literature that indicates that an understanding of the doctorate as a product – that is knowledge focused increasingly on industrial issues – is insufficient, because the doctorate is also about the person who graduates with the qualification.

Ward and West (2008) state that becoming a 'Doctor' is a process of becoming an autonomous researcher, a person who can develop, communicate and defend ideas that have grown from

their research. Thus, doctorate holders should be trained through research and yet be capable of embarking on a broad range of careers in rapidly changing industrial contexts, thus making the sectors they join more knowledge-intensive (Jorgensen, 2012). The ability to educate and retain doctorate holders is vital for the sustainability of university research capacity and universities are increasingly having to compete with industry to keep their doctoral graduates as academics. While Kiley, (2011) states that the title 'Doctor' "itself betrays the degree of lineage and points to a position of status in academia", the salaries offered by industry to knowledge makers at this level may tempt them away from university work, especially in contexts such as South Africa.

Cloete and his collaborators (2015a) in their research that reviewed the policies, discourses and data related to doctoral education in South Africa expressed both the need for more doctorates and concerns about the rapid growth. They identified four imperatives that need to be considered as South Africa strives to increase its doctoral graduates. I will draw on multiple sources to consider each of Cloete et al.'s four imperatives of doctoral production in depth and consider some of their implications (2015a).

2.2.1   The Quantity imperative

The first imperative is quantity. This refers to the global and national competition to increase the doctoral output to serve the 'knowledge economy'. There are several policies, both nationally and internationally, which argue for an increase in postgraduate outputs, especially at doctoral level. In the UK, for example, postgraduates have increased proportionately more than undergraduates; between 1996 and 2001, the number of doctorates awarded increased by 38% from 10 214 to 14 115 (Delamont et al., 1997). Likewise, in South Africa, policy documents (for example NDP, 2011; Department of Science and Technology [DST], 2008) have identified the need to increase doctoral output.

Cloete, Mouton, and Sheppard (2015) argue that as societies shift to a situation where the ability to use knowledge for innovation and problem solving is most highly valued, access to the powerful knowledge embodied by the doctoral qualification has become highly prized. The NDP (2011) suggests that a doctorate is a vital indicator of a country's stability and potential for economic growth in the knowledge economy world. Therefore, it is not surprising that from

a base of 1 878 doctoral graduates, the NDP (2011) set a target of 5 000 per year by 2030. While the 2013 output was below that objective at 2 051, there has been significant improvement in 2019 with 3 445 doctorates (CHE, 2021). As indicated in the previous chapter, various national drivers have been put in place to push universities to achieve these ambitious targets, in particular the funding formula which rewards universities for both enrolling and graduating doctoral candidates.

The National Research Foundation's South African PhD Project (2008) is another kind of national driver. This was aimed at significantly increasing the number and diversity of South Africans with research doctorate degrees by providing scholarships at this level. The DST, (2007) also put forward convincing arguments for South Africa to build a knowledge-based economy positioned between developed and developing countries and indicated that the country would need to increase its doctoral production rate by a factor of five over the next ten to twenty years. The ASSAf (2010, p. 15) report on doctoral education concluded that "there is a broad consensus in the science community in South Africa that not enough high-quality PhDs are being produced concerning the country's developmental needs".

South Africa's public higher education institutions differ widely in their capacity to deliver doctoral education, but they are all under the same pressures and incentives to provide this prominent level of knowledge. Thus, the data analysis raises a concern about an instrumentalist understanding of research output in the domain of culture. This in part emerged from the notion of providing incentives for supervision. Some question whether this conception of the doctorate is appropriate, given the local context and ask whether all forms of knowledge and constant economic growth is beneficial for the planet (Boughey & McKenna 2021). There are also suggestions that the correlation between the number of doctoral graduates in a country and a country's economic development might not be causal, and even if it is, it may not be unidirectional (McKenna, 2017). Nonetheless, the dominant conception of the doctorate at a policy level seems to be that this qualification is significant to sustain the knowledge economy (Cloete et al., 2015a).

2.2.2 The Quality imperative

The second imperative that Cloete et al. (2015a) list, is the quality of doctoral graduates and the doctoral process. They raise concerns about the rapid rise in doctoral numbers which have not been entirely met with similar increases in numbers of academics with doctoral qualifications. The current responsibility for quality for all aspects of the doctoral studies process resides with the institution, although this is overseen by the Higher Education Qualifications Committee (CHE, 2018). The 2020/2021 national review of doctorates could be seen as an indication of concern in this regard or simply as the HEQC enacting its mandate (CHE, 2018). I return to the issue of the review shortly.

The ASSAf (2010) and Cloete et al. (2015a) observes that the increase in the ratio of research students relative to the number of academic staff able to supervise is concerning. ASSAf (2010) and Cloete, Mouton and Sheppard (2015a) argue that the quality of the qualifications of academics affects the quality of how they supervise. This suggests that a cycle of good or mediocre quality can emerge. Key to the issue is having enough potential supervisors who have doctorates. Cloete and colleagues (2015a) argue that staff qualifications need to be at a doctoral level to supervise at doctoral level and this is generally implemented, although with a few exceptions, such as in medicine where some highly regarded researchers may not have a PhD but may undertake supervision at this level. They further argue that while the PhD is seen to be a significant contributor to talent for the knowledge economy, it is also significant for improving the university system (Cloete et al., 2015a). Having a significant percentage of staff with doctorates can have an impact on research output.

In South Africa, there is evidence that increased growth and diversity of students leads to a more significant burden on supervisory capacity (Badat, 2010). Cloete and his collaborators (2015a) identified the following areas that need to be considered by the various institutions in their assurance and enhancement of quality:

- the quality of the candidate;
- the quality of the doctoral programme;
- the quality of the supervisor;
- the quality of the doctoral graduate at exit level;

- the quality of the thesis; and

- the quality of any outputs for the PhD.

Quality is a complex matter with multiple meanings (Harvey & Green, 1993). Many of these meanings are context dependent. The idea of the 'quality of the candidate' is often over-emphasised to explain poor throughput statistics. In South Africa, for example, only 54% of doctoral candidates graduate within six years (CHE, 2021). If the interpretation is focused on the quality of the candidate at the cost of the other quality areas that Cloete et al. (2015a) mention, this can lead to 'the discourse of the decontextualised learner' (Boughey & McKenna, 2021), whereby success or failure is seen to be dependent entirely on the attributes inherent in the individual student. This undermines the extent to which the student is a social being, bringing a wealth of understandings, norms and values, and the extent to which the supervisor too has a particular set of beliefs and approaches. Furthermore, the student and supervisor work together within the enablements and constraints of a particular university, department, and discipline and each of these affects what happens. Importantly, in South Africa, the issue of redress and transformation are key: which may provide an imperative beyond a superficial understanding of the 'quality of the candidate'. Despite making up 82% of the population, Black Africans make up only 60% of doctoral candidates (CHE, 2021); furthermore, this percentage is greatly decreased if international Black Africans are removed from the statistics, as is discussed under 'Equity'.

The 'quality of the doctoral programme' is another issue that Cloete et al. (2015a) call to be considered when considering doctoral quality. In South Africa, especially in the Humanities and Social Sciences, there is little by way of 'doctoral programmes' and many students simply collaborate individually with their supervisor, without engaging with any seminars, courses, or other students (McKenna, 2016; Samuel & Vithal, 2011), an issue I return to later. This is rapidly changing, but it is still the case that many students have little structured support, although judgements of quality may be made on the basis of the status of the university. In South Africa, for instance, doctorates from traditional universities are in high demand, while the quality of other institutions is often met with suspicion (Mouton, 2007). Traditional universities are still responsible for producing 80% of doctoral graduates in South Africa. This is also true when doctorates in some disciplines are compared internationally (Cross & Backhouse, 2014).

The 'quality of the thesis' would depend at least in part on the robustness of the examination. In South Africa, the national review of doctorates should provide some indication of this when the report comes out shortly, but we know from the institutional reviews which took place in the early 2000s that there were concerns that some departments used supervisors as the examiners or repeatedly used a small group of external examiners. The ASSAf (2010) report also raised a concern regarding the quality of the PhD from South African public universities, due to pressure on universities to compete in the knowledge economy.

While Boud and Tennant (2006) express that the PhD is one of the most robust qualifications in the academic repertoire. Gumede (2019) raised a concern that the drive to increase the postgraduate numbers should not be reduced to quantity over quality issues as both are important. McKenna (2019) also noted that the quality of doctoral graduates matters because the highest level of qualification sets the tone for quality throughout the university.

Many have argued that the issue of quality of the current doctorates needs to be addressed first before encouraging universities to produce more doctoral graduates (Muller, 2012). The national policies also specify quality indicators, for example, that doctoral work must be of a quality to "satisfy peer review and merit publication" (HEQSF, 2013, p36). High-quality doctoral education needs a stimulating research environment driven by research enthusiasm, curiosity and creativity, and not simply motivated by the collection of credits (EUA, 2010) which requires that quality be understood from a range of directions. Nevertheless, the demand for increased output and production of doctoral results is often considered to happen at the expense of quality as supervisors have to work under pressure to meet the institutional and national demands (Cloete et al., 2015a).

2.2.3 The Equity imperative

The third imperative that Cloete et al. (2015a) identify for doctoral education relates to equity. As White Paper 3 (WP3, 1997)states, the principle of equity encourages fair opportunities for all in entering and succeeding in higher education programmes. The apartheid history of the exclusion of the majority of the population from the best research institutions in South Africa, resulted in lasting educational inequalities, which conditioned the current need for more

doctoral graduates. The National Plan for Higher Education (MoE, 2001) supported the White Paper by providing a framework that outlined the process for restructuring the institutional landscape of the higher education system in South Africa. The transformation of a society struggling to undo the destructive actions of its past requires that Black South Africans be provided opportunities to realise their previously denied potential (Akoojee & Nkomo, 2011). However, the doctoral participation rates of Africans in South Africa are still low compared to their representation in the broader population, and many of those reported within the Black African numbers are not South Africans (Mouton et al., 2015b). The 1997 Education White Paper set the basis for the envisaged transformation of higher education. As discussed in the previous chapter, the advent of democracy in South Africa has made it possible and imperative to decide on institutional mergers. "The fact that South Africans have experienced different educational histories is therefore a significant factor in the transition to a single, national non-racial system" (DOE, 1997, p. 14). The restructuring policy emphasised that masters and doctoral enrolments in the system must grow, as building a knowledge economy requires an increase of citizens with high-level qualifications (DOE, 1997).

The NDP (2011) proposes that by 2030, over 25% of university enrolments should be at a postgraduate level, but this needs to be read alongside calls for equity in student numbers along lines of race and class. As can be seen in Table 2, some gains have been made with regard to racial representation at doctoral level, with 66% of students and 61% of graduates being African; however, the extent to which [they] are international students, (particularly from SADC regions) is unclear and may suggest that more needs to be done to ensure that equity gains are made internally too. It would seem that up to 65% of African doctoral graduates may come from the rest of Africa, rather than from South Africa itself (CHE, 2021 lists 1331 of the 2019 doctoral graduates as coming from SADC and the rest of Africa).

Table 2.1: Doctoral enrolments and graduation rates by race - 2014 and 2019 (CHE, 2021).

Race	Enrolment 2014	Graduates 2014	Enrolment 2019	Graduates 2019
African	9291 (54%)	1 091 (50%)	15 607 (66%)	2 032 (61%)
Coloured	924 (5%)	105 (5%)	1 172 (5%)	147 (4%)
Indian	1 356 (8%)	161 (7%)	1 511 (6%)	217 (7%)

| White | 5 730 (33%) | 848 (38%) | 5 262 (22%) | 942 (28%) |
| Total | 17 301 (100%) | 2 205 (100%) | 23 552 (100%) | 3 338 (100%) |

This increase in numbers indicates that higher education massification has introduced a much more comprehensive range of individuals into the higher education system with varied purposes, including industry needs for pursuing a doctoral study beyond academia (Samuel, 2016). Quality as equity may not have been achieved but there are signs that the system is moving in a positive direction. Equity needs to be achieved in terms of doctoral supervisors and not just candidates. Here too progress is notable, though nowhere close to alignment with the demographics of the country.

Table 2.2: Headcount of academic staff with doctorates for 2014 and 2019 (CHE, 2021).

Race	2014	2019
Black African (South African and beyond)	2 595 (23%)	4 911 (34%)
Coloured	533 (5%)	774 (5%)
Indian	875 (8%)	1 179 (8%)
White	7 065 (64%)	7 636 (53%)
Total	**11 068 (100%)**	**14 500 (100%)**

The increase in numbers of academics with doctorates needs to be applauded, as should the decrease in racial inequalities in these figures – even if Cloete et al.'s (2015a) characteristic of quality as equity remains far away.

2.2.4   The Efficiency Imperative

The fourth imperative for doctoral education noted by Cloete et al. (2015a) is efficiency, whereby the government desires high graduate returns on its subsidy investments in doctoral enrolments. Herman (2012) suggests that efficiency is a significant policy imperative in doctoral education and building research capacity, which might take a particular form in South Africa because it is closely linked to the transformation agenda for the higher education system. While the equity imperative has seen a shift in demographics of enrolment and graduation as reported above, Cloete and colleagues (2015a) also report that about 54% of candidates fail to complete their doctorates within seven years. By 2019, this statistic had improved somewhat,

with only 46% having dropped out or still being busy with their studies after six years and 54% having graduated (CHE, 2021).

There are several reasons for about half of all doctoral students dropping out or taking longer than six years to complete their studies. It would certainly seem that the three-year timeframe stipulated for doctoral study is unrealistic (HEQSF, 2013). Within the South African context, only a few individuals are privileged to study full time at the postgraduate level, and the notion of three years to completion is a significant challenge, especially given that this is often used as the basis for funding and for supervisor workloads. Bitzer (2012, p. 1186) even concludes that "only the boldest seem to return with a title".

While the private sector is bigger than the public in many countries, it is fairly small in South Africa. The biggest sector is made up of public universities which rely on funding from the state, though some enjoy significant other sources of income including student fees and third-stream income. There is a growing higher education private sector, but it is still relatively small in terms of student numbers. Given that public higher education remains highly subsidised in South Africa, especially at doctoral level, and that the doctorate is increasingly linked to economic growth, Cloete et al. (2015a) further argue that it is not surprising that questions are being asked about efficiency in doctoral education. The ASSAf report (2010, p. 16) indicates that "in 2007, 80% of all postgraduate graduates were produced by Traditional Universities (as opposed to Comprehensive Universities and Universities of Technology)". CHET (2012) also reports an uneven distribution, with seven out of twenty-three universities producing 80% of doctoral graduates, with some comprehensive universities doing better than the traditional universities. The table below however provides an illustration of how doctoral production by several institutions has changed.

Table 2.3: 2014 & 2019 Doctoral Graduations from the top ten universities in 2019 (CHE, 2021).

Institution	2014	2019	% Increase
University of KwaZulu-Natal	264	459	70%
University of Pretoria	237	399	68%
Stellenbosch University	234	359	53%
University of Witwatersrand	199	291	46%

North-West University	171	314	84%
University of Cape Town	204	261	28%
University of Johannesburg (comprehensive university)	106	223	110%
University of the Free State	104	128	8%
University of Western Cape	104	126	8%
Nelson Mandela University (comprehensive university)	72	97	35%

Mouton et al. (2015a) argue that the burden of supervision on the top ten to twelve universities already producing 90% of doctoral output will continue to increase as students flock to these research-intensive universities. These universities are generally previously advantaged with better completion rates and more resources. The increase in doctoral outputs indicates that the distribution from only seven institutions producing doctorates has changed, although institutional histories remain in evidence. Furthermore, the 60% of South African postgraduates studying part-time greatly impacts the throughput rate (Cloete et al., 2015a).

The four imperatives placed on doctoral education in South Africa can be seen to be in tension. There is a need to bring substantial changes to the system for universities to increase the number of students admitted and enable them to graduate with quality (Muller, 2012). The following section presents a look at the doctoral review that took place as I was completing this study.

2.3   The CHE review process and doctoral standards

The CHE recognised the importance for higher education institutions to promote their internal quality assurance processes (CHE, 2018) and there is a focus on monitoring universities' internal quality processes rather than monitoring the quality of the education provision directly. The CHE identified the need to conduct a national review of higher education institutions that offer doctoral qualifications, in conjunction with the National Research Foundation which funds much of the research undertaken at this level. The review is the first of its kind for the council in that it is a review of a level of qualification (doctoral programmes at level 10 on the NQF) rather than a review of a programme (such as the previous national review of Law and Education qualifications or the national audits of universities as a whole). In the review process,

which took place in 2020 and 2021, each institution that offers doctoral qualifications had to develop a self-evaluation report indicating how it meets the national doctoral standard, which had been developed just over a year before. A review panel then verified and interrogated the claims made by these institutions, followed by a report being given to the institutions, to which they were required to provide an improvement plan.

However, McKenna (2019) argued that it would be impossible for the review process to strike a balance between the South African differentiated higher education context, considering the inequalities within these institutions. The doctoral standard review further aimed to help ensure that South African public universities maintain the standing of their doctoral programmes and their graduates and used some form of innovation and enhancement to develop their procedures and quality assurance (CHE, 2018). Another aim of the doctoral standard was to translate the doctorate into 'best practices' to ensure that institutions continue to produce high-quality doctoral graduates who can contribute to society's knowledge (CHE, 2018).

The CHE (2018) introduced the doctoral standards to support an institution's postgraduate students. The aim of the doctoral standards was for higher education standards to play a meaningful role in establishing benchmarks for assuring quality and developing quality in the sector (CHE, 2018). Also, "the standard aims to be accessible and beneficial to all relevant parties: the institutions awarding the qualifications, the CHE as quality assurer of the qualifications, and graduates of those qualifications, and their prospective employers" (CHE, 2018, p. 4). Mckenna (2019) makes a clear argument that the doctoral standards aim was not to review the doctoral students or their theses, but rather the universities' capacity to assure the quality of their doctoral qualifications. She raises the issue that some universities in South Africa often enrol PhD candidates to get the subsidy attached to them, knowing that they do not have sufficient supervision capacity. She indicated a desire to see this review highlight some of the unintended negative consequences for students of the rapid increase in doctoral numbers in the country, and thereby drive improvements in the system.

The South African doctoral growth rate began to rise in 2008 when the new subsidy formula for doctoral study introduced in 2005 began to take effect. As indicated previously, this growth and diversity led to a more significant burden on supervisory capacity, whereby supervisors had to supervise more students, even quite far outside their areas of expertise (Cloete et al.,

2015a, p. 185). Similarly, in the UK, the need to keep doctoral programmes under review to ensure that they produce high-quality research is generally recognised to produce a sustainable supply of what (Nyquist, 2010, p. 14) terms "knowledge workers who possess deep analytical skills and capacities." The review was a means of checking whether the rapid rise in doctoral numbers – in response to the so-called knowledge economy and the drivers put in place to feed it – were being sufficiently well managed by the universities. At the time of writing, no national report is available on the findings of the review, although all universities have been sent their individual review reports and are busy developing the required improvement plans.

Having considered four imperatives that doctoral education in South Africa has to consider (Cloete et al., 2015a). I now focus on the actual educational processes of doctoral education, and in particular at supervision. I begin by looking at the various models of doctoral education used in South Africa and elsewhere.

2.4   Supervision Models

As discussed earlier, doctoral education has undergone a number of changes in curriculum in recent years – in many countries including coursework, by publication and creative outputs. In all cases, however, there is a generous portion of research which is done under the supervision of another person or people. Traditionally, most postgraduate supervision was based on the 'secret garden' model (Park, 2005), in which student and supervisor worked closely together without a great deal of external scrutiny or accountability. However, this approach has been challenged from various directions with new models of supervision emerging and replacing the traditional one-on-one apprenticeship model in the UK (Park, 2007).

The 'secret garden' approach has many names – including one-on-one, master-apprentice and the Oxbridge model. This model heavily influenced the supervision pedagogy in South Africa, when the PhD programme was introduced from the UK (Reguero, et al., 2017). The model follows the classic British model of supervision. It comprises a single candidate collaborating with a single supervisor on an assigned or agreed-on topic over an extended period, eventually resulting in the submission of a doctoral thesis for examination (Dietz, et al., 2006; Wadee et al, 2010, Lunsford et. al, 2017). The intense privacy of this teaching space is maintained because students only usually worked with one supervisor. In some cases, supervisors guarded

their students as if they owned them, becoming hostile to the notion of their students talking to other colleagues about their research (Reguero et al., 2017).

This model remains the dominant one in the South African context despite many critiques (for example ASSAf, 2010; Cloete et al., 2015a; McKenna, 2017) which point to the minimum support this model gives to the PhD student in its most individualistic form and the extent to which power imbalances in the supervision relationship can play out 'behind closed doors' where the student's success rests so strongly on the supervisor's competence and care. Harrison (2012) refers to this model as the 'lonely scholar' model and argues that it relies heavily on the agency of the individual to find additional support structures and to confront supervisors who do not provide feedback or who in other ways treat the student poorly.

There are many different names for the different models of doctoral supervision. Using the models outlined by Grossman and Crowther, (2015) one can say there are four supervisory models: (1) the traditional model (one-on-one), (2) co-supervision or joint supervision, (3) laboratory model, and finally (4) committee or panel approach. The traditional model and co-supervision models are common in South Africa and are arguably variations of one model. The dominance of this model is at least in part from the legacy of being a British colony (McKenna, 2021), though many doctoral programmes in the United Kingdom now draw on other models. The dominance of this model is especially noted in the Humanities and Social Sciences, including Commerce and Law, where many doctoral students have no other contact at the university besides with their supervisor or, in the case of co-supervision, supervisors (CHE, 2009; ASSAf, 2010). The apprenticeship model is possibly used because it is viewed as a gold standard due to our colonial legacies, and because the HEQSF (2013) dictates that no coursework may be included for credit at doctoral level, it makes this model more likely. It is also argued that the very low number of potential supervisors to meet the expanding higher education system needs means that many supervisors are 'on their own' (Molla & Cuthbert, 2016).

The move from the traditional apprenticeship model is argued to reduce, among other things, the doctoral candidate's dependence on a single person and broadens input to multiple sources (Nerad, 2012). Several scholars alluded to the problematic nature of the master-apprentice model of supervision. The supervisor often becomes the face of the faculty for graduate

students, which (Lee & Green, 2009) refer to as an essentially privatised and personalised relationship, traditionally conducted behind closed doors (Ismail & Hassan, 2011). Thus, alternative supervision models need to be considered in mentorship and support that can be embraced. Despite most of the literature arguing for alternative approaches to supervision, or at the very least the augmenting of this model with various seminars and workshops and other opportunities for students to interact with each other and other supervisors (Bitzer & Albertyn, 2011; Lee & Green, 2009; McKenna, 2017) there is a "persistent administrative and conceptual defaulting to the one-to-one relationship" model of supervision (Lee & Green, 2009). Those who suggest exploring alternative models of supervision to "open out and make transparent the largely private student-supervisor relationship" (Samuel & Vithal, 2011, p. 83) call for approaches such as group approaches and the use of research seminars to create collaborative knowledge sharing environments (Malfroy, 2005).

In my own PhD study context, within the Education faculty at Rhodes University, there are two 'doctoral programmes', one in Environmental Education and another in Higher Education studies. These programmes include 'Doc Weeks' where we come together to attend workshops and present on our progress and support one another. This is supplemented with an online community (see McKenna, 2016 for a description). Another version of such a cohort arrangement is to be found in the Faculty of Education at the University of KwaZulu-Natal, which calls it a collaborative cohort model (see Samuel & Vithal, 2011 for a description). These approaches combine traditional (one-to-one/master-apprentice) and co-supervision with cohort seminar sessions, and other forms of more collaborative support. The candidates need to learn to collaborate as part of the postgraduate journey, and it would be through such suggested interactions that the independent researcher can emerge (Johnson, Lee, & Green, 2000). Collaborating with the team of scholars and learning from others helps avoid a lonely journey though bouncing ideas to and from each other (Motshoane, 2016).

The different models of supervision need to be explored to not only better support students but also to drive the mentoring process of emerging supervisors. (Boud & Lee, 2005) argue that academics, particularly supervisors, generally desire to 'do an excellent job,' to feel competent and valued by their students and the faculty, to explore in a supportive and enabling environment. Pearson and Brew, (2002) have argued that adequate supervision with multiple inputs is a form of mentoring as emerging supervisors would learn from their own supervision

experiences as they are guided and facilitated through gradual development into independent researchers.

As indicated, while the one-on-one model remains dominant in South Africa, this is increasingly extended to co-supervision, which shifts the supervision burden from a single supervisor to two (or even three) supervisors (King, 2007). Co-supervision is defined in the literature as two or more academics sharing the full responsibility of supervising postgraduate students from admission to programme completion (Paul, Olson, & Gul, 2014; King, 2007). Equally Robertson (2017, p. 410) explains that "collaborative teams are understood as having at least three members—the principal supervisor, co-supervisor and doctoral student". One reason for this is that co-supervision can happen for several reasons, such as supervision development, sharing the workload or providing specific expertise. Crucially for this study, it should be noted that co-supervision allows emerging supervisors to be mentored by experienced supervisors and provides better coverage of the critical academic areas under study (Phillips & Pugh, 2010).

In some cases, the co-supervision model can be seen as part of a broader move towards team approaches in supervision, which is an international phenomenon (Manathunga, 2012). Manathunga traces the genealogy of this shift from the master-apprentice model to the team supervision model in Australia. She further argues that it emerged primarily because of the increase in interdisciplinary studies, and because it mitigated many of the risks associated with the one-on-one and co-supervision model (2012). The practice of joint/co-supervision of a dissertation committee, consisting of each member having equal power and one primary advisor who is expected to provide substantial professional training, has existed in the United States for decades. Such a paradigm shift has been very slow in South Africa due to power-related issues invested in past inequalities and because of the entrenchment of the traditional model.

Australian universities consider supervision by more than one supervisor of doctoral students throughout candidature as best practice (Robertson, 2017b). It is further recommended that the candidate is supervised by a primary supervisor and at least one co-supervisor (Robertson, 2017a). While the team approach seems to be a powerful way of addressing many of the problems inherent in the 'behind closed doors' nature of the traditional model, it is not without its own potential problems. Manathunga (2012) cautions that the team supervision model can

be seen as part of the move to increased surveillance in the academy, whereby academics are seen to need to be more explicitly monitored and performance managed. Nonetheless, she suggests it can "create an intense sense of excitement with more people to build ideas together" (Manathunga, 2012). While team supervision is not a panacea, it does seem to offer possibilities for the more extensive process to be more transparent through collective engagement. Students have built-in access to more resources and toxic power relations are less possible.

However, considering that about 60% of South African doctoral candidates study part-time and many of them are geographically far from their campuses, there can be problematic organisational issues around group supervision meetings as these students would be unable to access the necessary support (Cloete et al., 2015a). Thus, McKenna (2017) calls for alternative models to supervision where groups of scholars engage in shared project areas and draw on shared theoretical frames, where programme-based doctoral events are built into the PhD journey. This approach would support the candidates to not experience the journey as one of loneliness, especially considering that knowledge cannot be produced in isolation. What is key, is that expectations about the roles of each in the group need to be made explicit. Supervision must be a collective effort with clearly defined and written responsibilities of the primary supervisor, supervisory team, doctoral candidate, doctoral school, research group and the institution, all of which should support individual development of the doctoral candidate.

2.5   Supervision as pedagogy

Postgraduate supervision has become of much greater concern with the increase in student numbers and the increasing understanding that prominent levels of knowledge are important to economic growth in the 'knowledge economy'. There has also been an increasing understanding of doctoral education and supervision as teaching, rather than only being about research. (Jorgensen, 2012) suggests that doctoral education is the link between teaching and research. White, (2010) explains doctoral pedagogy as being the active, productive power relations between student, supervisor, and knowledge. Despite this growing acknowledgement, the literature has shown that lecturers are often expected to become supervisors 'by default' (Lee, 2008a) and simply to draw on how they were supervised, thereby perhaps perpetuating mistakes.

As per the HEQSF (2013), the assumption is that competence in postgraduate supervision is automatic once the academic has a doctorate, as this is one of the stated outcomes of the doctorate. In comparison, the literature suggests that teaching at the doctoral level is a specialised skill that needs to be developed beyond the experience of a supervisor having undergone supervision themselves (Grossman & Crowther, 2015). It requires understanding the interconnection between research and teaching embedded in the supervision development process (Lee, 2008). It is for such reasons that Fulgence, (2019, p. 726) argues that "supervision development training needs to include multiple issues of which the training component should aim to enable the supervisor to provide support throughout the doctoral process".

The supervisor is the academic assigned to lead the doctoral student through the research process. (Walker & Thomson, 2010) suggest that the supervisor should be seen as a knowledgeable authority who oversees the student's work. They further define the supervisor's position as an experienced and successful researcher, an established power in some areas of their discipline. Alongside the capacity to mentor, guide and teach, is the need for supervisors to be "active researchers" (EUA, 2010, p. 5).

Thesis supervision is a practice that, in parts of Europe, dates back almost three centuries and has become how research communities reproduce their membership (White, 2010). With the changed understanding of the doctorate as being for industry and not just for the development of academics, the pedagogy at doctoral level has become more complex. Many universities providing doctoral education now offer training initiatives and resources to support supervisory development and practice (Connell et al., 2012; Halse, 2011; Kiley, 2015; Taylor & McCulloch, 2017).

Lategan and Jager, (2008) reason that skilled supervisors are needed to guide postgraduate candidates to complete their studies, but Herman (2012) argues that it is challenging to build supervisory skills without practical, structural, institutional support. Supervision pedagogy and research teaching are sophisticated skills worthy of professionalisation (Grossman & Crowther, 2015). Therefore, supervision is an aspect that deserves more attention, due to its critical importance for the doctoral degree. Good supervision, for example, shapes relationships between the supervisor and the candidate.

Similarly, Lee and Green, (2009) observed that the success of doctoral education lies in a shared responsibility among many participants. They argue that supervision pedagogy centrally involves the relationship between a (candidate) learner, a (supervisor) teacher, and the knowledge produced through that relationship. But I have argued that this is insufficient because the institutional structures and cultures are also key to how doctoral education takes place (Motshoane & McKenna, 2014), an issue I return to later in the thesis.

Adkins, (2009) examined the development and maintenance of supervisory relationships that are sufficiently responsive and flexible to deal with increased numbers and diversity in postgraduate candidates. She concluded that supervision should indeed be conceptualised as pedagogy, "probably the most subtle and complex in which we engage" (Adkins, 2009). There is an assumption that an effective teacher would translate into an effective supervisor (Eley & Jennings, 2005). However, that is not always the case, and far more is at play in developing the capacity to be an effective supervisor (Manathunga, 2005).

2.6   Supervision Development

Institutions have in the past offered little in the way of formal development in supervision, although it is becoming more common. In 2012, a consortium of South African universities (Rhodes University, Stellenbosch University, University of Cape Town, and University of Fort Hare), in collaboration with Dutch partners, developed a course for the professional development of PhD supervisors to boost this critical capacity. The *Strengthening Postgraduate Supervision* (SPS) course offered across institutions is one example of such local supervision development interventions. About eighteen of the twenty-three South African public universities have been part of this partnership over the years since then, and many supervisors have benefitted from it (Thomson, 2015). To date, the course has been offered more than 70 times in various iterations to academics in most South African universities and to academics from universities in Kenya, Namibia, Turkey, Belgium, and the Netherlands.

This programme was initially funded by the Dutch government through Netherlands Universities Foundation of International Cooperation (NUFFIC) and subsequently offerings have been funded through EU Erasmus+ funding and DHET University Capacity Development Grant funding (CHE, 2018). The aim of strengthening postgraduate supervision was for

participants to develop a strong scholarly identity, consider social justice issues related to postgraduate education, and build their "research supervision craft" (Maistry, 2017). Another initiative was the South Africa-Netherlands Trust (SANTRUST) project which worked to support doctoral candidates to develop their proposals. The focus here was on the student and their project but it also included a one- or two-day session where the students' supervisors were invited to a supervision development workshop (Dietz et al., 2006). Various other universities in South Africa have started to implement supervision development opportunities, as will be discussed in the findings chapters of this study.

Given the complexity of doctoral supervision as a pedagogical practice it is unsurprising that development initiatives have become common. Supervision can be conceptualised as comprising many differentiated skills (Danby & Lee, 2012). Unfortunately, many academics who are recent doctoral graduates do not get some form of development and become supervisors 'by default' (Lee, 2009).

While much of the existing research on supervision provides rich insights into postgraduate pedagogy (for example, Danby & Lee, 2012; Trafford & Leshem, 2008; Lee, 2009; 2018Wisker, 2012). There seems to be an assumption that postgraduate success emerges mainly or only from the actions of the supervisor and student. This research fails to interrogate the role of institutional structures and culture thoroughly, if at all (Motshoane & McKenna, 2014). Doctoral supervision is shaped by the different conceptions, approaches and models of supervision that are likely to be influenced by different academic cultures of departments and the ethos, policies and practices of the institution (Huet & Casanova, 2021).

In focusing predominantly on supervisors' and candidates' perceptions and activities, the literature omits to consider the role of institutions (for example, Gardner, 2008), and hence, structural responsibilities for creating enabling conditions for postgraduate supervision development are neglected. Vehviläinen and Löfström (2016) call the academic supervisory process a learning process and a participatory process that shapes the identity of the emerging supervisor and student. This does not happen within a vacuum.

The idea of formal staff development to take on the role of supervision can be seen as "a step that runs counter to the tradition of supervision as a set of implicit and unexamined processes.

Indeed, pedagogy has been the 'absent presence' in the 'supervision' relationship, where the role of the supervisor as the researcher has taken precedence over other roles" (Evans & Green, 2009). This may explain the belated emergence of supervision development opportunities, especially in South Africa where the one-on-one model continues to dominate, particularly in the Humanities and Social Sciences.

Postgraduate supervision development can be seen to fit within the broader field of academic development, which is currently more focused on undergraduate teaching and learning aspects of higher education. In South Africa, academic development has shifted from focusing on student development to curriculum development, instructional design and professional staff development (Quinn, 2012). Most universities in South Africa have units dedicated to staff development. However, there has been little recognition of supervision as part of lecturers' teaching role and a narrow focus on postgraduate supervision development. The work on academic development primarily focuses on undergraduates (Scott, et al., 2007; Scott, 2009; Quinn, 2012). The offering of formal supervision development opportunities is relatively new but growing in South Africa and insufficient research has been done on the development of academics as postgraduate supervisors.

Therefore, this study looks at the individual agency of emerging supervisors, but it also concerns itself with issues beyond this in terms of the social contexts in which supervision occurs. Developmental activities need to be structured in such a way that there is an opportunity for supervisors to think about issues specific to managing research; to listen to what specialists in the area have to say, and to discuss any doubts or problems they may experience (Phillips & Pugh, 2010). This would include spaces to consider the role of the national, institutional, and disciplinary context within which the doctoral education is taking place.

As stressed in the fifth EUA report (2010) on postgraduate supervision, the practice of supervision plays a crucial role in the success or failure of the students. Providing professional development to supervisors is an institutional responsibility, whether through formal training or informal sharing of experiences among staff. Developing a common supervision culture shared by supervisors, doctoral school leaders and doctoral candidates must be a priority for postgraduate schools. Lessing and Lessing, (2004) furthermore recommended that supervisors receive training to meet their graduate students' needs effectively. The argument is not against

the offering of supervision development opportunities, but rather a call to guard against a notion of generic 'best practice' that fails to take the context fully into account.

Supervision is a complex practice bringing together issues as varied as knowledge building, identity formation, literacy development, independent problem solving, relationship management, and much more. McKenna (2021) notes that some academics may have the institutional influence and energy needed to directly address institutional structures, that may, for example, limit postgraduate education to the training of skills for industry. However, many academics may feel overwhelmed to raise such issues. Thus, supervision development needs to be much more than the transmission of the practical steps in the process. Pearson and Brew, (2002) suggest that central to supervision development has to be nurturing and flexible to adapt to changes in the field and the student body. Grant, (2003b p. 176) argues that supervision is unstable as there "may be misunderstandings, ambiguities, excitements, … and moments of unexpected clarity".

Exposure to supervision approaches and developing expertise can help to move individuals from a novice position to a more confident position in terms of supervision (Searle, 2014). Supervision exposure is an integral part of capacity development, and this requires time and engagement. Herman, (2012) concludes that it is challenging to build supervisory capacity without proper structural support. The focus on building the individual capacity of novice supervisors needs to include space to reflect upon and engage with the context in which the novice supervisor works.

2.7   Conclusion

This chapter provided an overview of the demands being placed on universities and supervisors to increase doctoral enrolments and throughput. It looked in particular at the four imperatives which Cloete et al. (2015a) identify as facing doctoral education in South Africa. The shifting forms of the doctorate and the possibilities of moving from the dominant master-apprentice model of supervision were also discussed. The chapter concluded by looking at the emergence of supervision development initiatives, which are the focus of this study. I now move to look at

the philosophical underpinnings of this study in the next chapter and follow that with a chapter which outlines my methodology.

Chapter 3: Theoretical framework: Critical and Social Realism

A theory is a systematic explanation for the observations that relate to an aspect of life

(Babbie, 2020).

3.1   Introduction

Having explored the literature related to doctoral supervision and supervision development in the previous chapter, this chapter argues for a theoretical framework that would assist in answering my realist research question, which as indicated in Chapter 1, is:

What are the mechanisms that condition postgraduate supervision development across South African public universities?

This chapter commences with an explanation of the philosophy of critical realism. I discuss the ontology of critical realism and how it underpins research in the social sciences. Critical realism enables researchers to understand methodologies in a particular way and this discussion therefore precedes my chapter on methodology. Both critical and social realist frameworks provided me with lenses to see the data beyond my commonsense, everyday understandings.

The study aimed to uncover the relationships among the observed phenomena of supervision development and the underlying causes of why it happens (or not) as it does. To do this, I needed lenses that allowed me to explain why things are the way they are and not otherwise. Critical and social realism further assisted me in articulating the nature of truth in this study, an issue which is often sidelined in qualitative research. In doing that, I discuss and justify the theoretical framework for the study. First, I elaborate on Bhaskar's critical realism and how it provides the ontological position of my research. Secondly, I discuss social realism as an explanatory theory which helped me make sense of the mass of data, so I could begin to identify some of the causal mechanisms at play. Lastly, I explain analytical dualism as an analytical tool for the study and how it was used to account for interplay of structure, culture, and agency.

3.2   Critical Realism

Critical realism is a meta-theory and a philosophy of reality for social science (Fleetwood, 2013). Henning, van Rensburg, and Smit (2004, p. 14) explain a meta-theory as "the nature and structure of scientific theories that give the meaning of what is appropriate." A meta-theory further offers an ontology, that is, an understanding of what the world is like and how one comes to understand it (Manicas, 2008). It also offers clarity on epistemology and how researchers can justify the knowledge claims they make.

The term 'critical realism' and the philosophy it represents were introduced by Bhaskar (1989), built on the earlier work of the realist philosophy of science, particularly the ideas of Rom Harré (Sayer, 2010a). Bhaskar, (2014) proposed critical realism as an alternative meta-theoretical framework for both positivism and social constructionism. Critical realism differs from the philosophical traditions such as positivism and empiricism by arguing that the reality of the phenomena cannot always be fully directly observed (Bhaskar, 2013). Critical realism is a combination of a realist ontology and an interpretive epistemology, essentially suggesting that although a real-world exists, our knowledge of it is socially constructed and fallible (Sayer, 2004). The realist thus challenges the empiricist's view that we can come to know all there is in the world. It is not however, a relativist theory because critical realism acknowledges that there are causal mechanisms – some of which are beyond our knowledge and which have effects in the world – so it cannot be that anybody's experiences or explanations of the world are equally believable.

Critical realism has necessary implications for the conceptualisation and conduct of this research on how emerging supervisors are developed by both their institutions and faculties. Bhaskar (2013) advised that the use of critical realism as an 'underlabourer' for social research, in the sense of clearing a philosophical path, laying down a stratified and depth ontology (explained in the next section), and viewing the world as an open system (explained in the section that follows after) on which to overlay substantive theory, which in this study, is social realism (explained thereafter). This means that it clears the ground for social research by setting out the nature of truth and reality in the study. It does not aim to uncover general laws but to understand and explain the underlying structures and their generative mechanisms (Bygstad, & Munkvold, 2011) and it does this through a depth ontology.

3.2.1   The stratified nature of reality

Ontology refers to assumptions about the nature of reality. Critical realism warns against reducing the question of 'what is' to the question of 'what we can know' (Bhaskar, 2013). Bhaskar's ontological map offers three domains of reality that should not be confused. These are experiences at the level of the Empirical, events at the level of the Actual, and mechanisms within the level of the Real.

The Empirical domain consists of what we experience, directly or indirectly, and is understood by researchers through human interpretation. The Empirical domain, which in scientific contexts contains our 'data' or 'facts,' is always theory-impregnated or theory-laden (Danermark et al, 2002). In the case of this study, it is at this level that emerging supervisors make sense of the supervision development activities that they engage in. The Empirical domain encompasses the data generated from the research, which can be contradictory and misleading. This is because research participants have their own views and beliefs about what would work best in supervision development activities, and those beliefs might not always hold true across participants or contexts. This domain could consist of all the experiences of supervision development which my participants shared with me.

The Actual domain refers to events that happen, whether we experience them or not (Sayer, 2004). These events can be understood as anything that occurs in the world. The Actual domain in this study is evident in the events that surround and condition the daily experiences of supervision development. This domain could consist of a supervision development workshop or a policy requiring co-supervision.

The Real is the domain of underlying, generative mechanisms with their associated 'causal powers'. The 'real world' does not only entail what we experience or what happens, but it also includes the mechanisms that allow such events and experiences to take place (Collier, 2011). Critical realists use the terms 'mechanism' or 'generative mechanism' for features or events that can yield specific results given certain inputs. Sayer (2010a) states the Real is whatever exists, be it natural or social, irrespective of whether it can be an observed object for the researcher, and whether we happen to have an adequate understanding of its nature or not. (Mutch, 2017) further agrees that the Real is not only what can be sensed but includes the

mechanisms that produce the sensations. Structures at the level of the Real possess powers, which may not always be exercised, or might be exercised but are not always actualized; and, finally, even when actualised, are not necessarily always perceived (Collier, 2011). The relationship between the three domains, the Real, the Actual, and the Empirical, are illustrated in the table below.

Table 3.1: Bhaskar's three domains of reality (Bhaskar, 2008, p. 2)

	Domain of Real	Domain of Actual	Domain of Empirical
Mechanisms	√		
Events	√	√	
Experiences	√	√	√

An understanding of the Real domain of reality, the deep dimension where generative mechanisms are found, is not easily achieved (Danermark et al., 2002). Researchers are, in a critical realist study, expected to identify the generative mechanisms in the domain of the Real (Madondo, 2020; Moyo, 2018; Muthama, 2018; Ncube, 2020). The deep structures have real effects and influence institutional and personal lives. These structures exist, irrespective of whether they produce an event or not. Nevertheless, a critical realist framework allows researchers to understand reality in a stratified manner and to understand what we experience in many different ways. In the context of this study, I tried to discover the emergent properties and powers at the level of the Real in the context of supervision development across South African universities. I acknowledge that what was presented in the data might not be the true reflection of what happened because of the transitive and intransitive nature of 'reality.'

3.2.2   Transitive and intransitive dimensions of science

Bhaskar, (2008) makes a distinction between intransitive and transitive objects of reality. The *transitive* dimension is where the object of knowledge is determined through the socio-material objects, that is, through interactions with people and other forces in the world. The transitive object of science is ever-changing as we learn and transform, whereas intransitive objects exist regardless of our knowledge or ignorance of them (Bhaskar, 2008). Understanding the distinction between the transitive dimension (what we know and understand) and the intransitive (that which exists and has effects regardless of our knowledge of them), can enable

a deeper understanding of what might be enabling or constraining for a phenomenon such as supervision development. In this study, although I recognised the existence of the intransitive domain of social reality and its ability to influence social practice, I focused on those aspects that could be identified and thereby changed due to different interactions (King, 2010). This change was necessary because the whole point of the transitive object is to explore the intransitive object, which exists independently of us (Collier, 2011).

Generative mechanisms exist, sometimes act independently of researchers and are irreducible to the patterns of events they generate (Bhaskar, 2008). Critical realism, therefore, attempts to understand or account for 'causal tendencies' rather than to suggest direct cause and effect (Bhaskar, 1989). Because a particular mechanism enables a particular event or experience in one context, this does not mean that this mechanism, when activated, will always result in the same event or experience. Consequently, the reality that exists and which researchers analyse is called the 'intransitive object of science.' The purpose of this research was to come as close to this reality as possible. "Intransitive objects of reality are in general constant to our knowledge of them: they are the real things and structures, mechanisms and procedures, events and possibilities of the world, and for the most part they are quite independent of our knowledge" (Bhaskar, 2008). In this way, critical realism acts as an argument against simplistic causal explanations found in positivist approaches to scientific investigations.

Bhaskar, (2014) further warns against some of the relativism of social constructivism, where the world is understood as entirely a socio-cultural projection, which would entail restricting research to the 'transitive dimension' of reality. Our theories and concepts of objects constitute our knowledge of them and make up the transitive object. Hence, Sayer, (2004) cautions against conflating the world with what we experience of it. This results in ontology and epistemology being conflated so that it is impossible to understand how transitive objects, (in this case, data about supervision development and support), may be used to examine relatively intransitive structures (an understanding of how such development is enabled or constrained).

For critical realists, the concept of 'mechanism' is a real phenomenon (Collier, 2011). Explained differently, rather than saying that there is a law by which whenever A happens, B happens, we assume that there are generative mechanisms by which a structure or institution generates a tendency for something to happen. Thus, whenever A happens, B is likely to happen

(but there may be contexts in which C or D make it less likely that B will happen). Therefore, researchers need to identify the underlying mechanisms which account for the emergence of specific events. Our knowledge and experience of the world are subjective and consequently limited. This partial and relative way of engaging with the world often results in what Bhaskar (2008) refers to as the 'epistemic fallacy' where we mistake our knowledge of a phenomenon for the whole explanation for that phenomenon. Therefore, critical realism aims to explain the relationship between events, experiences, and mechanisms (Archer et al., 2013).

Bhaskar (2008) links the Actual domain to a more profound ontological level. It is whatever exists, be it natural or social, irrespective of whether it is an Empirical object for us, and whether we happen to have enough understanding of its nature or not (Sayer, 2010b). Researchers can attempt to access the Real domain when the causal mechanisms within objects or structures cause events at the Actual and Empirical domain to occur.

Higgs and Waghid (2017) assert that higher education should be considered an ontological feature of the world unfolding in the university's deep structures. Several South African scholars have used critical realism to better comprehend the events and experiences related to higher education and as a way of identifying the underlying mechanisms that might be enabling or constraining the different events (Boughey & McKenna, 2021; Case et al., 2018; Quinn, 2012)

The example of the falling tree is often used to explain the stratified ontology. "If a tree falls in a forest and no one is around to hear it, does it make a sound?" I will briefly unpack this analogy to simplify the above discussion.

Figure 3.1: A representation of the analogy of the falling tree (Photo by Thomas Allsop on Unsplash https://unsplash.com/s/photos/fallen-tree)

Perhaps the mechanism at play was the wind that resulted in the tree falling, and this wind is Real. When the tree falls, there is an event, meaning that the mechanism is at play, and whether we see it or not, regardless of how or whether we experience it, it has occurred and has had an effect in the world. However, strong winds will not always cause trees to fall. Strong winds have causal tendencies, but firmly grown root systems can constrain the causal efficacy of the wind and keep the tree upright. The Empirical domain consists of experiences, which are the visible observations of the tree falling, which we may experience as frightening, dangerous, or exciting, because individuals experience the same event differently. Moreover, this transitive aspect of our experiences may not be at play at all if nobody sees the tree crashing to the ground.

The critical realist position concludes that mechanisms are not reducible to empirical observations, which means that the falling of the tree was not dependent on who was watching or experiencing the event. Generative mechanisms are essential to both physical and social structures, enabling or constraining what can happen within a given context (Sayer, 2004). The analogy of the falling tree illustrates the critical realist, ontological and epistemological positions as they relate to human knowledge of reality.

By using the concept of the wind being a mechanism at play in the falling of the tree, I could identify how the different levels of reality work. The application of the analogy to this study, for example, could be that as part of postgraduate supervision development, a workshop may be offered. The workshop is an event that happened; it is real at the level of the Actual. However, the participants who attend the workshop may experience it differently. These experiences at the level of the Empirical are also real. As a researcher, it was my role to analyse the events as they occurred. I gained the knowledge of how participants experienced such events to gain an understanding of the generative mechanisms accounting for the occurrence of events and for the participants' experiences thereof. The table below is a representation of this stratified ontology concerning one phenomenon, the offering of supervision development workshops.

Table 3.2 Example of the depth ontology in the study of supervision development workshops

Empirical Domain	**Experiences:** How the different supervisors experience the same workshops.
Actual Domain	**Events**: Supervision Development Workshop.
Real Domain	**Mechanisms**: The generative mechanisms that enabled the event of a workshop and the varied experiences thereof to emerge as they did.

While we may be able to observe things (for example, the falling of the tree, the structure of an organisation, or a supervision development workshop), as well as what happens when they act, some generative mechanisms may not be observable (Sayer, 2010b). In my study, I aimed to identify the generative mechanisms at the level of the Real from which vastly different practices and experiences related to the development of emerging supervisors emerge across different South African universities. Furthermore, this is key to Bhaskar's thinking of the notion of emergence. The event of a falling tree emerges (or may not emerge) as a result of the interaction of multiple mechanisms at the level of the Real (such as the wind, rot in the wood, waterlogged soil, a poor root system, and more). The existence of such mechanisms does not mean they will exert an impact on this interplay, since, in any one context, some or many of them may be dormant. Consequently, (le Boutillier, 2003) argues that emergent events need to be understood in relation to the mechanisms that enabled them.

The depth ontology and the idea of emergence require the researcher to move beyond describing and categorising Empirical data to identify the mechanisms that are at play at any one time. It is impossible to identify all the mechanisms at play, and critical realism acknowledges the fallibility of all research. However, this is not the same as saying all accounts are equally valid and legitimate. Thus, critical realism distinguishes between epistemic relativism and judgemental rationality, which is discussed in the next section.

3.2.3   Epistemic relativism and judgemental rationality

Epistemic relativism is the argument that human knowledge is transitive and that our knowledge is finite, contextual, and fallible (Bhaskar, 2008). This means that any number of accounts could be provided for any event or experience. The principle behind epistemic relativism is that "all

beliefs are socially produced so that all knowledge is temporary, and neither truth-values nor criteria of wisdom exist outside historical time" (Hartwig, 2007).

In other words, the beliefs that we hold are relative in terms of our geo-historical, social, and economic conditioning and positioning. The concept refers to the fact that our knowledge is 'contingent.' Therefore, epistemic relativism accepts that people may know and experience the world differently according to how, where, and the time in which they live. For example, we are now in a time where some people refuse to believe that they can be infected by the Coronavirus because they hardly travel internationally, let alone hold a passport. This belief is what Bhaskar has termed epistemic fallacy because at the level of the real, the virus is not travel bound. In addition, some believe in the South African conspiracy theory that the vaccine is meant to kill Black people, and this belief may have power over their actions even if is a fallacy.

Accordingly, Archer, (2003) adds that "all our judgements are socially and historically situated and are conditioned by our circumstances, what we know at the time and by the prevailing criteria of evaluation". In the context of this study, different supervisors might proffer quite different accounts of supervision development experiences. I bring to such accounts my own socio-cultural history and personal projects, which also makes my claims to knowledge relative.

Nevertheless, acknowledging the relativism of our understanding of knowledge is not the same as saying that all accounts are equally valuable. We acknowledge that our thinking and knowledge might be fallible and culture dependent. Thus, our thinking and knowledge are historically conditioned, meaning that they are context based (Bhasker, 2008). Therefore, Hartwig, (2007)agrees that knowledge based exclusively on evidence in the data is a myth because even 'facts' are theory-laden, the theory is value-laden, and values are definitive rather than given.

Bhaskar (2007) explains that epistemic relativism does not lead us to a relativist position where all accounts should be treated as equally credible. This leads to the call for judgemental rationality in research This entails judging between competing claims or multiple realities. *Judgemental rationality* is a commitment to make a rational judgement. I acknowledge that what I discovered from the data may not be a complete reflection of reality. Instead, it concerns the possibility of choosing some accounts over others (Hartwig, 2007). Judgemental rationality

suggests that there are grounds for concluding when one kind of knowledge should be preferred over the other (Danermark et al., 2002). It suggests that there are intersubjective bases for determining the relative value of compelling claims to insights. Epistemologically, all these judgements are open to new information and should be adapted, based on new information when necessary. Hence, Sayer (2004) argues that judgemental rationality permits us to discuss our claims about reality to arrive at "reasoned, though provisional, judgements about what reality is objectively like, considering that some judgements may be objectively better than others".

Bhaskar (1989) elaborates that we need to use our rational judgement to make decisions about which is the best account of reality available to us at any given time. On the other hand, judgmental relativism, which underpins some of the stronger versions of constructivism and postmodernism, implies that there are no grounds for determining when one kind of knowledge should be preferred over the other.

Accordingly, I acknowledge that what I discovered from the data is not a complete reflection of reality as participants experienced the same event differently. Evaluations of different and competing claims about the world and the supervision debates had to be undertaken. Thus, the intransitive world serves as the basis for the exercise for judgemental rationality.

Following Maxwell (2013), critical realism can do useful work for qualitative methodology: critical realism assisted me in showing how a realist perspective can provide new and valuable ways of approaching the problem of supervision development. It can generate useful insights into resolving supervision capacity issues in the South African higher education context. Furthermore, Bhaskar's (1989) critical realism philosophy offered an explanatory framework for uncovering what mechanisms might be constraining or enabling postgraduate supervision development. While critical realism is a philosophy that underpins all aspects of the world, social realism is specifically about the social world (Archer, 1995; 1996; 2000). The next section explores social realism and how it builds on critical realism to underpin research on social phenomena, such as supervision development.

3.3   Social Realism

Archer, (1995) distinguishes between a closed and an open system. Researchers in social science always work in an open system, while natural scientists may attempt to work in a closed system (Collier, 2011). In the natural sciences, research is often carried out in a closed system in the form of a laboratory so that the experiments can be enacted, and the variables controlled. The central issue of epistemology in social science is the question of whether the social world can and should be studied according to the same principles and procedures as those used in the natural sciences.

Danermark et al., (2002) elaborate that closed systems exist when the generative mechanisms are operating in seclusion and independently of other mechanisms. However, in the social sciences, 'internally related structures' may not always be exercised because other contingencies intervene in society due to the nature of the open system. The project of empirical research in the social sciences is to investigate social phenomena to identify, as far as possible, the underlying causal mechanisms at play (Carter & New, 2004).

Archer's (1995) social realism allows researchers to begin to understand the messy social world in more specific and nuanced ways. Archer's social realism provided me with both descriptive and analytical tools for this research to investigate the social world of postgraduate supervision development. Archer builds on Bhaskar's three-level depth ontology and provides a methodological framework that allows researchers to analyse social contexts. (Archer, 1995) views society as open, stratified, and differentiated.

Archer argues that the social order is discursively constituted, and knowledge of it involves knowledge of the cultural system. The social order concerns self-worth and our relations with others (Archer, 2000), thus agential powers and properties emerge at each level. The three orders of reality are further elaborated on in Chapter 5, where I describe how they enabled me in understanding how emerging supervisors made decisions around the development opportunities presented to them.

Furthermore, Archer, (2000) distinguishes between the 'people' and the 'parts' in the social world. The 'people' are understood in terms of agency, which refers to the capacity of individuals to act independently and to make their own free choices (Archer, 1995). In contrast, the 'parts', which comprise structure and culture, refer to those factors of influence (such as social class, institutions, religion, gender, ethnicity, customs and policy documents) that constrain or enable the extent to which agency can be activated. For example, Soudien (2018) points out that the novice academic may have a personal agency in their desire to participate fully in the academy, but such desire may be enabled or constrained by the recognition and reciprocating afforded by the institutional structures and culture. The domains of structure, culture, and agency exist at all levels of Bhaskar's ontology – the Empirical, the Actual, and the Real. I now turn to explain the concepts of structure, culture, and agency in more detail.

3.3.1   Structural considerations

Structure refers to the different roles in society and the institutions that sustain them. Structures, which influence the ability of humans to act independently, include class, religion, and gender, for example. Structure, according to Archer, (2003) also has to do with material goods and is the domain of social positions and roles. Structure typically includes social structure consisting of individuals, groups, and organisations, along with sets of rules and practices, such as the higher education system and universities. Structure pre-exists agency. For instance, a university exists before a specific postgraduate student applies to register within it. 'Supervision' as a structure exists before emerging supervisors start to supervise. For this study, l focused on institutional structures particularly, and how they enabled or constrained postgraduate supervision development.

One structure may, in turn, also be part of a higher-level structure (Danermark et al., 2002); for example, marriage can be part of a larger structure, such as family or kin. Structure can further refer to institutions, organisations or positions, including practical structures such as the contracts signed by employees. Quinn (2012) identified a number of structures that are associated with higher education, like faculties, committees, funding formulas, senate. Social structures such as race and gender exist and can exert power as mechanisms that may condition supervision and supervisor development. A social structure in this study is the South African higher education sector with the differentiated institutions, discussed in Chapter 1. The sector

is officially regulated by the state with clear boundaries and ideas expressed in policies. An example of a smaller level structure for this study are the policy guidelines in each university that influence how supervision development is carried out in the various institutions. Structures possess causal properties called structural emergent properties (SEPs) (Archer, 1996).

Structural properties predate human action, even though some emerge from human interactions. Individuals enter a context with pre-existing structures even though some of those structures might have emerged from the actions of people. Emergent properties are known by their powers, and these include the power to modify the constituents of the relationship as well as things outside them. The novice supervisors and others who provided the data in this study enter the structure of the university and the structures of doctoral education and supervision as pre-existing. The SEPs of these structures would condition their agency. In some cases, the SEPs may enable the novice supervisors to act in certain ways or to draw on certain beliefs, in other cases the SEPs may constrain their actions and beliefs.

In other words, people can decide to change the way in which supervision development is carried out, but they cannot create a new structure called supervision development because it is already in existence. The supervision development practice was seen and understood as a phenomenon emerging from interactions of institutional and other *structures* and the research and other *cultures* with the interaction of *agency* of the novice supervisors. Structure necessarily predates the action(s), though these actions can then transform it so structural elaboration necessarily post-dates those actions. Structure and culture work together to condition the environment that emerging supervisors find themselves in. So, structure is materialistic, while culture is ideational as discussed in the following section.

3.3.2 Cultural considerations

Culture is the world of ideas. Archer, (1996) refers to *culture* as the ideational reality: values, theories and beliefs that are not always easy to identify, but which are learned through social interactions. Archer, (1996) declares that culture comprises three elements: the Cultural System, Socio-cultural interaction, and the interplay between them. Archer, (1996) points out that culture refers to how and what we think about things, including our beliefs and values.

Babbie, (2011) proposes that each person inherits a family culture made up, in part, of firmly accepted knowledge about the workings of the world and the values that guide our participation in it. Furthermore, Kuh and Whitt, (1988) argue that culture is a difficult concept to work with and that a study of institutional culture is not unproblematic, because the idea of culture as a general framework of analysis must include as many elements of higher education institutions as possible, which is typically impossible in the scope of one study such as this PhD.

Culture can be understood as a shared meaning among group members, even though the group might not understand what is to be shared (Higgins, 2014). In joining the conversation, Yin, (2014, p. 308) explains culture as "an invisible social structure, embracing groups of people larger than kin groups, who share a common language, religion, or ancestry not always coinciding with political institutions or geographical boundaries". For this study, culture can be referred to as the institutional culture and how activities such as research and postgraduate education are understood by different agents in different roles. Emerging supervisors may feel they have to adapt to the institutional culture they find themselves in and may thus find themselves conditioned by the pre-existing culture.

Tierney and Lanford, (2018) maintain that institutional culture in higher education is most apparent to individuals when they move from one institution to another after spending a significant amount of time at the previous one. In the South African context, institutional culture is often used to refer to what is perceived as the overwhelming whiteness of higher education (Higgins, 2014). Tierney and Lanford, (2018) argue that leadership may seem to be the most apparent aspect of institutional culture but that this may be misleading as the culture may emerge very differently in various parts of the university. Culture is thus a soft and intangible construct and not always easy to identify, although Archer (1996) argues that it plays a significant role in conditioning the actions and understandings available to individuals.

For this study, culture was identified from the experiences of emerging supervisors through the interviews and how they responded to questions: in particular through the discourses, they drew upon. As Higgins, (2014) reminds us, institutional culture looks different depending on who is looking at it and from which angle, or who is looking for it and with what purpose in mind, as different people will experience culture differently depending on their backgrounds. In this study, I looked for the ability of emerging supervisors to identify any phenomenon that relates to the interactions of various people in context. Culture, as is the case with structure, is also

relatively enduring and has cultural emergent properties (CEPs). Such emergent properties might enable or constrain agency (of the emerging supervisors, for example).

3.3.3   Agential considerations

Agency is the capacity of individuals to act independently and to make their own free choices. Agency is always plural in social realism – the people, the group. It is the ability of an organism, in this study, emerging supervisors', to do as it wishes. As Archer (1995) puts it, "people are not puppets of structures because they have their emergent properties which mean they either reproduce or transform social structure, rather than creating it". Agency is the realm of human decision and action, a way of being in the world. The ability to act in a context, for example, emerging supervisors' ability to critique how supervision workshops are conducted or to select their own postgraduate students, are both examples of agency. People come from different backgrounds and thus conceptualise their work differently from each other and envisage different possibilities of acting within and upon the world they confront (Archer, 1995; Sayer, 2004).

Archer regards agents as always being plural and as existing before the individual actor. Agency is the domain of human activity and interaction; thus, "structure and agency are separate strata, that is, they possess completely different properties and powers" (Danermark et al., 2002) but the one is essential for how the other will be enabled or constrained. Agency represents the extent to which individuals demonstrate effortful action to achieve their goals, for instance, agreeing to supervise during their own doctoral candidature or not. A realist philosophy concludes that agency does not create the 'parts' of structure and culture, but rather transforms or reproduces it in any given time. Agents can only operate through structures and within cultures, and these evolve through the actions of agents and vice versa (Archer, 1995). Emerging supervisors are expected to transform through the form of development that is available to them, and they may, in turn, transform the nature of such development.

Agents thus also have powers, which are termed personal emergent properties (PEPs). Archer, (2003) explains that "all emergent properties are social, but they pertain to different types of agents." The agents in my study can be said to be institutional leaders, supervisors (novice and

experienced), academic developers who offer supervision development opportunities, and postgraduate students. However, the focus of the study is on emerging supervisors rather than the others. Although emerging supervisors can use their PEPs to pursue their concerns and personal projects (Archer, 1995). They have identified for themselves; their previous experiences will condition the way they use their PEPs. Their personal project might be to learn and understand supervision in order to supervise better. In order to pursue this project, emerging supervisors would need to draw on the 'parts' – both social structures and the set of beliefs, values and so on that constitute the cultural system. Archer, (1995) identifies two types of *agency*: primary agency and corporate agency. She also notes that the structure of particular roles allows for a third category of social actors.

Primary agency refers to the circumstances into which one is born (Archer, 1995). Primary agency (Archer, 2007b) typically entails being unable to exercise much agency due to their disempowered position in a particular context. They merely share life chances in common. Archer (2007a) explains that 'me' is positioned as an object of society that the 'I' discovers when facing constraints and enablements. Individuals may experience challenges with scarce resources or lack of access to available resources. Primary agency is distinguished from corporate agency and social actors by lacking much say in structural or cultural modeling (Archer, 2000).

The emerging supervisors might, for example, not have access to the necessary support they need as part of undertaking the supervision role and might be constrained in finding such support because of being positioned as having little institutional influence. Primary agency is subject to "involuntary positioning" (Mutch, 2004) because of external factors such as the social constructions of age, race, and gender. The degree of power is primarily determined by their position, social structure, and culture: such positioning works in intersectional ways. In the supervision context, one may be positioned in a certain way because of age, gender, experience, or social status. While individually, novice supervisors may be only able to draw on primary agency, collectively they may have access to what Archer calls corporate agency.

Archer (2007a) indicates that *corporate agency* is when there is the formation of 'We'. This agency emerges as a result of collective action. Corporate agency is formed when those who have articulated a collective aim organise a means to try to attain it. The collective groups critically reflect on their social situation and engage in deliberate, coordinated activity in the

interests of their social group to shape their social context (Archer, 2007). Corporate agency can be seen as community groups that are organised around a common interest. Archer explains that corporate agency is always 'active' rather than 'passive'; that is, they are social subjects with reasons for attempting to bring about change, rather than accepting the status quo (Archer, 2000). Corporate agency entails strategically interacting in a manner that cannot be interpreted as the summation of individuals' self-interest (Archer, 1995). These could be individual emerging supervisors with little experience or institutional power, but if they agreed on collective projects (intentions or goals), they could form collectives that thereby acquire more agency.

Corporate agency results from agents collectively joining together to change the existing social structures and values. For instance, supervisors may team together to question how developmental activities are structured and carried out. Corporate agency can be identified as groups who are aware of what they want; they can articulate it to themselves and others (Quinn, 2012). "Corporate agency can articulate their aims and the development of organisation to achieve the intended outcome as they possess the emergent power which enables them to become strategically involved in shaping social change" (Archer, 2000). A key example of corporate agency in South Africa was when the student protests of 2015 and 2016 shut down universities across the country to demand reduction of fees and the decolonisation of the higher education system (Boughey & McKenna 2021).

In the social world, people's roles and identities are often internally connected so that what one person or institution is or can do depends on their relation to others, as they cannot operate in isolation (Sayer, 2010b). Thus, what it is to be an emerging supervisor cannot be explained at the level of individuals, but rather, in terms of their connections with the institutions in which they work and the students they supervise, and vice versa. The different ways in which agents responded to events in this study's data will be discussed in the Findings chapters.

While primary and corporate agency considers the extent of PEPs available to individuals to enact their own personal projects within the structural and cultural conditions of their context, Archer (2007) acknowledges that there are particular roles in society (structures) which can provide particular effects on the PEPs of those who hold them. She calls these social actors.

Social actors are individuals who can claim a strong identity because of their association with a role or position in society (Archer, 2007a). Social actors are defined as occupying roles with particular properties and powers, even though each person might enact the role differently. In the context of this study, social actors could be Vice-Chancellors or Deans or others whose roles provide institutional influence. They might also be more experienced supervisors who have learned the rules and regulations of the academy and who can use their roles as full professors or research chairs to enhance their personal agency. They may have achieved a different institutional status to the emerging supervisors, and this might bring with it a sense of academic freedom.

3.4   Against conflationary thinking

Archer, (1996) refers to the 'fallacy of conflation' which happens when the 'parts' of structure and culture and the agency of the 'people' are conflated into one explanation for a social phenomenon, and she strongly warns researchers against such conflation. She further describes the three forms of conflation as the downwards conflation, upwards conflation, and central conflation. The different forms of conflation are strong tendencies, rooted in classical sociology, either to let the 'parts' dominate the 'people' (downwards conflation) or to allow the 'people' to orchestrate the 'parts' (upwards conflation) (Archer, 2000).
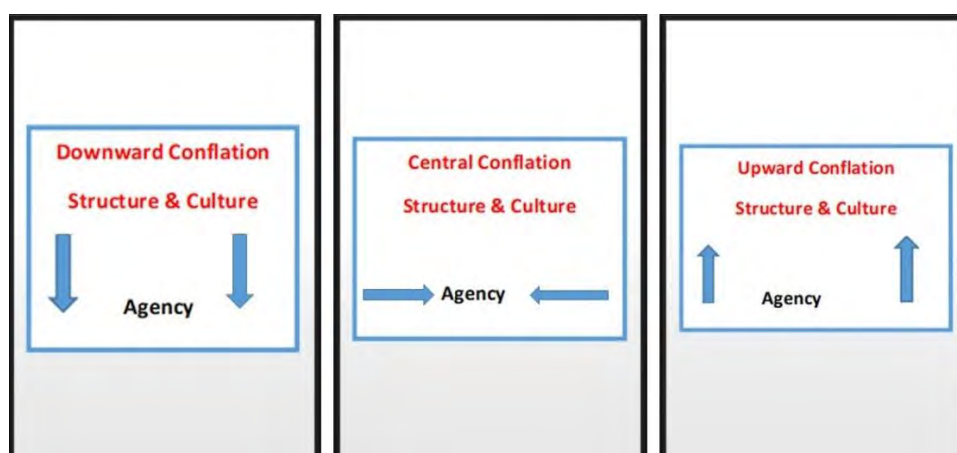
Figure 1.2: Illustration of the three forms of conflation

D*ownward conflation* is known as 'Society's Being' (Archer, 2000) the 'parts' are understood to dominate the 'people'. This form of conflation would suggest that we are entirely at the mercy of large social structures and culture and unable to exercise free will to bring about change. She further argues that downward conflation means that the properties of the 'people' can be 'upwardly reduced' to properties of the system, which alone is seen to have causal powers (Archer, 2000, p. 5). To any downward conflationist, action leads nowhere, except where structure guides it. From the viewpoint of downward conflation, structure does indeed predate action, but it goes on to determine action too, meaning that supervisors would accept the presented workshops without exercising their agency in questioning the status quo or without having any power to enact agency even if they wanted to do so.

Upward conflation, or 'Modernity's Man' (Archer, 2000) is the opposite of downward conflation as all explanations of that which occurs, are ascribed to agency. Accordingly, in upward conflation, social reality is nothing but individuals and their activities. Upward conflation privileges the 'people' over the 'parts.' In both the 'upwards' and 'downwards' versions, the central disadvantage is that by making agency dependent upon structure, or vice versa, they automatically prevent any two-way interplay between the levels, because, in each, one level is rendered inactive.

C*entral conflation* is where elision happens in the 'middle.' It "is a reductionist, because it insists upon the inseparability of the 'parts' and the 'people'" (Archer, 2000, p. 6). Autonomy is withheld from both the 'parts' and the 'people' and can prevent examination of their separate powers and their interplay. Therefore, the 'people' and the 'parts' are seen as mutually constitutive and are held to be inseparable because they mutually constitute one another. In this case neither the 'parts' nor the 'people' can be seen to have emergent properties and powers.

This kind of conflation was seen in (Giddens, 1984) Structuration Theory (1984). For Giddens, the 'parts' and the 'people' cannot be separated and, therefore, cannot be analysed separately. This explanation suggests that structure and agency are mutually constitutive, with neither awarded explanatory primacy, an issue which Archer found problematic as it limited explanations of the emergence of events. As Carter and New (2004, p. 5) put it, "the properties of structure and agency are only real in combination with each other and cannot be examined or identified separately since not even an analytic separation is possible". The non-realist

conceptions tend to accord explanatory primacy to either structure or agency, where either the one or the other is seen to exercise properties and powers. However, Archer is critical of Giddens' theory by arguing that it locks the 'parts' and the 'people' together in a 'conceptual vice' (Archer, 1995). Archer further argues that these should be separately analysed even though they are intertwined. She further explains that conflation and reduction rest upon the same ontological bases. That is, either the 'parts' or the 'people' are held to be the ultimate constituents of social reality, to which the other could be reduced.

Earlier, I referred to a paper my supervisor and I co-authored, in which we illustrated how much of the literature on supervision suggests that with the right type of supervisor and the right kind of student, it is possible to ensure 'good' supervision (Motshoane & McKenna, 2014). Most of the existing research that has already been done on postgraduate studies and in most of the doctoral guides available for students and supervisors, there is exclusively or certainly mainly a consideration of the role of student and supervisor. This places, to a great extent, the power for the supervision process and the possibilities for successful completion of the doctoral study in the hands of the 'people'. This is an example of what Archer means by upward conflation.

Therefore, to avoid conflating the interplay of structure and culture with those of agency, there was a need in my study to consider the roles that structure and culture play in postgraduate supervision development. I then had to explore how these interplay with the agency of supervisors and other individuals. It was necessary to separate structure, culture, and agency at the point of analysis for three reasons. Firstly, to identify the emergent properties of structure and culture. Secondly, to differentiate between their causal powers and the intervening influences of people due to their different causal powers as human beings. Thirdly, to explain any outcome always entails understanding the interplay between the people and the parts (Sayer, 2010a). In order to undertake such a separation, I drew on the concept of analytical dualism.

3.5   Analytical dualism

Archer's concept of analytical dualism is intended to clarify the interplay between the 'parts' and the 'people' and how this can be enacted in research. 'Analytical dualism' is a methodology based on the historicity of emergence (Sayer, 2010a). The notion of analytical dualism was first

identified by (Lockwood, n.d.) in his seminal article *Social integration and System integration*. Lockwood began by distinguishing the 'parts' from the 'people' and then examining their interplay to account for variable outcomes, which otherwise eluded theorisation (Archer, 1995) The messy nature of the social world calls for analytical dualism. The model thus says that "structure and agency are two different strata with separate powers and properties, that structures constrain and enable the actions of the agents, and that agents reproduce and transform structures" (Danermark et al., 2002 p. 181).

Analytical dualism is the "guiding methodological principle underpinning non-conflationary theorising" (Archer, 1995). Archer further describes analytical dualism as a need to study the interplay between the 'parts' and the 'people' the social, and the systemic 'structure and agency,' and argues that while this is indispensable, it is also incomplete (Archer, 1995). The separation is done to probe if culture is more significant than structure (or vice versa) and tease out how their causal powers enable or constrain agency. As people are both actors and acted upon, the interplay between agency and context is a central issue in qualitative research across all disciplines (Fleetwood, 2013).

Social realism, therefore, demands a methodology based upon analytical dualism, which depends upon an account of how the properties and powers of the 'people' and the 'parts' causally intertwine. Therefore, to avoid upward conflation, I needed to consider the roles that structure and culture played in the doctoral supervision development identified in the data. Additionally, to avoid downward conflation I had to consider the agency enacted by the study participants and others in the university in this doctoral supervision development. Archer (2000, p. 306) notes that the object of the whole exercise is to link the 'parts' and the 'people' by accepting and stressing the distinctive properties and powers about each of them and then to consider their interplay.

"Analytical dualism, therefore, places the fundamental model of structure and agency into a time dimension" (Danermark et al., 2002). According to the model, structure and agency are two different strata with separate powers and properties, and those structures can constrain or enable the actions of the agents. Danermark et al. (2002, p. 182) further elaborate that without strictly distinguishing between structure and agency, it is not possible to see the interplay in these phases. Linking of structure and agency can be achieved through an examination of the

interaction between structure and agency over time. Archer, (1995, p15) claims that "it is the social realists' insistence upon ontological emergence, which introduces analytical dualism as its methodological complement".

The transcendental question I am asking through my research is, "*why is supervision development the way that it is in the differentiated South African public higher education institutions?*" Analytical dualism is, therefore, a methodological approach through which conflation was avoided in this study.

3.6   A critique of a social realist theory

Thus far in this chapter I have outlined Critical and Social Realism as both the ontological underpinnings of this study and, through analytical dualism, as the analytical approach (an issue I return to in the next chapter). But there is no theory that is without criticisms.

There have been many criticisms of Archer's work, but this does not imply that the theory should be rejected. While I accept most of Archer's theory, for purposes of this discussion, I will focus attention mainly on those criticisms that have a direct impact on my study. Many of Archer's concepts such as morphogenetic approach, internal conversation and situational logics were not used as they were not directly relevant to my study. The morphogenetic approach is about analysing events through time to identify whether there was a change or not. Equally so, I decided not to explore how participants responded to the available form of development initiatives using situational logics. I was guided by the mantra: "Only as much theory as the problem needs."

One critique of social realism is about the idea that the 'people' and the 'parts' can be separated. The argument is about how can they be separated when they are intertwined, and one cannot function without the other as events and experiences emerge from their interplay (Archer, 1995). Another critique is that Archer's theory of society is a useful descriptor but less developed as a set of analytical tools. To counter such concerns, I drew on practical steps for the analysis outlined by (Creswell, 2014; Saldaña, 2013) which I discuss in Chapter 4.
Another criticism is that Archer "divides knowledge into three distinct types – natural, practical and discursive – but fails to see how they overlap with regard to embodiment" (Luckett, 2008,

p. 310). She draws on Archer in much of her work, continues that Archer's social theory did well in holding together the distinct powers and properties of both structure and agency, but would have more explanatory power if it fully accounted for irrational desire, inconsistent actions and the internalisation of social structures. The limits of a PhD study means that not all paths can be followed, and it would be useful for future studies to take up this challenge through more in-depth studies on the experiences of individual novice supervisors, and to use a methodology that would allow for a nuanced consideration of all the taboos and absented accounts that were not to be found in this large-scale study.

3.7   Conclusion

In this chapter, I defined the concepts and theories that provided the grounding of the research. This study was undertaken to understand social change in the South African higher education sector, considering its differentiated structure and culture with regard to how academics are developed to take on the role of postgraduate supervision. In this chapter, I argued that both critical and social realism have essential implications for the conceptualisation and conduct of qualitative research. I elaborated on how critical realism as a philosophy provided a lens through which we can see the world differently and make sense of the limitations of human understanding.

My aim of adopting an analytical and social framework was to be able to see the analysis beyond my commonsense, everyday knowledge. I have also elaborated that structure, culture and agency are deeply intertwined in their actions and manifestations at Empirical and Actual levels. The Real domain involves the underlying causal properties and powers, which account for what is observed, and experiences at the level of the Empirical and the Actual. Critical realism argues that the social world cannot be successfully explained without paying explicit attention to its ontological foundations. A study using social realism can make a significant contribution to researching supervision development challenges, and address issues that might enable or constrain such development. The three forms of conflation were acknowledged and discussed, and I explained why the study is designed to attempt to avoid all three.

My primary objective was to use the available theory to help me understand and reveal the underlying mechanisms and processes at work in supervision development and not primarily to

see whether the method is functional or not. The whole point of analytical dualism was to be able to investigate the relations between structure, culture and agency. In addition, analytical dualism is discussed in the next chapter, in relation to how it was used for the data analysis.

While much of this chapter discussed issues of ontology and epistemology and how it is that we can come to make knowledge claims, the next chapter discusses the research design, and how the data was generated and analysed. The methodology is concerned with the process or procedures by which we create knowledge claims, and this needs to align with the ontological and epistemological positioning and so the core concepts discussed in this chapter inform the process of research design and implementation. The subsequent chapters of this thesis are structured in a way which allowed me to demonstrate the framework in action through the findings.

Chapter 4: Investigating supervision development

The methodology is about the borderline between, on the one hand, the philosophy of science, and on the other, the critical methods or working procedures used in specific studies

(Danermark et al., 2002)

4.1   Introduction

This research project is part of a National Research Fund funded project which focused at least in part on institutional differentiation. All seven of us in the project undertook larger scale studies within the South African higher education system (Grant number 87646, Project Leader Sioux McKenna) and considered how particular phenomena played out across the system. Others in the team have researched teaching development initiatives (Moyo, 2018), research cultures (Muthama, 2018), plagiarism policies (Mphahlele, 2019) and curriculum development (Ncube, 2020). Two further studies are still underway – a study of educational technology being undertaken by Noma Ngcobo (forthcoming) and a consideration of the emergence of comprehensive universities by Renée Morrison (forthcoming). In all cases we looked at our specific research phenomena across the differentiated higher education sector.

As indicated in Chapter 1, an interpretative analysis of education research in South Africa conducted by (Deacon et al., 2009) indicated that 99% of all education research in South Africa was small-scale research. They argued that there was a great need for research to be undertaken on a larger scale. These authors define a large-scale study as a study that focuses on problems or issues that extend across multiple educational institutions or involve large numbers of research subjects and could, therefore, be engaged at the provincial or national level. This motivated me to undertake this large-scale research to account for supervision capacity development in the South African higher education system.

As indicated in Chapter 1, this research takes place within the differentiated, complicated, and unequal South African higher education sector. This research aims to understand the social conditions of supervision development initiatives and the purpose of this chapter is to explain the execution of this qualitative study's research design. Critical and social realism were

introduced in Chapter 3, with critical realism as a metatheory for the study. The previous chapter further discussed social realist theory that calls for an understanding of the interplay between structure, culture, and agency within the data and asks for an analysis which takes this into account. This chapter describes the types of data in this study and methods of collecting, recording, and analysing the data.

First, I discuss the justification for taking a qualitative research approach. Second, I elaborate on how the selection of participating institutions was conducted. The process and challenges encountered while seeking permission to conduct the research are elaborated on. Thirdly, an account of the various data gathering methods is discussed and fourthly the analysis process is examined by returning to the concept of analytical dualism. I then consider the ethical issues related to this research and how my role as a researcher might have influenced the research. Lastly, I address the limitations of this study and briefly introduce the three findings chapters that follow.

4.2   Qualitative research

The overall approach that the study employed was qualitative. Denzin and Lincoln (2011) maintain that qualitative researchers stress the socially constructed nature of reality and the close relation between the researcher and what is studied. In the realist terms explained in the previous chapter, this entails understanding the Empirical and Actual layers – that is, the realms of experiences and events – as socially constructed, while acknowledging that there are some mechanisms at the level of the Real, which might be intransitive and yet still condition the phenomenon being studied.

Qualitative research has been defined as the study of social phenomena, typically in an in-depth and holistic way, by collecting precious descriptive materials (Moser & Korstjens, 2017). Qualitative research studies phenomena in the natural contexts of individuals or groups (Stake, 2010). Stake continues to explain that qualitative research helps researchers understand phenomena as they occur in natural settings and from various perspectives. I explored the experiences of both emerging and experienced supervisors regarding the enablements and constraints they encountered in their supervision development experiences. In qualitative

studies, the participants' voices provide rich data (Leedy & Ormrod, 2010) that can be analysed to understand the experiences of emerging supervisors.

While all qualitative research endeavours to understand the phenomena being investigated, critical realist qualitative research requires the researcher to use these data of experiences and events to identify mechanisms at the level of the real (Sayer, 2010a), as discussed in the previous chapter. I used exploratory research, which employs an open and flexible method to explore new understandings of phenomena (Babbie, 2020; Terr Blanche et al., 2006). Neuman (2014, p. 38) definition of exploratory research is "research into an area that has not been conducted and whose primary purpose is to examine a little understood issue or phenomenon and to develop preliminary ideas about it and move toward refined research questions."

An exploratory case study's strength is its intuitive method, which is also its main advantage when phenomena are studied that are not yet recognised (Streb, 2010). In Chapter 2 I discussed that there is little research on academic development related to supervision and the importance of developing emerging supervisors. Thus, I purposefully decided on an exploratory study to better understand how emerging supervisors are being developed and supported to supervise to their best ability.

However, exploratory studies are not without important shortcomings. First, I was aware that the chief shortcoming of exploratory studies is that they seldom provide satisfactory answers to research questions (Babbie, 2020). However, the use of critical and social realism helped me analyse the data beyond the level of the empirical explanation and to begin to account for the underlying generative mechanisms at the level of the Real to establish what was enabling or constraining the supervision development to emerge in the ways that it did.

4.3   Case study research

As a form of research, an individual case defines the case study (Stake, 2010). Equally, Korstjens and Moser (2017) define a case study as a research method linking a thorough, in-depth analysis of an individual, group, or another social unit. I decided on a case study as it was suitable for my attempts to understand the variable social phenomena in real-life environments,

as Yin (2014) maintains. A case study comprises investigating one or a small number of social entities or situations with data collection that involves multiple data sources (Easton, 2009). A case study can be described as an empirical enquiry that investigates a current phenomenon within its real-life context (Yin, 2014) such as postgraduate supervision development. Stake (2010) indicates that a case study is bounded, so the case is a separate entity in terms of time, place, or physical boundary such as, as in this study, the case of the South African higher education sector. The case study was appropriate as I wanted to establish whether, within this case of one higher education system, differentiated institutions had similar measures in place to develop emerging supervisors.

Furthermore, a case study was fitting to answer the broad research questions and provide me with a thorough understanding of how the supervision development process unfolds. Case studies are a comprehensive examination or an investigation of a person or group, especially as a model of social phenomena (Stake, 2010). I was thus able to reach conclusions about the South African higher education system, and some tentative findings related to the three institutional types within it, without necessarily suggesting that these findings would automatically play out in the same way in the case of other countries. Besides, the case study approach was proper for the theoretical framework for this study. It enabled me to gather data, analyse and understand the interplay of the 'parts' and the 'people', to establish the causal generative mechanisms at work that enable or constrain (Bhaskar, 2008) the supervision development of emerging supervisors within and across universities in the case of South Africa.

This research follows what Sayer (2010a) terms intensive research design that studies causal significance and has interpreting meaning in context as its primary purpose. In this research, I considered the question of methodology and the selection of research strategy, which involved my views and beliefs that underlie the enablements and constraints in postgraduate supervision development and support. Extensive research shows us how extensive certain phenomena and patterns are in a population, while intensive research is mainly concerned with what makes things happen in specific cases (Sayer, 2002). Sayer further explains that case study research focuses on an intensive examination of events occurring in a single structure, such as the public higher education sector of South Africa.

An intensive approach provided me with preliminary views about the social phenomenon, based on knowledge about supervision development (Swanborn, 2018) and how the different

institutions conceptualise this phenomenon. Equally, case study research focuses on an intensive examination of events occurring in a single structure (Bygstad, 2011). Case study research is based on an ontological assumption about the importance of studying a 'case' (Bakker, 2010, p. 930). The 'case' for this study is the complex, unequal South African higher education sector. Simultaneously, the unit of analysis is the supervision development of emerging supervisors and how they are supported from the perspective of a differentiated sector.

As noted by Sayer, (2010a) an intensive approach allows researchers to trace the possible roles of various generative mechanisms in the emergence of events and experiences. Thus, I used this approach as I tried to understand the actors' reasoning (Sayer, 2010a). An intensive, probe-like case study allows the examination of connections between a specific mechanism and diverse contexts (Elger, 2010). The intensive empirical technique covers essential elements of data collection and analyses of a qualitative kind and focuses on generative mechanisms (Danermark et al., 2002) as discussed in the previous chapter. The intensive approach focuses on generative mechanisms that might be enabling or constraining an event. It studies individual agents in their natural settings, using interviews and qualitative analysis. The 'intensive research design' can be used in research where we want to obtain in-depth knowledge of specific phenomena, like the supervision development of emerging supervisors.

Given my use of critical and social realist theory, the phenomena in this study are the events and experiences of supervision development of emerging supervisors, and my role then was to identify the mechanisms that enabled or constrained these phenomena to emerge as they did. Critical realism values two standard features of case study research design: an investigation of actors' discourses and negotiated meanings, and a concern to set social processes in context, both within and around the case (Elger, 2010).

4.4   Study aims and research question

The study aimed to investigate the mechanisms at play during the development and support of emerging supervisors across South African institutional types. As described in Chapter 1, the research question was framed as follows:

What are the mechanisms that condition postgraduate supervision development across South African public universities?

The sub-questions were framed as follows:

1. What structural mechanisms condition postgraduate supervision development?
2. What cultural mechanisms condition postgraduate supervision development?
3. What agential mechanisms condition supervision development activities?
4. How does postgraduate supervision development emerge from the interplay of structure, culture, and agency?

4.5   Seeking permission to conduct the research

As part of the ethical considerations, it has become increasingly common for institutions to require ethical clearance for research to be undertaken, to ensure that their staff members are protected. I obtained the Rhodes University ethical clearance when my study proposal was accepted (see Appendix C). 'Gatekeeper's permission' was then also sought and obtained from all participating institutions. My ability to obtain the data depended on gaining permission to access the different institutions. The permission to contact participants was essential over and above the ethical approval from the university where the study is lodged.

I began this process with a Google search of institutional websites to search for the relevant contact details. I had to identify the relevant people to assist me in providing me with permission to collect data or, if necessary, to apply for additional ethical clearance from that institution. I contacted the relevant people through email with both an introductory letter explaining the research and a copy of the Rhodes University ethical clearance letter (see Appendix A). I asked to be referred to the relevant person if they were not identified on the website, or if the websites had not been updated. Some staff had changed, and some websites did not provide clear information as to who to contact. My introductory letter requesting permission outlined the purpose of my research, how the deans of faculties could assist me in identifying possible participants, and what was to be involved in participating in the study. I was cognisant of the difficulties in undertaking large-scale research across multiple institutions. However, I anticipated that the benefits of my research, providing a broad overview of supervision

development across the higher education sector, would outweigh the complexities of multi-site data collection.

In a few cases, the ethics office personnel were quick to respond; while these cases were all traditional universities with clearly established ethics procedures, not all traditional universities proved to be so easy to communicate with. Some institutions did not have a specific office tackling ethical clearance and permission issues, and I was referred from one person to the other. In some cases, it took multiple requests to reach the relevant people to assist with permission to conduct the research. I outline the three categories of responses from institutions for the data access permission process.

The *first* category consisted of three traditional universities that acknowledged the ethical clearance from my institution of study and granted me 'gatekeeper' permission immediately. They welcomed the study and encouraged their supervisors to participate. One of the traditional institutions shared the survey link in their institutional communication circulars.

The *second* category consisted of one comprehensive and two traditional universities that never replied to me despite frequent follow-up attempts to establish the necessary process and despite submitting all the requested documentation. An additional challenge I encountered was related to cases where once ethical clearance was finally granted as permission for me to conduct the research, the 'gatekeeper' permission was requested from a different person. After continuous follow-ups, I was unsuccessful with two institutions as time was running out for me and this process of ongoing attempts at communication had extended over a full year. Therefore, two institutions were excluded, except for the inclusion of relevant documentation from these institutions which were available in the public domain.

The *third* category of institutions was those for which I had to provide significant information and complete a number of processes before ethical clearance was obtained. The information included having to complete the institutional application forms for ethical clearance from that university and uploading my proposal approved from Education Higher Degrees Committee at Rhodes University, as well as providing my supervisor's signature and her Curriculum Vitae. I then had to wait for the next ethics committee meeting. The process required several email and

telephonic communications and much patience. Each institution had its own form, process and requirements.

I will now elaborate on one instance as an example of this lengthy process. I started an email communication with a representative of the particular institution's ethics office on July 12, 2016. I never got a response, and so I followed up after two weeks. Indeed, I followed up with each institution every two weeks. I was emailed a form to complete and send back together with a brief letter explaining my research and again sending the ethical clearance letter from Rhodes University. Upon another follow-up some months later, I received the response below:

> If you read the survey policy, you will see that you must provide at least 12 weeks for a formal reply. The executive has serious matters to deal with, and the institutional committee only meets on an ad hoc basis. Your patience in this regard will be appreciated.

I was never disheartened; I kept on knocking with the hope that the door would be opened. After numerous follow-ups, I was sent an email detailing the process to be followed once again as if I had never started it. What I found intriguing was that I was now informed that I needed to pay R3 000, 00 in advance, to be granted ethical clearance (see Appendix B). I followed up once again as I needed to determine why the payment matter was not communicated when I had started the process. I never received feedback after I sent several emails raising my enquiry. In the middle of 2017, I decided to drive to the institution to request a verbal explanation regarding the payment and to ensure that I had followed all the required steps I was expected to make before I could be granted permission to conduct the research.

The explanation I got from the ethics administrator was that my study was too big and that it would not be possible for me to conduct such a study. I appreciated the concerns that my study would be challenging as I was aware of the complexity involved but I was not sure on what basis this was preventing them from providing ethical clearance, as my study was not lodged in their university.

I did not ask about the payment. I waited for it to be mentioned, but it was not mentioned. I was asked to explain and show evidence that I had managed to send the survey to other institutions, and that it had been completed by them. They called someone from the ethics office and

explained what I had told them in Afrikaans, which I do not understand well enough to be sure of what was said. I was then told that I could not be granted permission to send out my survey as this was too big. I was instead told that I had to decide on a single discipline, and they would consider granting permission for data to be collected from that discipline. I quickly typed a new letter of request that the survey be sent within one faculty and emailed it to the administrator. To avoid further deliberations, I decided on the Education Faculty as my study was lodged in the Education Faculty at Rhodes University, and I hoped there might be some shared understanding of the research approach and intention. The administrator printed my letter and took it to the ethics office on the other side of the building. I was not going to leave before getting a response.
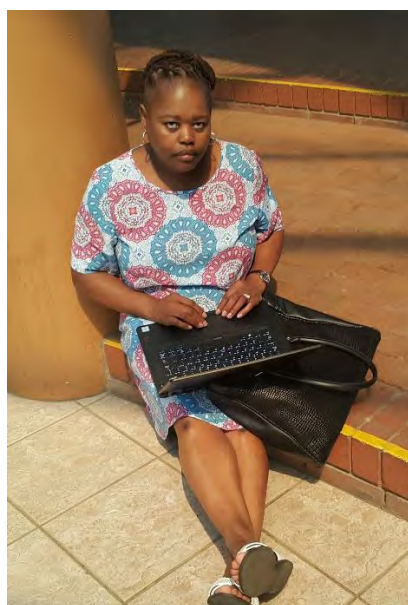
Figure 2.1: Waiting for ethical clearance after over a year of communication with a university

As I waited, I asked myself why my proposed study and the ethical approval granted from the institution where my study was registered was being questioned. Why had it been approved if the study was not doable? I wondered if my supervisors' knowledge or the institution where I was registered was being questioned. How was it that my study was problematic for one institution but not for others? The entire process forced me to think of the bureaucratic issues that manifested through institutional cultures. Some institutions seemed to be more risk-averse than others, and my assurances that no data would be attached to a particular person or institution did not assuage their concern that my study might cast their university in a poor light.

The administrator returned with my letter stamped and signed as permission for me to continue with the research. I guess I would not have permission to access the institution had I not gone there in person. Securing ethical clearance from twenty higher education institutions took over a year, which started *after* I had received ethical approval from my institution of study. I felt like the ethics committees of several institutions treated me unfairly as they did not understand my study and seemed worried that my study would cast them in a bad light. I would argue that my experience indicates that our South African institutions should implement a 'willingness to learn' approach to the governance of research ethics, rather than focus on bureaucratic compliance application of irrelevant practice (Cutcliffe & Ramcharan, 2002).

In the end I was able to get permission to collect data from twenty institutions. It should be noted that I understood the need for rigorous interrogation of the ethical underpinnings of any research being conducted in a university, but my experiences suggest that the chief concerns were about institutional reputation, despite my assurances of anonymity. Thus, the permission-granting process provided insights into reflections about the research culture of the various institutions and their value of research. Ten traditional universities, five comprehensive universities and five universities of technology granted permission for me to collect data. The table that indicates the institutions that did not participate in the study.

Table 4.1: Universities excluded from the study

Traditional Universities	Comprehensive Universities	Universities of Technology
One traditional University – never granted permission for data collection. Only publicly available documents included.	One comprehensive university – never permitted permission for data collection. Only publicly available documents included.	Mangosuthu University of Technology was excluded as it does not offer PG qualifications.
Sefako Makgatho was excluded as only formed in 2014 through its 'de-merging' from University of Limpopo.	Sol Plaatjie University was excluded as was only formed in 2013.	

	Mpumalanga University was excluded as it was only formed in 2013	

4.6   Data generation

Case study research involves collecting data from diverse sources. The data were generated through a multimethod approach, which is seen to be a research approach that can lessen deficiencies that might be caused by using one method of data generation (Flick, 2018). I generated data through document analysis, an online survey, and through semi-structured interviews to achieve data triangulation. In this case, data triangulation was not used to verify the data in the sense of finding 'the truth' as participants had strong beliefs of what works or does not work for them in supervision development and support activities. Critical realism acknowledges that reality is composed of multiple experiences of an event emerging from the interplay of various mechanisms. Obtaining data from multiple sources was not a means of verifying 'fact from fiction' but rather allowed me to obtain a more complete picture of the phenomenon of supervision development and support.

Similarly, social realism allowed me to understand that multiple experiences can emerge from diverse events because of the interplay of structure, culture, and agency. I was aware of the differing perspectives and views that could emerge from the data. Triangulation was thus rather the means whereby I could ensure that I achieved the richest, fullest picture of supervision development across the South African higher education sector. The next sections elaborate the three sources used for data generation for the study.

4.6.1   Documents

The first phase of data generation was the collection of institutional documents. Document analysis is a systematic procedure for reviewing or evaluating documents, both printed and electronic versions (Bowen, 2005). Several types of documents can help the researcher discover meaning, develop understanding, and discover insights relevant to the research problem (Merriam, 1998). A range of institutional documents related to postgraduate supervision were

gathered. These documents had different names in the various institutions but contained similar data. For instance, the student-supervisor agreements were named student-supervisor relationships or supervision contracts in some universities and in others were not available at all.

All institutional documents I included in this study were in the public domain. I collected at least one document from each of the twenty-two universities. As indicated, the three new universities, Sefako Makgatho, Sol Plaatjie, and Mpumalanga University, did not yet have any relevant documents developed and the Mangosuthu University of Technology does not offer postgraduate programmes, and so also had no relevant documents. The main document that was used was the audit report by the CHE on each institution. The Higher Education Quality Committee (HEQC) introduced the institutional audits. These audits constituted one of the mechanisms through which the national authority conducted its mandate for quality assurance.

The first cycle of institutional audits occurred between 2004 and 2010. The purpose of the audit was to provide the institutions with a view of the findings of the audit panel concerning the audit criteria as well as the panel's assessment of the effectiveness of the institution's arrangements for quality (Council on Higher Education (CHE)., 2004) The White Paper and the National Plan for Higher Education place substantial importance on the necessity to develop research capacity and increase research productivity to guarantee both open-ended knowledgeable analysis and the application of research activities to social development (NDP, 2004) and so this issue was part of the institutional audits process. The audit reports contained both commendations on what the institutions did well and recommendations on what could be improved in terms of supervision. The audit reports among the collected documents were crucial to my research as I needed to establish what the CHE recommended regarding research and supervision.

Over and above the audit reports obtained from the CHE website, I also sought out documents related to postgraduate education from each university. Such documents had different names in each institution.

Table 4.2: Institutional documents collected

Document name	Number
Audit reports	23
Student-supervisor agreement	20
Research strategy	20
Higher degrees guide	20
Research reports	20

These documents were read to understand better how structure and culture related to postgraduate supervision development were articulated in each institution. Information contained in these documents suggested some questions that were included in the survey. The use of documents helped me paint a holistic overview of what measures have been put in place to support and develop emerging supervisors. The documents used were informative to the research topic and incorporated into the process of inductively building categories related to underlying mechanisms (Danermark et al., 2002).

4.6.2   Online survey

The next process in data generation was an online survey. An online survey provided an efficient way to document the views of large groups in a brief time (Stake, 2010). I used Google Forms to design the survey. The survey research was the ideal method to collect original data for describing the experience of supervisors across South African public higher education institutions. The survey provided a different form of data generation and was used descriptively (Neuman, 2014). The survey questions were devised around supervision concepts that emerged from the institutional documents and the central ideas from my theoretical framework. The design of the survey instrument was also based on the issues emanating from the literature on postgraduate supervision.

I piloted the survey to seek feedback on the structure of the questions and gauge whether the survey questions addressed the research questions. The purpose of the pilot was to refine the questionnaire so that respondents would have no problems in answering the questions. The pilot of the survey instrument consisted of two groups. The first group had twenty-six participants, both experienced and emerging supervisors, from the International Doctoral Education Research Network (IDERN). This online network shares publications on doctoral education and supervision and was suitable to respond to clarity-seeking questions on doctoral education. I asked members of IDERN to complete the survey and to provide me with comments on its appropriateness. I also asked them for input on how long it took them to complete.

The second pilot group were South African academics from my personal networks. I contacted them by email and requested that they complete the survey and provide me with feedback. I asked whether the online survey was easy to understand and complete. I also asked 58 pilot participants to comment on the representativeness and suitability of the items. The feedback I received was mainly technical and related to the survey's structure and, thus, was easy to amend. This process helped improve the flow and structure of the survey. However, below is an extract from the non-technical feedback I received from an expert on the social realism framing and was used for the study.

> *I did not see much about culture or agency in your questionnaire; I could see some things are about university structure. How will you answer those sub-questions? They are exciting, but culture is a malleable and intangible construct, how will you measure it or ask it in a way that your participants can answer? Agency is perhaps a bit easier; you can directly ask the participant about their agenticness. How do they seek help, what support do they seek out, where do they find students - and that can give you a measure of agency, but I did not notice such questions in your questionnaire.* [unedited]

The pilot prepared me for the actual data generation in the sense that I had to check the responses on daily basis. It also allowed me to identify what I had overlooked. The feedback allowed me to check the feasibility of the survey tool and how it could be amended. Such feedback was used to further develop the survey, until I was satisfied that it met the purpose of the study.

Participants were requested to select one of the ratings in response to each statement and provide their experiences for the open-ended questions. The survey thus utilised both a nominal scale using closed-ended questions, which allowed for quick responses, and open-ended questions, spread throughout the survey to encourage engagement. The closed-ended questions allowed the participants to select the option that was relevant to them. In contrast, the open-ended questions prompted them to express their perceptions of development and support opportunities available for them or lack thereof. The survey comprised six sections with twenty-five questions which could be completed in about twenty minutes.

The first section was an invitation to participate in the study and a brief description of what the study was about. The second section addressed the informed consent while the third requested the participants' biographical data. The fourth and fifth sections investigated the supervision development and process. The last section was an invitation to further participate in the study through an interview, should they be willing to do so. See Appendix D for a copy of the survey and the open-ended questions below:

1. How is the supervision load shared within your department?
2. Are the supervision policy documents enabling or constraining your supervision process?
3. What are your beliefs about what supervision development should be?
4. What training development, if any, is conducted in your institution or department?
5. What training or development for emerging supervisors do you think might be helpful?
6. What is the supervision selection process in your department?

The survey obtained a broad overview of what practices are used in doctoral supervision development. One hundred eighty-six participants completed the survey between July 2016 and January 2017. The survey functioned as a heuristic tool that provided a means of obtaining an overview of the main trends, similarities, and differences between the different institutional types. The online survey was an appropriate tool to consider as I dealt with a large population of participants.

The advantage of using an online survey was that it was quick to administer, and there was an absence of interviewer effects or interviewer inconsistency, thus, the online survey reduced the

power dynamics between me as a researcher and the participants (Stake, 2010). Another advantage of using an online survey was that it provided faster response times compared to hard copies that might need to be posted to the participants and back to the researcher and get lost along the way. The online survey provided few unanswered questions and generally good responses to open-ended questions (McCabe, 2004). The online survey further allowed the respondents to complete it at a time and place suitable to them.

Other strengths of survey research, in general, are that it is useful to understand the beliefs and attitudes from a large number of participants (Babbie, 2020). This is where I managed to cost-effectively secure a broad overview of the supervision development and support from across the differentiated landscape of higher education. Unfortunately, some participants only provided short answers to the open-ended questions, which indicated the need for interviews to allow me to generate more in-depth data. The Google Form allowed for the respondents' replies to be logged directly, and the entire dataset was retrieved once data generation was completed. Also, the weakness of a survey is that it can be regarded as superficial for complex information and weak on validity, as responses were considered approximate indicators of what I found when the questions were designed (Neuman, 2014).

However, the survey's weakness in providing partial data was lessened through the individual semi-structured interviews to obtain more rich data and address the gaps. To achieve this shortfall, the last item of the survey invited participants to participate in an interview. Participants who were willing to be interviewed were requested to provide their name, surname, and email address so that they could be contacted. The invitation yielded 80 potential participants, both emerging and experienced supervisors.

My survey participants came from a purposive sampling (Miles & Huberman, 1994; Merriam, 1998) as I searched for people who met the criteria of having supervised for two years or more. I used purposive sampling as a qualitative-based sampling strategy, which refers to the selection of participants based on their knowledge and purpose (Babbie, 2011). I indicated in the invitation that participants needed to have supervised for two or more years. The Heads of Departments were identified through the institutional websites. I then sent them the survey link (see Appendix D) with a covering letter indicating that I had ethical clearance, explaining the purpose of the survey, and requesting them to forward it to supervisors as they saw fit. While it had been a very long process of obtaining permission from each university to send out the

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invitation to their staff, this did not mean that the survey was then widely circulated, and I had to rely on the goodwill of recipients of my email to forward the survey link to staff. The open-ended data of the survey provided issues to follow as I prepared for the interviews.

Table 4.3: Overview of survey respondents

Institutional type	Number	% Of participants
Traditional	123	66.4%
Universities of Technology	25	13.3%
Comprehensive Universities	38	20.3%
Total	186	100%

4.6.3   Semi-structured interviews

The third phase of data generation was in the form of semi-structured interviews. I decided on interviews as one of my data generation techniques as I needed to solicit the perspectives of emerging supervisors directly. Since it was challenging to ask culture-related questions in the survey, such matters of institutional culture became a crucial focus in the interviews, in addition to anything that was not clear from the open-ended questions. The survey data provided a platform for me to start the interview conversation.

Elger (2010) suggests that interviews should be 'theory-driven,' designed to explore, refine, and evaluate the character of mechanisms and link to the study outcomes. The interviews were thus structured around a set of questions which served as a guide to facilitate the conversation. The qualitative research interviews further sought to describe the meanings of central themes in the life world of participants (Korstjens & Moser, 2018). Unlike a survey, a qualitative interview allowed my interaction with the participants (Babbie, 2010), in which I had a general plan of inquiry, including what I needed to determine.

I used an institutional website search to establish the potential participants' disciplines, in order to ensure that I had a spread of both disciplines and institutions in the selection of interviewees. Of those 80 people who volunteered to be interviewed, 80% were from the natural sciences and 20% were from other disciplines. I especially wanted to engage with emerging supervisors even though experienced supervisors also took part in the survey as they valued the study and wanted to share their experiences. I aimed to interview two supervisors from each of the twenty

institutions and tried ensuring a wide spread of disciplines. Unfortunately, not all disciplines were represented by the volunteer sample. I ensured participation from a range of study fields, which I grouped as follows: Education; Health Sciences; Natural Sciences; Business, Economic and Management Sciences; Humanities and Social Sciences; and Engineering and Technology. My groupings were influenced by the clustering used (Cloete et al., 2018) in their South African doctoral education study. Despite my attempts, I had 54 participants in total with one participant from one of the institutions and up to six from each of the others. Nevertheless, I was mindful from the outset that it would not be easy to find participants that ensured representation across all participating institutions and fields. I therefore had to contact individuals who were recommended by some participants. The biographical data revealed that about half of the participants had been supervising for less than five years, which was an expected group to participate.

Table 4.4: Overview of interview participants by institutional type

Institutional type	Number	% Of participants
Traditional	32	60%
Universities of Technology	8	17%
Comprehensive Universities	13	23%
Total	54	100%

Table 4.5: Overview of interview participants by field

Discipline/Field	Interview participants
Education	21
Engineering and Technology	2
Health Sciences	12
Humanities and Social Sciences	11
Natural Sciences	6
Business, Economic and Management Sciences	2
Total	54

I contacted participants who agreed to be interviewed, expressed my gratitude and tried to arrange for a convenient date and time for the interviews. The interviews were conducted face-to-face, through Skype and telephonically. The different options were reliant on the availability of participants and other logistics, such as the distance from Gauteng province where I am located, and some participants not having the necessary technology. The next step was to contact participants who would not form part of the interviews. I thanked them for completing the survey and for their willingness to participate in the interview. I explained to them that they would not be interviewed as I had enough representatives from their institutions and disciplines.

The main objective of the interviews was to understand in more depth what the participants revealed in the online survey. The semi-structured interviews offered the potential to deal with the complexity of a story in need of contextualisation (Galletta, 2013). Interviews were thus appropriate as I wanted to know how institutions develop and support emerging supervisors. I decided that semi-structured interviews would be more appropriate as more nuanced and in-depth data was needed to augment the brushstroke data from the survey. Moreover, I needed to examine how and why specific experiences, behaviours, and decisions around supervision development occur. The semi-structured interviews allowed me to develop in-depth accounts of experiences and perceptions of individuals.

Creswell (2014) describes a semi-structured interview as an approach used by research interviewers to generate verbal data through discussing specific topics with research participants in an informal and semi-structured way. The interviews were structured around a set of themes that emerged from the survey data and which served as a guide to facilitate the interview conversations. I wrote the interview questions down in an interview guide but then encouraged participants to speak freely. I asked questions intending to clarify what was unclear from the open-ended survey data. Participants were asked to elaborate on their experiences of being supervisors, with an emphasis on the development and support they received along the way. As a result, interviews were more of a discussion with the participants as I wanted them to be free to voice their views regarding the forms of supervision development or lack thereof.

As this process went along, in later interviews I became more focused as the interview evolved. I asked participants about their supervision experiences and whether there were opportunities for development as supervisors and how they thought that supervision development can be best

be facilitated to meet their supervision needs. Therefore, the conversation with the participants helped me establish a general direction for the discussion (Babbie, 2010) and pursued specific issues raised by the participants. I asked follow-up questions and encouraged elaboration on topics by using probes and prompts and keeping a brief period of silence.

According to many qualitative researchers, the 'reality' we observe is formulated by our social, cultural, historical and individual contexts. (Archer, 1995) argues that it is not enough to use only interview data to identify structural and cultural emergent properties intended to reveal what emerged from the data, from the individual contexts. Hence, realist researchers regard interview data as useful, as long as there is an awareness that people's assertions are their conceptions and perceptions of reality and they may also provide inaccurate accounts of events.

The length of the interviews ranged between twenty and sixty minutes, depending on the participants' supervision experiences. A vital advantage of the semi-structured interviews was the attention paid to the participants' lived experiences, while also addressing theoretically-driven variables of interest (Galletta, 2013). The face-to-face interviews allowed me to have a quiet conversation with participants, while the online and telephonic interview also went well as participants were excited to share their experiences. The interviews provided insights into individual experiences that enabled me to explore the experiences of emerging supervisors.

4.7   Data analysis

Data analysis in qualitative research is ongoing, and an iterative process (Henning et al, 2004). Rubin and Rubin (2011, p. 31) state that "qualitative data analysis explores themes, patterns, and structure to interpret meaning and to generate rich depictions of research settings". Data analysis entails a systematic search for meaning. The data analysis in this study was conducted by asking questions of the data (the documents, survey and interview transcripts) to identify essential issues that emanated from the research. The process was useful in further analysing the data and seeing enablements and constraints emerge. I analysed with an attempt to get to the 'level of the real' whereby underlying mechanisms can be identified (Bhaskar, 2014). Danermark et al., (2002) refer to this attempt as abduction and retroduction. In the use of critical realism as a theoretical framework, abduction and retroduction are two vital methods of

interpretation besides induction and deduction, where I became familiar with the data. The data analysis phases are presented in the figure below.
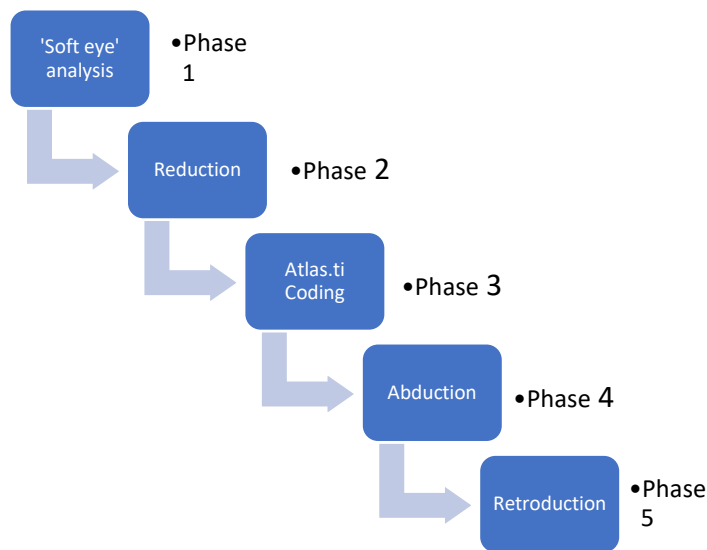
Figure 4.2: A representative of the five phases of data analysis

The Google Form allowed for a simple descriptive statistical analysis of the survey's closed question demographic data, through graphs. The use of the Google Form for the open-ended responses helped cluster the reactions according to the different questions. I analysed the open-ended survey responses together with the interview data. The data were stored in both Atlas.ti and Google Drive for safekeeping and backup.

I transcribed the first twenty interviews, which allowed me to engage with the data and become familiar with it. I outsourced the transcribing of the remaining thirty-four, due to time constraints. I then ensured that transcripts were accurate and reflected the totality of the data. I further considered the silences at the level of the empirical (Bhaskar, 2008) and noted these in the transcriptions. I undertook soft eye analysis (Maton & Chen, 2016) at this stage, which requires becoming familiar with the data through repeated reading. I jotted down notes of issues that emerged or seemed of interest but did not yet consciously apply the analytical framework.

The second phase of my analysis was data reduction. Miles, Huberman, & Saldaña (2014) explain data reduction as a form of analysis that sorts, improves foci, discards, and places data in such a way that conclusions could be reached. Qualitative research's effectiveness allowed

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me to inductively approach my data analysis and allowed for an iterative and ongoing pursuit of meaning. I followed Saldaña's theory to analyse the data, whereby I read the data and reduced it to a manageable size (Saldaña, 2013), ensuring that I did not lose the wholeness of the data (Cousin, 2009).

The next step was to order similar or dissimilar categories into broader higher-order categories (Moser & Korstjens, 2017). I wrote memos as I coded and explored patterns of frequency, recurrence and absences. I had to think about what was said, as well as how it was said. As Cousin, (2009) advised, I had to study what my participants said rather than what I wanted them to say. I also had to take a reflexive stance in my analysis in order to ensure trustworthiness, as I acknowledged that I would be subjective to the data.

I then used concepts from the literature to devise a general description of the phenomenon under study. Subcategories with similar events and information were grouped as categories, and categories were grouped as themes. The data analysis involved analysing the participants' patterns and thoughts from the responses to obtain an understanding of the phenomenon under study. The volume of data generated required me to use computer-assisted qualitative data analysis software and I used Atlas.ti Version 8 software as it was available for me from the institution where I work. The third phase of the analysis was using Atlas.ti as my data management tool to systematically code all the data from the survey and the interviews.
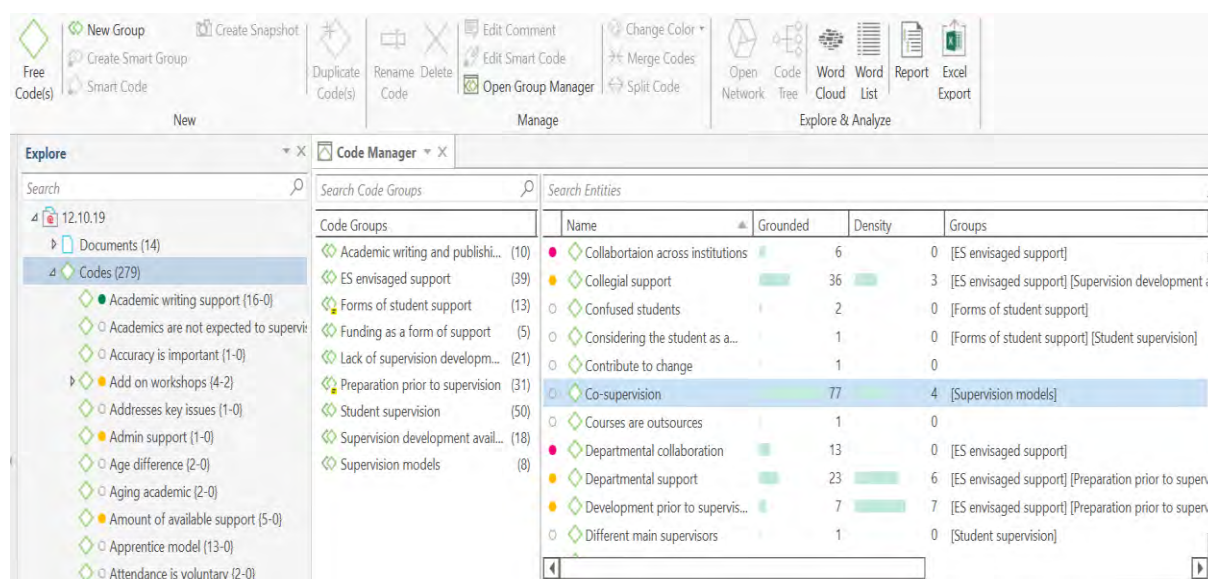
Figure 4.3: Example of codes generated in Atlas.ti

Atlas.ti was further used to annotate and retrieve texts, locate phrases and segments of data, name and label the codes, sort, organise and create networks. I still had to do the analytical work by studying what was in the data and I explored themes, trends and structures to interpret the meaning (Cousin, 2009).

Maxwell (2012) advises researchers to regularly write memos during data analysis, so that they can capture the analytic thinking about the data and facilitate insights. I wrote memos as I coded and explored patterns of frequency, recurrence and absences, which gave me an indication of how structure, culture, and agency were represented. I had to think about how the data were offered along with what was presented. I needed to begin to explore the generative mechanisms that make events and experiences possible at the Actual and Empirical levels. I was also aware that our way of communication is socially constructed and produced by mechanisms at the social level. I further studied the experiences as narrated by the participants from across institutions. In addition, I kept a reflective journal to ensure trustworthiness.

I deliberately used longer codes so that I could remember and identify other ways of interpreting the data, as I coded and analysed. Coding the data allowed me to think systematically about what the data might be revealing (Cousin, 2009). The data was seen as a pattern when several participants from the different institutional types reflected on similar issues.

Data were coded and codes were grouped into categories using a feature in Atlas.ti known as 'code family'. The Atlas.ti allowed me to code the same segment of data several times to identify emerging themes. The patterns emerged from the data when some participants repeated experiences, and the data was grouped together according to relationships (Saldaña, 2013). Thus, several links were established and networks created as illustrated in the next figure.
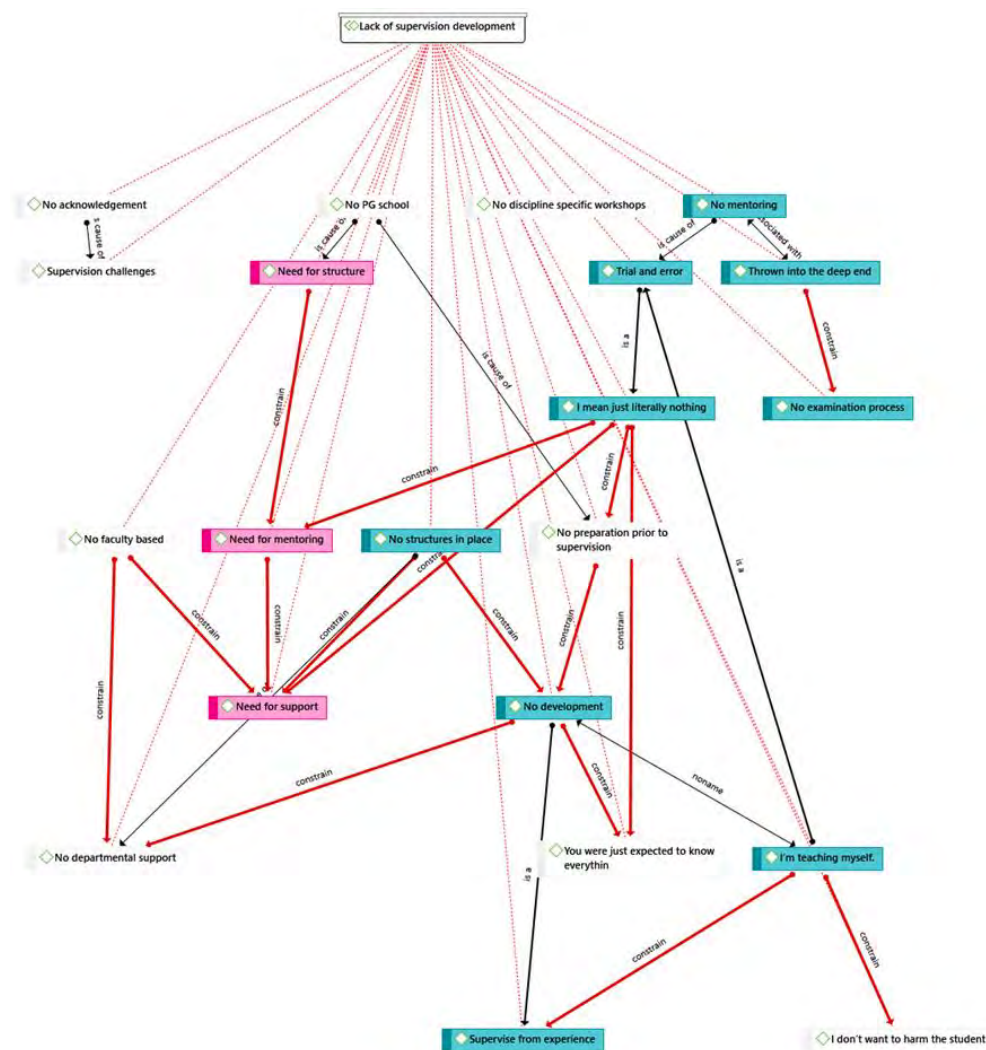
Figure 4.4: Example of code networks generated in Atlas.ti

The next step was when I used analytical dualism derived from the work of social realist Margaret Archer to identify the roles of structure, culture and agency, and their interplay (see Chapter 3). The theory allowed me to answer the 'why' and 'what' questions. Social realism demands a methodology based upon analytical dualism, where the explanation of why material things are, as they depend upon an account of how the properties and powers of the 'people' causally intertwine with those of the 'parts'. Abduction and retroduction are two essential tools for analysis in realist research, as they enable explanations of social phenomena that reveal causal processes and mechanisms (Danermark et al., 2002). My approach was primarily guided by Chen and Maton's (2016) suggestion that data should be allowed to emerge, rather than the researcher imposing pre-described categories on the data.

Abduction (also known as theoretical redistribution) is the process of forming possible explanations from the data, implying that a phenomenon or event is interpreted from a set of general ideas or concepts (Danermark et al., 2002). The process enables the researcher to move from the empirical level to explore the deeper levels of reality. It is a practical reasoning method with a purpose to create ideas and explanations that account for surprises and unmet expectations (Locke, 2010; Shank, 2010). Abduction, thus, entails a:

> . . . move from a conception of something to a different, possibly more developed, or more profound conception. Abduction happens through our placing and interpreting the original ideas about the phenomenon in the frame of a new set of ideas (Danermark et al., 2002).

Abduction refers to making sense of data by using theoretical and conceptual lenses to explain the study (Danermark et al., 2002). Accordingly, abduction enabled me to understand supervision development anew, by observing and interpreting the data using analytical dualism as an analytical framework. The process guides the interpretative processes by which researchers assign meaning to events about a broader context (Danermark et al., 2002). I had to move between the data and the existing knowledge on doctoral education and supervision development.

Similar to abduction, retroduction offers knowledge of structures and mechanisms that cannot be directly observed in the empirical domain. Retroduction is the core of the critical realism explanatory model. Retroduction as a mode of inference aims to identify what must be true, in order for an observed event to take place as it does (Danermark et al., 2002).

It is derived from the ontological assumption of emergence and epistemological focus on clarification, the use of causal mechanisms as the foundation for this explanation, the possibility for multiple possible explanations, and the knowledge that these causal mechanisms may be observable empirically (Wynn & Williams, 2012). For instance, what conditions may exist for supervision developmental initiatives to be deemed successful (Danermark et al., 2002). Retroduction involves moving from empirical data, for example, a description of experiences provided by an emerging supervisor, to positing the conditions which could have led to their emergence. Therefore, retroduction may be described as a thinking process whereby a

researcher engages with both the Empirical and the Actual levels to work back to the Real level to explore the generative mechanisms at work in order to understand what is going on at the level of the Real. Retroduction further provides reasoning to come to an understanding of why things are the way they are. Thus, the realist question for the study is "why is supervision development and support the way it is across South African institutional types?"

Retroduction is a form of interpretation that seeks to meet the critical realism goal of explaining, by identifying and confirming the existence of a set of mechanisms that are theorised to have generated the phenomena under study (Wynn & Williams, 2012). Retroduction further provides reasoning to come to what conditions must exist for '*X*' to be the case and not '*Y*'. The following questions guided the retroduction process in my study:

- What properties must exist for supervision development to exist in the way that it does?
- What must the context be like for the development initiatives to be successful or not?
- How do we conclude that mechanisms are causally effective for supervision development and support to be the case and not others?

The researcher can propose multiple explanations that describe a causal mechanism, set within a social structure through the retroduction process, which must exist to produce the observed events (Wynn & Williams, 2012). Thus, retroduction further became useful when I analysed the data to search for underlying mechanisms. The strength of using this technique is that it provides knowledge of structures and mechanisms that cannot be directly observed in the domain of the empirical (Danermark et al., 2002). Retroduction subsequently allowed me to take a claim and put it in different situations where I asked several questions regarding that claim, for example, the notion of workshops as a claim that supervisors were developed was investigated.

Nevertheless, it was not the concept itself that was interrogated, but what goes on around the workshops and other development initiatives, including all questions that I thought that related to the success or failure these initiatives. For instance, I explored how the workshops were presented and what made people attend or not. Retroduction, as an interpretation tool, contributed to my research to confirm the underpinnings of supervision development and support across institutional types. The primary purpose for this research was to use the available theory to uncover the generative mechanisms and processes at work in my context and not

primarily to see whether the theory is 'good' or not. As indicated earlier, obtaining clearance to collect data from the multiple universities included in this study was extremely labour-intensive. But ethics is more than attaining access and ethical clearance, and I now turn the discussion to additional ethical aspects that I had to consider throughout the study.

4.8   Ethical considerations

All research must adhere to ethical considerations related to obtaining permission to the research site and participants and behaving in ethical and respectful ways (Henning et al., 2004). Ethical clearance is meant to be a means by which to ensure that researchers adhere to an ethical code of conduct. (Flick, 2018) agrees that ethics refers to the appropriateness of the researcher's behaviour about the rights of those who participate in the research. I, therefore, attempted to observe all the principles referred to in the ethics application letter (see Appendix A). The transcribers of the interviews also signed an agreement that they would not disclose any information from the interviews. Informed consent is based on the right of individuals to consent to participate once they are clear about the project (Denzin & Lincoln, 2011).

The survey participants had to read the consent form, which formed the first part of the survey before they could continue. Survey participants decided whether to participate by clicking the 'Continue' button (see Appendix D) on the screen to proceed to the next page. For the interviews, the informed consent letter was sent a week before the interview date (see Appendix E). Participants were requested to read it, complete it, and send it back before the interview. However, there was a slight challenge whereby some participants did not return the signed consent forms before the interview date. I reminded them before the interview, and the written consent was sent through email immediately after the interview was conducted. Furthermore, by signing the consent form, they also agreed to the voice recording of the interviews.

The participants' privacy and sensitivity were protected (Henning et al., 2004). I informed the participants before the interview that participation was voluntary, and participants were free to withdraw at any point during the research process. I assured participants that their identity and that of their institutions would not be revealed. Furthermore, the data were securely stored on Google Drive and password protected.

I was conscious of the reality that insiders might recognise disguised locations and pseudonyms and was determined to remove any identifying characteristics. I made it clear to the participants that this information would not be linked to their anonymous survey responses. Therefore, I assured participants that their identities, any identifying characteristics, and their institutional identities would be anonymised. The surveys were anonymous, and any interview data used in the study has been anonymised. The audio recordings and transcripts were code numbered, and any identifying information from the transcripts was removed.

The transcriptions were used verbatim and included pauses and repetitions before I cleaned the data. Where I have used data quotes, I rewrote the data to keep to the academic writing standard, such as indicating with eclipses where information was cut or using square brackets where edits were made for clarity, without changing what the participants said. I approached this research with the intention that any decisions taken by institutions and the higher education system because of my findings should have only positive consequences for the collective interests of the participants.

Data quotes are presented as follows: The S refers to the 'survey', followed by an institutional type and the participant number. For example, S-Trad56 indicates a participant from a traditional university, S-CU11, a participant from a comprehensive university and lastly, S-UT10 is a participant from a university of technology. For the interview data I used the acronym for the institutional type and the number for the participant for example, Trad4 for traditional universities and participant four, CU4 for comprehensive university and, UT4 for university of technology.

4.9   My positionality

My previous experience as a postgraduate student influenced my interest in the study as I did not want to supervise the same way I was supervised. I was curious to understand why some of the emerging supervisors seemed to be mean to students. I also work as an academic developer (although not in the area of postgraduate supervision) and engage in informal supervision development conversations that fueled my curiosity to undertake such a study. When the Strengthening Postgraduate Supervision course (discussed in Chapter Two) was introduced to

the South African higher education institutions (SAHEIs), my interest in this area started to grow, I started reading on supervision and began this journey.

As a qualitative researcher, I was an essential instrument of data collection. Therefore, I had to be considerate, reflect on my biases and maintain personal notes that helped me manage how my personal values could interact with the research situation or influence the setting (Flick, 2018). Being explicit about cross-examining my positionality in the research was crucial during the data collection phase. However, I am not a supervisor and this to some extent positioned me as an outsider as I generated my data from a range of institutions and most participants I had never met before conducting the research. I was mindful of my values, which might have influenced my data collection, and I did my best to be non-judgmental and non-directive (Moser & Korstjens, 2017). I believe I was not intimidating to my participants as I was simply a doctoral scholar engaging with participants who were ahead of me in the university as supervisors.

I attended an institutional workshop that ran over five days in the institution where I work during the course of doing this study. Attendance at the workshop helped deepen my understanding of the data. The week's programme was facilitated by experienced senior academics from the institution who teach on postgraduate supervision programmes, as well as internationally recognised experts in research and supervision. The topics ranged from the role of academic literacies; trends and issues of supervising PhDs by publication; qualitative research methodologies; the importance of writing a remarkable conclusion; and key elements for postgraduate studies, to name a few.

The range of topics was interesting but meant that each issue was only touched on in a short hour-long session. When I asked the workshop organisers about this, they said the idea was to give participants a teaser of what to expect in an extended postgraduate diploma that was being developed to run over a period of two years. I am not sure that many supervisors would be willing or able to attend a two-year qualification, given the challenges many academics noted (discussed in Chapter 5), in juggling their workloads to allow them to attend a single-day workshop. It may well be the case that only those who participate in the scholarship of teaching and learning with a special focus on postgraduate education would be able to undertake this qualification.

4.10   Study limitations

Several limitations were present in this study. Firstly, the study was large-scale, and therefore, I could not conduct follow-up interviews with participants. Qualitative research applies only a few questions and a few interviews because it is concerned with interpretation. In this study, both an online survey (with open-ended questions) and semi-structured interviews were conducted as data generation mechanisms, which were aimed to capture the richness of responses. I made an intensive effort to include the most significant responses and interpretations but there was much in the data that could not make its way into the thesis and will be communicated through publications. A future in-depth study can be conducted to explore more about what conditions supervision development by making follow-ups for clarity with some participants.

Secondly, the large sample size and cross-case analysis was a challenge as it presented an ordeal in terms of manageability and workload. However, to ensure efficiency, I structured the results in thematic sections to improve the results' manageability. Looking back, I may have been able to go deeper if I had selected just one university from each type, but then again, the scope of this study is also its strength.

Lastly, the general limitations of a survey were that there could be no prompts and probes, and the respondents could not ask for clarification of questions that might have been unclear to them. Despite my piloting it twice and making significant edits as a result, there were still items that I would probably change if I were to do this study again. Another survey limitation was experienced from some of the open-ended questions that were answered only in one word instead of giving a detailed response. Had these questions been asked in an interview, I could have prompted the participants to elaborate further. Reja, Manfreda, Hlebec, and Vehovar (2003) also raise the point that there is no interviewer in the online survey to intervene in any misunderstanding. With telephone interviews also, I lost the opportunity to witness my participant's non-verbal behaviour, which may have affected my interpretation of how far to pursue the responses given (Bishop, 2010). This limitation can be overcome through having face-to-face interviews if the situation allows, although with the pandemic protocols, data generation methods had to be adjusted.

The data collection process took place over a number of years. This was in part because of the constraints around obtaining ethical clearance detailed earlier, but also because of the demands that occurred at this time in my own work and family environments which made ongoing data collection a significant challenge. This could be a strength as it means that data represents not only a spread of institutions but also a spread of approaches to supervision development over a few years. However, given how rapidly the context is shifting, it would have been better had the data been collected within a shorter timeframe to provide a 'snapshot' of the status quo. Notwithstanding this concern, it is probable that all of the findings that are discussed in the next three chapters continue to be in evidence in at least some of the universities. Any researcher is, of course fallible, and thus any identification and explanation of the interplay of mechanisms presented in this study is open to challenge.

4.11   Conclusion

In this chapter, I described the methodological framework and the specific methods used to answer the research question. I discussed the evidence on which this study was based. This research considered the natural contexts in which supervision development happens. An overview of the research process was provided, detailing the study's planning, the methodological approach and the execution. The chapter further provided an overview of ethical considerations and study limitations.

In the social sciences, the aim is to understand and consider how things come to be as they are. Therefore, a social realist account of the events allowed me to understand the hidden realities in supervision development from across institutional types. The subsequent chapters present the findings using the theoretical framework discussed in Chapter 3, where I began examining supervision development data to answer the research question:

> *What mechanisms condition postgraduate supervision development across South African higher education institution?*

Chapter 5 takes us through the main theme that emerged from the data, which is the lack of development and support for emerging supervisors. The heavy workload experienced by

emerging supervisors formed a theme that ran through the data, and it is addressed accordingly. Chapters 6 and 7 then focus on the forms of development that were available and how participants responded to this. The main forms of development that were available were workshops and seminars and these are discussed in Chapter 6. Mentoring and co-supervision are addressed in Chapter 7, with a focus on learning how to supervise through relationships with others.

Chapter 5: Lack of development: "Just-do-it"

"I was thrown in at the deep end right from the beginning because ... you start supervising

students from day one" (Trad8).

5.1   Introduction

In the chapters that follow I discuss the data about supervision development opportunities, but the overwhelming finding was one of absence. Across all the data and throughout all institutional types, lack of support was the main theme that emerged. As indicated in Chapter 2, the HEQSF indicates that being able to supervise is one of the outcomes of attaining a doctorate, but this study found this to rarely be the case. The most consistent finding from the study was that emerging supervisors had to supervise without being prepared for the supervision role. This chapter considers the finding that emerging supervisors felt the need for coherent, structured, and ongoing supervision development.

Hammond, Ryland, Tennant, and Boud (2010), in a project undertaken in Australia and New Zealand, found that research supervisors learn to supervise through four main ways: the way they were supervised themselves; workshops; learning from being in positive co-supervisory relationships; and reflecting on practice. The first three conceptions were evident in my data and will be addressed accordingly. The study data about supervision development initiatives was focused far more on the lack of such opportunities, with limited reflection on the enablements such opportunities offered, with this latter being discussed in the next chapter.

This chapter focuses on the sub-themes within the issue of there being a lack of support. The last section of this chapter considers how heavy workloads limited participants' ability to accept development opportunities where they were available. I also consider how the institutional culture as evidence in both workload policies and incentivising supervision conditioned the likelihood and uptake of supervision development. Figure 5.1 is an illustration of the sub-themes that are discussed in this chapter.

Figure 5.1: Lack of support sub-themes

5.1   Thrown into the deep end

In South Africa, the criteria to become a doctoral supervisor relies on having a doctoral qualification. It was clear that there was generally an expectation that emerging supervisors are already able to supervise. A problematic notion was that graduating at the doctoral level entailed crossing the boundary into supervision competence.

> *Through osmosis... picking it up as you go along, trial and error* (S-Trad96).

> *The assumption is that once one has a PhD, they will be able to supervise* (S-Trad70).

In common with similar findings in the literature (for example, González-Ocampo & Castelló, 2019), in many universities in this study, emerging supervisors were deemed competent by having been supervised themselves. Alongside this data indicating a lack of support was an indication that such participants felt adrift and uncertain of what was expected of them and

desperately needed both development and collegial support to cross this border into their new role.

> *If one of the PhD outcomes is that you should be ready to supervise, then there is no explicit training during the PhD that says this is how you supervise. I think it is a crazy kind of outcome* (Trad25).

The participant below now works at a UoT but here reflects on her previous experience at a traditional university.

> *They come with a strong tradition of research. They think that lecturers can supervise, and I do not think it is that easy. There was support for the students. They had workshops for the students, which I also attended but not much support for novice lecturers* (UT1).

It was interesting to note that, as per the data quote above, while supervision development opportunities (discussed in Chapters 6 and 7) were highly uneven across the sector, comments about a complete lack of opportunities emerged mainly in the data from traditional universities.

> *It was terrifying at the beginning, but it is much less scary now. I think because I was so new even to know what it was to have a PhD, you know, I had just come out of it myself* (Trad7).

It would seem that in traditional universities it is expected that one would pick up how to supervise from the research culture, but this can be problematic where power relations make it challenging to seek support.

> *I mean, I think [traditional university] is a highly competitive environment, so saying you do not know something is a stupid thing to do because everyone is going to be [indistinct] saying "That person didn't know about this theory". There is no safe space for supervisors to express their doubts and fears. I think that is a massive problem in terms of supervision* (Trad25).

Moreover, what was quite interesting was that opportunities were more likely to be available in the universities of technology that had historically not offered postgraduate education (see Chapter 1) and had always been far more focused on professional training. It would seem that because they were explicitly striving to become more of a research-based institution, as they frequently articulated in their institutional documentation, they deliberately introduced training programmes (as will be discussed in Chapter 6). While the lack of supervision development opportunities was a concern across institutional types, supervision development seemed even less available in traditional universities where it seems to have been expected that one would learn from the institutional culture.

Similar data was evident from the UK supervision survey, whereby supervisors from the Russell group of institutions reported fewer formal development opportunities and opportunities for team support and reflection on supervision (UK Council for Graduate Education, 2021). The data suggests that the 'newness' of supervision at an institutional level led to more formal supervision development opportunities in the UoT institutions:

> *At UoT because we are not a traditional research university. There is more staff support, and there are not many opportunities for supervision or that many supervising people. Not that many supervisors. So, I find that the institution supports lecturers more than at the traditional research university. Moreover, the institution puts structures in place, like the training we have just done, to help us and prepare us for supervision* (UT21).

Similarly, Rukundo, (2020) alluded to the fact that prior to 2018, the role of formal pedagogical training in strengthening supervisory skills was not clearly understood in Uganda. However, with the rise of postgraduate education, there has been the emergence of this form of academic development. There were also various posts created in the UoTs to advance research and postgraduate studies.

> *There was a sort of research coordinator for the faculty whose responsibility was to upskill people* (UT7).

The data suggests that generally the system seems to assume that supervision can be achieved by 'default', despite the literature (see for example, Chapter 2) indicating that supervision is a

sophisticated pedagogy requiring extensive development and support, especially for emerging supervisors.

> *Suppose you are supervising, how are you doing so pedagogically, in a pedagogically sound way? If you have not thought about it, you are a [lousy] supervisor. Because I think [supervision] is a field of expertise in itself* (CU2).

> *Honestly, [there is a view that] if they are good researchers, they must know what they are doing. It is that same analogy in staff development, right? If you are a great researcher, you will be a great teacher of your discipline without any training* (Trad7).

A number of participants suggested that in their institutions there was a view that supervision development was unnecessary because supervision required research competence rather than pedagogical knowledge. This idea reveals the institutional culture that fails to acknowledge supervision as pedagogy. Indeed, it seems that in some cases supervision development opportunities were actively dismissed.

> *I know that the Strengthening Supervision course was ... fully funded, but the former DVC [Deputy Vice-Chancellor] turned it down because he claimed supervision was not pedagogy* (S-Trad64).

Supervision is understood in the literature as "a pedagogical activity that calls for pedagogical expertise and research-related expertise" (Vehviläinen & Löfström, 2016, p. 509). Similarly, Lee (2009) argues that supervision pedagogy needs to be understood as part of the teaching-research nexus. Without such an understanding by those who are what Archer terms 'social agents' within a university, it seems unlikely that supervision development would be institutionalised. There were a number of concerns expressed that understanding supervision competence as being only related to research competence was problematic.

Green and Lee (1995) long argued that many academics simply do not conceptualise supervision as pedagogy, or perhaps at least as teaching in the usual sense.

We need to develop a culture of seeing this as pedagogy. We need to develop a culture of seeing this as not just an activity, but a teaching activity (CU2).

I see supervision as an educational activity. Nevertheless, you know universities take people from the industry ... and they have never been taught anything about pedagogy (CU2).

Moving the argument further, Mouton (2019, p. xiii) argues that "making sense of university-based research implies understanding how universities work and how they value research and the pursuit of knowledge". This suggests that alongside developing pedagogical skills, novice supervisors need to come to understand institutional processes and policies. Despite reference to the view that supervision development was unnecessary, there was ample data that emerging supervisors felt the need for development opportunities.

We need the staff members with quality and competency to supervise. We need more intervention in terms of supervision development (Trad6).

Even just having [accurate] information on that and workshops on that and then having, you know, bringing in Mouton or whoever to give a seminar based on extensive research experience (UT5 & UT7).

Some data suggests that the recently developed Postgraduate Centres, which I return to in the next chapter, were often not involved in collaborating with supervisors at all.

There is a whole division of postgraduate studies at [traditional university]. However, they do not seem to be focused on supervisor development at all. It is mostly student stuff, and a lot of it is administrative rather than [supervision] development (Trad7).

The data presented is congruent to a study by Turner (2015) that emerging supervisors frequently undertake doctoral supervision not long after having completed their own doctoral studies. Emerging supervisors need the time to learn to research to be able to supervise (CREST, 2018; Cloete et al., 2015a; Gardner, 1995). However, in this study, research participants from across institutional types felt that they were thrown into the deep end as many had to accept the supervision role without development or support. They responded that "*not much support was*

available", with comments such as "*I have not been offered any support from the faculty*" (S-Trad25) and "*I did not receive any formal workshops or training*" (S-Trad27) were frequent. Gardner (1995) further noted that professionals have often undertaken supervisory roles with little or no formal training in how to conceptualise the supervisory process.

> *Nobody gives you the skills, the knowledge, nobody, even tells you what it entails.* (CU10).

> *It is just assumed, I think, that you will know what you are doing* (Trad7).

Often emerging supervisors were being rushed to take on supervision as soon as they graduated before they had undertaken any research beyond their own PhD. Given the drivers towards increasing doctoral output in the country, discussed in Chapters 1 and 2, this is perhaps unsurprising.

> *I think a lot of supervisors and supervisors are so scared to propose a good research study themselves. I think that is where they need support in just becoming good researchers before supervising someone else's research* (Trad25).

> *There is no structured way in which you are developed to say now you are ready to supervise. Give it a go. We are just given the job* [as emerging supervisors] (CU2).

A considerable number of supervisors reported that they were supposed to know how to supervise by having a doctorate and being supervised during that process.

> *The assumption is that because you have a PhD, you know how to supervise* (CU6 and S-Trad 78, identical wording).

> *None, the assumption is that if you were supervised during your own studies, you will know how to supervise others* (S-Trad53).

> *My pre-requisite was that I had a PhD* (S-Trad32).

No specific preparation (Trad28).

When I started, there was nothing like that. You were just expected to know everything. I do not know how you just – about having been a student; you were supposed only to [understand] the stuff (UT4).

Evidence from data suggests that these supervisors entered the role of postgraduate supervision with some fear and did not have a sense of capacity as they felt thrown into the deep end. It was clear from the data that the assumption in most universities (and indeed in the South African higher education policy) was that supervisors are automatically effective by completing their own high-level research. Habib and Morrow (2007) remind us, however, that researchers are unlikely to be at their peak immediately after being awarded their PhD.

Within this context of lack of institutional development and support, many emerging supervisors were concerned that their lack of expertise may have effects on their students' success. They were anxious, since, in the absence of formal or even informal deliberations about supervision, there were limited opportunities for them to assess how well they were doing until a student had completed their studies and the thesis went for examination. Two participants used identical phrasing to express this concern when they said they "*did not want to harm the student*" (CU2 & Trad9). Being thrown into the deep end was perceived as unfair for both emerging supervisors and their students. In reality, the 'parts' of structure and culture were in constant interplay as they influenced the decisions of agents on whether to supervise or not.

5.2   Through trial and error

In the absence of explicit development, many supervisors indicated that they learned what was required through 'trial and error', a phrase that was used repeatedly in the data.

There was no one to supervise, and suddenly I got appointed as a supervisor, so it was a hit and a miss and a trial-and-error process at the beginning (UT4).

No one trains you; no one shows you the ropes. You do things on trial and error, and so it is supervision (CU10).

But a lot of my own like learning to be a supervisor has been very much trial and error. It's been, just kind of been given students and having to figure out as I go along. (Trad25).

The general view then was that in the absence of supervision development, supervisors took on their approach to supervision through experimentation. Taking on a complex pedagogy entails a degree of experimentation (Grant & Manathunga, 2011) as different students often require different approaches and being able to be adaptable to the context is essential (Lee, 2008b; Manathunga, 2017). But it was clear from the data that many novice supervisors felt that the process of their working out how to interact with students was not fair to those students.

Supervisors are very uncertain of themselves. They find it scary and need reassurance and what I say to them is there is no lousy supervisor, but supervisors have different strengths, and you need to know what you are strong at and where you are weak (Trad25).

Often there was a direct call for supervision development:

Novice lectures need a lot of support on how to supervise students. Therefore, I feel there should be formal and informal programmes targeting the [emerging] supervisors. These [programmes] will help improve research quality and the throughput of research students (S-Trad65).

Hemmati (2021) notes that in Iran, novice supervisors are left to traverse their paths independently and learn through trial and error. Halse (2011) argues that emerging supervisors adapted their prior experiences as supervisors where doctoral supervision was 'learned on the job'. Learning how to supervise through the process of supervising their students was necessary for most participants in the study. The most common way to learn how to supervise is to learn 'on the fly', in other words learning by doing (Maritz & Prinsloo, 2015). In many ways, the literature shows the value of this. Several participants indicated that they welcomed the opportunity to learn alongside their students as they took on the supervision role:

I see supervision very much as a learning experience. Therefore, for me, it is about facilitating learning, and it is about journeying with the students and learning with the student and learning from the student (UT6).

... the student comes with knowledge and the student has the ability and for me, it is there for me to work with the student, help them discover their expertise, and help guide them (UT6).

However, in most cases, the data that related to 'learning alongside the student' was regarding learning about the study phenomena or the methodology rather than learning *how* to supervise. Indeed, many participants welcomed the opportunities that postgraduate supervision gave them to learn novel approaches in their field and to learn more about specific topics. In much of the literature, a goal of postgraduate supervision is seen to be emancipation (Lee, 2008b), whereby the student becomes the expert on the phenomenon and the supervisor the guide (Grant, 1999; 2010). It was, therefore, important to distinguish in the data between the benefits (and even goal) of learning about the study phenomenon alongside the student and the challenges of learning *how* to supervise while undertaking the practice of supervision.

Feelings of being "*thrown into the deep end*" and figuring out how to supervise by "*trial and error*" were rarely expressed positively as opportunities to learn. They elicited mainly feelings of uncertainty and fears of harming the students. Nonetheless, even the data on learning how to supervise through the practice of supervision was not entirely negative, with one participant's demonstration in the comment:

I have learned what to do and what not to do by learning from the students I have supervised. What they like and dislike. What worked and what did not work (S-Trad27).

There was also data that showed that many supervisors are able to develop expertise through their on-the-job learning while supervising:

I have become a better supervisor. With every student I have supervised, I come up with things I could have done better and gain more experience (Trad9).

Learning to supervise while supervising is inevitable and even valuable because we are always reflecting and growing as professionals. Indeed, being adaptable according to the needs of the student and the demands of the research project is often seen to be an ideal approach to supervision (Lee, 2008b). However, where a supervisor feels ill-prepared for supervision, lacking in confidence and uncertain as to the expectations on them, is when they have to work out their role entirely through their interaction with their students and is problematic (Maritz & Prinsloo, 2015, Maritz & Prinsloo, 2019). In some cases, participants also indicated that they were unaware of the approaches that were available in supervision or the models they could use. A few reflected with some concern on the cost borne by the first students they supervised as they were "*working in the dark*":

> *We do not have any support... I mean even trying to figure out the processes like what is the process of a student submitting, what is the process of a student registering, even those things, every time I must figure it out for myself* (Trad9).

> *You have done it with your first students. Now you go to the second student they are still a problem. It would help if you changed the way you know, deal with your students, or look at your strategies. You know a terrible habit* (CU5).

Those supervisors who were able to reflect on their supervision practices and their relationships with their students and thereby grow into their roles, were able to develop other approaches to improve their experience (McAlpine & Amundson, 2011) but some battled to do this and felt adrift. These supervisors felt that the reliance on the trial-and-error process was ineffective in their development. Similarly, the legal framework in Germany for educating and training supervisors is still based on traditional assumptions, such as the notion that professional supervisory skills can be acquired in learning by doing (Brentel, 2021). It was also common to hear about such trial-and-error emerging from experiences of being supervised, an issue to which I now turn.

5.3   Supervising based on personal experience

Many lecturers become supervisors 'by default' (Bitzer & Albertyn, 2011; Lee, 2009) and therefore draw on the way they were supervised, thereby perhaps perpetuating problems and inequalities.

> *you follow the example that you received* (S-Trad 54).

Most new supervisors have few or no pedagogic models to draw on other than their own experiences of being supervised (Bøgelund, 2015). The data was filled with examples of supervisors reflecting on their own terrible experiences of being supervised.

> *Neither of my supervisors from my doctorate was involved. I often got the impression that they did not even read what I sent them* (CU2).

Some emerging supervisors actively did not want to repeat their unpleasant experience of being supervised:

> *When I do supervision, I bring that experience of being ignored, being treated as stupid, being marginalised, being spoken down to, so that when I supervise my students, I do not want them to experience that* (Trad11).

Denicolo (2017, p. 35) suggests that supervision development opportunities are vital because many supervisors "had good intentions but many of them clung to the familiar, personally experienced, and well-understood traditions of postgraduate research supervision and training, while much else around them in the professional arena was subject to change".

> *If you had [terrible] supervision, you end up becoming that kind of supervisor, and if you had adequate supervision, you tend to be a good supervisor* (CU10).

> *I have not been prepared for the supervisor role. I am acting based on my experience from my ex-supervisors* (S-Trad30).

personal experience as a student guided my role as supervisor (S-Trad8).

They supervise according to how they were supervised as there are very few training opportunities (S-CU25).

They have not been prepared for the supervisor role, and only acting based on the experience from [their] supervisors (S-Trad30).

As with the literature (Backhouse, 2010; Dietz et al., 2006), this reliance on personal experience emerged from the data as the dominant means of establishing one's approach to supervision, but it is not without its challenges. The results of an empirical study conducted by Amundsen and McAlpine, (2009) reveals that supervisors learn their role from and through personal experience, which learning occurs consistently and is often unsolicited. Such learning often emerges from personal experience as doctoral students or their own experiences as supervisors. Several participants shared the same negative sentiments from their supervision experience regarding what not to do in supervising their students:

I have learned what not to do and apply the good practices I experienced in my supervision. (S-Trad29).

I did not have an excellent PhD supervisor - I learned from him how not to supervise. (S-Trad30).

… not making the same mistakes that my supervisors made when I was a student. (S-Trad82).

My supervisor taught me what not to do. He was not the best supervisor as I was left mostly to my own devices during my PhD study, and so I learned that what he did poorly, I could do better (S-CU11).

Teaching expertise is often seen as common sense and not needing development (Moyo, 2018). Therefore, it is unsurprising that this seems to be especially so at postgraduate level, where the assumption that the research expertise knowledge that the supervisor attained with their PhD is

enough to enable them to supervise. Hence emerging supervisors had to use their own experiences as candidates as a benchmark for their understanding of what a supervisor should or should not do.

> *I try to avoid that which irritated me in their supervisory practice when working with my students*. (S-Trad42).

> *I have tried to do more of what worked for me and avoid what made me unhappy or disliked in supervision*. (S-Trad32).

> *I have drawn on what worked for me while I was being supervised and what did not work for me and tried to bring in elements that I thought were lacking* (S-Trad26).

Many of those emerging supervisors who experienced their doctoral journeys as isolating and scary indicated that the experience helped them to become more attentive and supportive to their students:

> *I had such a bad experience in my PhD study, which has made me understand how vital a supervisor is to a student. I have thus vowed never to subject any of my students to the same situation in which I was.* (S-Trad32).

> *I learned and developed my way, which is thriving by not making the same mistakes that my supervisors did when I was a student and taking valuable lessons from things successfully* (S-Trad27).

The data revealed that the only knowledge about supervision practice available to many participants is how they were supervised; and for some, it was a pleasant experience, aspects of which they could emulate; while for others, it was unpleasant and not to be repeated. Although, Archer (2003) reminds us that as agents we are fallible, and may misinterpret our course of action, and we 'do not have to be right every time'. Being fallible and making mistakes can have a great effect if you are an emerging supervisor on your way to achieving excellence. Thus, the data indicates that, due to the lack of support, emerging supervisors situated themselves concerning their experiences of being supervised. This finding echo (Backhouse, 2010) in her doctoral study that the only requirement for becoming a supervisor was having a

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PhD and that many supervisors replicated or avoided repeating their student experiences. While role modelling, positive or negative, is undoubtedly a powerful learning approach (McKenna, 2020) it was clearly not a sufficient base from which to take on the supervision role.

5.4 The always/already student and the effective supervisor

The data presented in this chapter thus far all points to an institutional assumption that having completed a doctorate, one should be able to supervise. (Manathunga & Goozée, 2007) note that the idea that supervisors can be effective from the start, simply by having been supervised themselves, rests in part on the idea of the "always/already" student (Johnson et al., 2000) who comes to the doctorate fully prepared for the undertaking. This student is autonomous and able to engage at the expected levels. They are already talented, and the work of the supervisor is to nurture that inherent talent by modelling appropriate research practices. As Manathunga and Goozée (2007) and Johnson et al. (2000) note, few students are always/already prepared for their studies.

> *Some of the students need a lot more work and there is no consideration given to that and it is just that if we have students this year and we divide the 60 students amongst all the staff that are working, and it does not matter you just have to supervise them* (Trad8).

> *I valued my supervisor immensely, BUT different universities and different students need different styles. If you try to understand the student's needs and accommodate them, it is good.* (S-Trad4).

This conception of supervision sees postgraduate education as being more about research than about education, with the education aspects being transmissive whereby the student learns from "observing and imitating their supervisor" (Manathunga & Goozée, 2007, p. 309). The focus is on a Master-Apprentice relationship whereby the supervisor is already a Master, and the student has the inherent talent which simply needs to be translated into postgraduate success through mimicry of the actions of the Master (Harrison & Grant, 2015).

This assumption that one can supervise by having been supervised is not surprising, given that until recently, it was assumed that one could teach at the undergraduate level by having completed such studies oneself. While teachers at pre-school through to the school-leaving level of education are required to undertake formal qualifications in which they learn about all sorts of issues from child development to pedagogical approaches, to curriculum content, teachers at the post-school level could get a lecturing job without any educational expertise at all. This is rapidly changing, and, in South Africa, there is often a requirement that educators complete at least some form of teaching development as part of their probation period (Quinn & Vorster, 2012).

Many academics are now undertaking the Postgraduate Diploma in Higher Education to better equip themselves for the complexity of undergraduate teaching, assessment, and curriculum design (Quinn & Vorster, 2011). Despite this, it is still common to hear the assumption that anyone with a qualification can teach that qualification and it is not unusual for good teaching to be seen to be 'common sense' (Moyo, 2018). It is, therefore, perhaps unsurprising that this assumption that effective teaching is available to all would be continued up to teaching at the doctoral level.

Thus far, we have seen that in the cultural domain, supervision capacity is understood to be an individual attribute attained as part of doctoral education. There is also an assumption of enormous individual agency in terms of personal development – an issue I return to later. Alongside the data about the absence of supervision development opportunities, was data about significant workload challenges. Such challenges have the dual effect of making supervision extremely challenging and deterring academics from taking up supervision opportunities.

5.5   High administrative, teaching and supervision workloads

High teaching and supervision loads were a significant issue that manifested itself throughout the data. Globally, universities are being encouraged to increase doctoral admissions to respond to the context of the knowledge economy (Rapp, 2008), likewise, the pressure to widen participation in the South African context (see Chapter 1 and Chapter 2) has had effects on academics' opportunities to develop as supervisors.

This section will address the administrative, teaching and supervision workloads as presented in the data as an issue conditioning the chances of supervision development. It was evident that the expectations that academics would be able to supervise 'by default' emerged at least in part because of massive increases in workload, making a more careful induction a challenge.

> *Now I am alone since other lecturers are young academics and do not have sufficient experience* (CU3).

It is noteworthy that the issue of balancing the workload was viewed specifically as a challenge. Many supervisors connected the challenges of supervision with the limited amount of time available, and they requested that supervision time be acknowledged in the same way as teaching time, in those universities that used strict workload allocation models and performance management systems. As in the South African context, in the UK research supervision was not recognised in every workload allocation model and there was a lack of clarity as to how many students a supervisor should take (UK Council for Graduate Education, 2021).

The workload issue was seen to condition how supervision is conducted and to have an impact on the attendance of developmental activities. Workload allocations and the performance management thereof were described as a "*broken system*".

> *It is a system that is a broken, and it is a system that needs a complete overhaul, and it is a system that means that sometimes you suffer in silence because you have to get the work done* (Trad16).

> *There is increasing pressure to widen participation, particularly at the postgraduate level so, we have got extremely high targets in terms of the numbers at postgraduate we have to register every year* (Trad14).

The word 'targets' in the above quote indicates the directives many academics face from their institutions. Moreover, many new academics reported having far less time to devote to postgraduate supervision because undergraduate classes are large, marking loads increased, and they are expected to produce research. In the UoT sector the requirement to undertake supervision and do research have only emerged recently, with significant implications for these

academics' identities and workloads (Gumbi & McKenna, 2020). The workload was thus skewed by the limited number of academic staff who are eligible to supervise.

> *I had to run the whole faculty's research and I did my normal day to day job in my department* (UT2).

> *I teach a block called research methodology for – students, and I teach two short courses for postgraduate students, masters, and doctoral degree students. Then I teach one theory course for 3rd-year students and then I must publish articles, do research, and supervise postgrad students* (UT4).

But such concerns were also found across the other institutional types.

> *We are sitting with extremely high supervision loads and at the same time as the programme I am working in is an undergraduate programme* (Trad14).
> *You manage and you must attend 100 meetings … so that is quite challenging just to fit in supervision as well* (Trad9).

> *The [principal] supervisor is so busy, he has got so many doctorates, so many projects so many things that he is running with* (CU2).

The teaching workload was found to be a challenge especially in comprehensive universities and UoTs. A recent report on Unisa (a comprehensive university which is also a huge distance learning institution) states that academic staff are stretched to the limit, with insufficient staff numbers in proportion to the rising numbers of students (Naidu, 2021). A number of participants were aware of differences in teaching loads across different institutional types.

> *We are a research institute, so research is our first job and teaching our second one unlike in [comprehensives and UoTs] where 70% is teaching and 30% so the reverse here* (Trad3).

> *So, I teach about three times as many classes as I had at [my previous university, which is a Traditional University]* (UT1).

Heavy teaching loads are experienced across universities but particularly in UoTs because of the nature of the courses which include significant practical courses. It is equally important to note that most of the academics in these universities are working on their own postgraduate qualifications or just starting to do independent research.

> *I was busy with my study, so I did not pay too much attention to short courses with supervision* (UT2).

> *We have [hefty] teaching loads, which I did not have at the [traditional university], maybe because of our strong emphasis on the vocational aspect* (UT21).

> *… has few highly experienced supervisors and I carry a good proportion of the load* (S-UT3).

The ratio of students to staff is one indication of the differing workloads reported on by participants. The overall ratio is 29:1 but in traditional universities this drops to 22:1 and goes up to 30:1 for the UoTs (CHE, 2021b). In Europe, the average ratio is 15:1 (Eurostat, 2018.) and in the USA the national average is 18:1. It is clear from these figures that teaching workloads were excessive across the higher education sector in South Africa, but they are also uneven. Those working at UoTs are more likely to be new to research and supervision, to have the least amount of research capacity in their departments, and to have the heaviest teaching workloads.

It is essential for institutions to value research and support supervision development, but also to take their context into account. Academics at UoTs, as indicated, have specific constraints on supervision development, and these are often found in HBUs, taking into consideration that they often lack resources and that they battle to attract and retain experienced researchers (Muthama, 2018). Drawing on a discourse of social justice, one can argue that the HBUs reveal complexities about the ongoing unequal nature of the sector. Some of the reasons for lack of supervision development can be attributed to the nature of the institution, especially the previously disadvantaged institutions, as they had neither the research capacity, nor a robust research culture.

But while some of the data suggested a stronger focus on research and postgraduate education in the traditional universities, many academics at such institutions also cited heavy teaching loads as a constraint. They suggest that there was no time to attend supervision development opportunities.

> *I also have an equally high teaching workload* (Trad14).

There were a few claims in the data that the brunt of heavy teaching loads was experienced by emerging supervisors because the undergraduate teaching is mostly given to young academics

> *they have heavy teaching loads and are also trying to publish [from] their PhD* (Trad7).

Several emerging supervisors also described receiving considerable pressure to supervise while they were still busy with their studies:

> *I have learnt by supervising students, but I also think that as a student myself it is easier for me to understand the difficulties that the students go through, and I find things that work and things that do not work in my research that I can share with my students* (Trad9).

This quote shows that many of the participants who had to learn how to supervise through trial and error were themselves still completing their own studies. Depending on the ethos of the department and the rules around workload in the particular institution, sometimes colleagues would try to assist each other so that they could complete their studies.

> *Those who are done with their postgraduate studies take more students, to allow the ones who are studying to complete their studies* (S-Trad65).

The demand for more doctoral students from the system has put pressure on universities to enrol more students to meet the national goals. Thus, the massification of higher education has functioned as a mechanism for supervisors experiencing high supervision workloads: such global and national structures have effects in the experiences of individual academics (Bøgelund, 2015).

And because there is increasing pressure to widen participation, particularly at the postgraduate level so we have got extremely high targets in terms of the numbers at post-grads we have to register every year (Trad14).

Ten years ago, pre the merger I never had more than four, five PhDs at any one time. It is the last five years, this massive pressure you know (CU3).

It is because they are being allowed to be overstretched, overburdened with too many things and then they get told they must supervise more and more and more doctorates and masters (CU2).

Another mechanism affecting workload is the funding issue. Since South Africa's funding formula greatly rewards doctoral education, all universities are being driven to offer it across all faculties, regardless of availability of supervision and resources (McKenna, 2019). The funding formula greatly rewards postgraduate education and research outputs compared to undergraduate teaching. This funding formula is blunt in that it does not distinguish between institutional types. All universities are thus driven to increase postgraduate numbers, although the data in this study raises questions about implications for student and supervisor well-being and the quality of the project.

These responses indicate that the current teaching loads have a negative impact on supervision and development of emerging supervisors. The data confirms the need for time to be allocated to supervision the same way it is allocated to teaching. There is also a need for time for development, as "*people need time to be able to supervise better*" (S-CU20). The idea that academic development, including supervision development, requires time for reflection and learning is found across the literature (for example, UK Council for Graduate Education, 2021) but the data suggests this is rarely possible.

Time! Supervision takes up a lot of time and most universities make little to no allowance for this as part of the workload (S-Trad86).

The main problem for me is lack of time, as I act in a lower managerial capacity [HoD] (S-UT12).

I am also a lecturer, lecturing two undergrad subjects or I lecture research methodology with kind of 25 projects per year and having a subject for first years' or second years', which is about 150 students in a class (UT2).

Across the data, concerns were expressed that teaching workloads were such that time for reflection and personal development was scarce. (CREST, 2018) reported the huge burden of administrative tasks and the accompanying bureaucratic red tape led to academics questioning the meaning of what they are doing and the tension between a compliance culture rather than an academic culture. Supervisors juggle competing demands on their time (Hammond et al., 2010b) with significant consequence for self-development. The heavy undergraduate teaching loads were experienced alongside heavy supervision loads. Young academics reported that "they were usually assigned disproportionately high teaching loads especially at the undergraduate levels, as well as often inordinate administrative duties" (CREST, 2018).

Mouton, (2011) reminds us that it is a requirement that a doctoral supervisor should in most cases have a doctoral degree, which then determines the number of academics in the system who have a doctorate and are capable of supervising. While the increases in potential academics described in Chapter 2 is impressive, it has not kept up with the rapid rise in student numbers. Thus, the supervision workload is high due to the poor supervision capacity across the system. As one supervisor explained, they are constantly grappling with "*need for staff members with quality and competency to supervise*" (CU13).

I took on a whole bunch of students, too many, it was 13 students I did not know any better at the time, I did not know how difficult it would be and how long it would take (Trad9).

It is because they are being overstretched, overburdened with too many things and then they get told they must supervise more and more and more doctorates and masters (CU2).

According to Mouton (2011), the actual ratio of supervisors to students in South Africa (as opposed to the potential ratios described in Chapter 2) is in the region of 1:7, and he argues that this is unrealistic for the supervisors to effectively supervise so many students. To have an average ratio of 1:7 there must be a great many supervising much larger numbers.

The university policy says the ratio for the supervisor to the students should be 1:6, but in my faculty, it is 1:15 (Trad5).

I spend, the Dean hates it when I say this, but I spend 75% of my time working doing [supervision] (UT4).

The students that you are supervising because the others that are doing Master's, others are doing PhD and we also have undergraduate students that must do research (Trad10).

Because of my experience and a good track record, I normally carry a very heavy supervision load (S-Trad59 &34).

Supervisors usually embrace supervision responsibilities without adequate understanding of the nature and complexity of these gaps and distortions (Cross, 2021). Some participants indicated that their supervision loads had implications for their work-life balance.

Supervision takes place all year round without a break for supervisors, thus if you supervise a lot of students, you never get a break. The supervision calendar needs to be reconsidered (S-Trad80).

I am currently supervising eight masters and five doctoral students. I had to see my new student even though it is a university holiday, I had to come, or else there would be no time this week (CU13).

According to Mouton (2011), South Africa's ability to improve its global competitive edge is dependent on the quality of its postgraduate students. Heavy workloads have enormous implications for the quality of supervision. A survey conducted by Mouton, Boshoff and James (2015) reported that many supervisors were not able to give sufficient time and attention to their students and had at times needed to supervise students outside their main area of expertise.

It was not that they were lazy at all. It is more that they were too busy. They took on too many things, and when I had to give them the stuff to read. As I say, I sometimes got the

impression that they [my supervisors] did not even read it when they gave me feedback (CU2).

It was clear that many universities had tightly managed workload policies which pressured academics to achieve 'targets'.

> *I took on two PhDs, and now I am thinking, why did I do that? It is stupid because now I have got a hell of much work to do, and so the capacity problem, to some extent, was created by the workload model* (Trad25).

> *They have a particular workload that kind of says each staff member will be supervising so many students* (Trad25).

The increase in numbers raises concerns about the availability of supervisory capacity to deal with the intake, and about the increased doctoral supervisor burden (Cloete, Mouton, et al., 2015a; Mouton, 2011; Mouton et al., 2015a; NRF, 2013). This burden is intensified by the increases in the overall workload of academics, in addition to pursuing their own research within a context of increased pressure to publish and teach large undergraduate classes. The traditional apprenticeship supervision model remains dominant in the South African context (Backhouse, 2011; Pillay & Balfour, 2011), which may exacerbate the problem of workload among academics.

> *South Africa in general has problems with doctoral students because we have this one-on-one type of supervision, which does not work if we are in a developing context trying to develop more and more doctoral students* (CU10).

> *We have ... forty-two PhDs supervised by only four people. Yes, if the other staff [had doctorates they] would be supervising only four or five each, instead of having only forty-two PhDs in our school, we would have eighty PhDs* (CU3).

Supervision development through a more communal model of postgraduate education was viewed as an option for increasing supervision capacity and sharing the heavy workloads, but it was evident this was exceedingly rare in most universities.

> *I think co-supervision, group supervision, developing a community of practice within the department can help with supervision* (Trad16).

One supervisor commented that "*doctoral education was never intended to be massified*" (CU2). This massification is at least in part because institutions are under pressure to produce more postgraduates for the knowledge economy and for the country to compete globally (ASSAf, 2010). The capacity of academics that are eligible to supervise is a challenge to universities to provide supervision, especially with doctoral enrolments having exploded in recent years (CHE, 2021). The dominance of the one-on-one model was also seen to allow for problematic supervision encounters, which are possibly ignored in the drive to increase numbers:

> *Some of these people that have behaviours towards these students. It has been there for a long time. Furthermore, they have been protected or ignored. There is a problem. Sometimes nobody wants to intervene. They just let them do what they want* (UT21).

It was clear across the data that the reliance on one-on-one model in many universities – particularly where this was without any seminars, workshops, or spaces for postgraduates to engage with each other – was problematic, given the context of limited supervision development opportunities. More collaborative approaches to supervision were seen to be valuable spaces for supervision development, but these approaches remain in the minority in South Africa.

> *Where I studied [internationally], you were not supervised by the department only. A trans-disciplinary team supervises you. They have supervised other teams. In this supervised team, you will have a supervisor guiding you on your methodology, and then you will have a supervisor who is within your substantive area* (Trad7).

Concerns about the excessive workloads and the loneliness and workload implications of the dominant supervision model was especially found in institutions where postgraduate education is new and supervision responsibilities are tacked on to existing heavy loads. Although the interviewees were not directly asked about workloads, the issue emerged repeatedly. Many

supervisors indicated that they had little choice about supervision and were simply allocated students:

So, whether you like it or not, you were compelled to supervise (CU5).

This problem is further worsened by the fact that the supervision load is not evenly shared.

Some supervisors have more than five times more load than others (S-Trad86).

In some instances, supervisors had to supervise across disciplines:

I have sixteen PhDs working on several topics (CU3).

In many cases, supervisors did not have a choice in this regard as they were simply allocated students.

And because there is increasing pressure to widen participation, particularly at the postgraduate level so we have got extremely high targets in terms of the numbers of postgraduates we have to register every year (Trad14).

Several supervisors discussed pressure to meet targets and to fulfil workloads requirements. They also complained that if students had not graduated within four years, these students were no longer 'counted' on their workloads. The idea emerges from the national funding formula and is then used by universities to determine supervision workloads. But this fails to consider that in the South African context, most doctoral students are of a mature age and studying part-time (Cloete et. al., 2015a).

Finish this degree in three years, so the students taking four years or five years, you still do the work with them, but they are not seen as part of your workload in terms of supervision (Trad16).

In contrast to supervision being a target and part of the workload requirements, some universities (notably manly traditional universities) left allocation of supervision to departmental level. This was also problematic:

The supervision load is not shared. Some supervisors have more than five times more load than others (S-Trad60).

There was, however, also data that in such institutions, the allocation was often determined based on expertise.

People have vastly different supervision loads. This is due to several factors such as job profile, demand, and personal capacity (S-Trad9).

I normally carry a very heavy supervision load. This is equally applicable to other highly rated supervisors in my discipline (S-Trad59).

The issue of uneven supervision workload emerged from across institutional types, but mostly from traditional universities as they have high numbers of postgraduate students. Some reported that rather than targets of student numbers to achieve, their universities had restrictions on the number of students that could be supervised by one supervisor at any one time. However, these restrictions were not adhered to.

For some bizarre reason, the way the workload works with PhDs is you do not get any workload credit for supervising your PhD until they graduate (Trad13).

Despite various universities implementing workload policies, uneven workloads remained an issue. In addition, workload allocations can be seen to be problematic, with this kind of managerialism assumptions of monitoring and generic capacity. These systems of counting postgraduate students as requiring a generic number of hours and being able to complete in a required number of years conditioned supervision to be seen in instrumentalist ways. These drivers of targets and workload regulations to increase postgraduate numbers and to ensure they complete in regulation time were often coupled by financial incentives for supervisors.

5.6   The problematic nature of incentives

Jones and Blass, (2019) suggest the need for increased "investment and structural support that recognises, rewards and celebrates best practice supervisors." Many UK institutions offer awards for 'excellent supervision' (UK Council for Graduate Education, 2021). South African university-based research is influenced by national policies, frameworks and incentives that attempt to steer and shape research in the country (Mouton, 2019) and while awards for postgraduate supervision are rare (I could not find any reference to such in the institutional documentation), the payment of incentives was to be found in a few cases. Such institutions offer supervision incentives whereby supervisors are paid a bonus when their postgraduate students graduate. This arguably can lead to experienced supervisors tending to claim the best students and teach fewer undergraduate classes in order to receive such bonuses (Muthama, 2018). Thus, the knowledge-making aspect of supervision and contributing to the discipline is possibly set aside through the focus on incentives.

> *... of that incentive, I am picking up with the young ones that are coming in to supervise. They are kind of working towards that* (UT2).

It should be noted that most of the universities (all except University of Cape Town and Rhodes University) also pay incentives for publication. In some cases, the amount an academic of a sole-authored article can receive is in the region of R30 000 to R50 000. The effects of such incentives are controversial, and many have argued that this leads to a focus on quantity over quality: "… such a context has the potential to become a metric for personal gain more than a means of knowledge dissemination" (Muthama & McKenna, 2020, p. 2). It can also have other perverse consequences such as 'salami slicing' of research to maximise the number of publications. This has been raised as a concern by the DHET who indicate: "Institutions should be cautious of directly incentivising individual authors as this practice is promoting perverse behaviour in some cases" (DHET, 2015, p. 5). This issue of incentives for publication also emerged in the data for this study.

> *There is no sharing because supervision counts... So ideally, you would like to have many postgraduate students with the hope that that will increase your publication and research outputs* (Trad19).

Mouton et al., (2015a) point out that doctoral education could potentially be understood as being more about making profit for the university, than about developing new knowledge. In an increasing number of universities, supervisors are paid a bonus when their postgraduate students graduate:

> *Moreover, when they graduate, they get some credit* (Trad25).

> *Another thing that our institution is doing, which could encourage people in, we did an incentive. If you are a supervisor and your master's student then got their master within the maximum of four years, you as the supervisor, get an incentive of about R6000, which can be paid in your salary or then in a cost code that you can use for research* (UT2).

It was not clear from the data as to how these expectations are backed up by appropriate support mechanisms. At the Durban University of Technology (DUT) the money awarded to supervisors and departments must be used for research purposes (the promotion and development of research as well as postgraduate students) and is R15 000 for the principal supervisor and R5000 for the co-supervisor (Cele, 2017). Some academics indicated that this incentive did not drive their supervision:

> *I am not supervising ten students for the sake of money* (UT2).

It was clear that this structural mechanism of funding had cultural effects on how supervision was understood. For most universities that paid incentives for publication far more than supervision, some academics acted accordingly

> *Some other work that they are working on, and they are producing two or three journals a year, … implies that you do not want too many [postgraduate students], in fact, you hardly want* (Trad16).

The trickle-down effect was for supervisor performance to be measured by the number of on-time completions. This, in turn, possibly drove supervisors to take on only the best candidates if they could manage to do so. Research incentives are a problematic issue, as academics could

potentially focus on the incentive rather than on the complex pedagogical task of supervision and knowledge creation. The ASSAf (2010) panel feared that policy signals and incentives to produce more doctorates would compromise the quality of PhDs from South African universities, and the data in this study provides some suggestion that this may be the case in some contexts.

An experienced supervisor in the faculty reported that some emerging supervisors claimed to have a fear of supervision as they were not prepared for the task (CU3), and they instead opted to 'publish', which is more financially valuable and leads to promotion. There was a disincentive to supervise, where publication accrued more. A number of academics in this study understood their roles in fairly instrumentalist ways, following the logic suggested by the performance management and incentives regime.

> *They are looking and say, 'I do not get promotion points for delivering a PhD's. I get promotion points for doing journal publications'* (Trad16).

The promotion criteria had similar structures across the universities, which blended four elements: research; teaching (including, in some cases, supervision); service/community engagement; and administration, management, and leadership. But some universities had far more flexible promotions policies allowing academics to develop a portfolio of evidence of their strengths, whereas others specified clear numeric 'counts' of what was needed within each category. The CREST, (2018) report also notes that "large majorities of academics accept that their academic promotion depends on a rather narrow set of measures related to the production of graduates and publication output."

The payment of incentives for successful supervision were more evident in those institutional types with low research outputs and postgraduate numbers, with the aim of promoting research. I could not find evidence of historically advantaged traditional universities paying incentives for supervision, though some did for publication. Postgraduate supervision arguably becomes a numbers game towards personal gain in the form of promotion or financial incentive, rather than about doctoral education, the nurturing of the scholar as a new member of the field, or the creation of new knowledge. This was seen to have knock on effects on the students being supervised:

The pressure is so much to produce ... They do not want you to take longer. They want you to be faster because numbers are running us (CU2).

There were concerns that supervision success is measured based on numbers of graduates only and rewarding it from this perspective is problematic, as this participant explains:

The one is a pedagogical interaction. A pedagogical engagement between two or three people and the other one is a quality product being produced. However, you know, you can go to factories where beautiful products are produced, but the workers are treated horribly. You must not for one moment think what is happening in there is good labour practice. It might be good products being produced, and I think the same is valid here (CU2).

The problem with this particular initiative of some institutions paying incentives and others demanding high numbers of postgraduate students, was extremely problematic. The problem with both initiatives is that postgraduate education is framed in a particular way – in terms of workloads and financial incentives – rather than as a fundamental part of the academic project. It further draws on discourses of knowledge commodification. South African universities have been captured by human capital theory and many have implemented managerialist structures to keep academics efficient, which some suggest is at the cost of a focus on knowledge creation for the public good (CREST, 2018; McKenna, 2021)

There was a tension between universities saying they want develop research environments to support postgraduate education and grow the next generation of researchers on one hand, and then a focusing on numerical metrics counted in the workload on the other. These each draw on different discourses in the realm of culture. One draws on the postgraduate discourse as a technicist discourse of getting the numbers through, and the other draws on the postgraduate discourse of knowledge creation and dissemination.

5.7   Conclusion

The study interrogated the mechanisms from which the study of supervision development emerged. In exploring the South African higher education landscape, it is important to consider how the past impacts the present. The historical legacy of South African universities under apartheid is still evident in how postgraduate studies are conceptualised across institutional types, with many of the institutions that have not offered postgraduate studies in the past putting measures in place to support the supervision development of emerging supervisors, while some of the traditional universities with strong research cultures tending to think that it is an automatic activity one can perform when you have a doctorate. Rath (2008, p. 11) notes that the processes related to supervisor development processes are complex with institutional, disciplinary, and international factors interacting to produce a highly contested field of practice. The findings in this chapter revealed that most supervisors in this study did not have to undergo supervision development to supervise doctoral candidates and there was a clear call for more explicit support in taking on this role. Many felt they had been thrown in the deep end and that learning how to supervise by trial and error was unfair to their students. There is a real need for support for emerging supervisors in South African public universities and this was explicitly articulated by the vast majority of participants.

> *When you have not been in that environment, and then you are expected to perform and be a teacher in that environment, it creates problems and insecurities* (Trad25).

Building supervision development into doctoral education is needed if the HEQSF statement about the capacity to supervise on graduation is true. The study by (Searle, 2014) also found that the supervisors were thrown into the deep end as the system assumed that everyone could supervise. Emerging supervisors also need to be allowed the time to develop their own research identities before they can take on full responsibility for supervision (Habib & Morrow, 2007). While the absence of support was evident across the institutional types, it was particularly in traditional universities that there was seemingly a 'sink-or-swim' approach. There seemed to be an understanding in the domain of culture that supervisors would be 'always/already' competent. The data suggests however, that supervisors felt a genuine need for supervision development. (Grant, 2003a) emphasises that without structured reflection on supervision development, supervisors may simply transfer across from their own doctoral experiences their

assumptions about supervision and this was indeed evident in the study data. Henderson (2018) cautions that explanations that supervisors pin onto their own doctoral supervision experience may ignore other important discourses. In relation to agency, that is, emerging supervisors as primary agents without much power to change the structural and cultural conditions, their positioning as primary agents is particularly significant in how they navigate the supervision trajectory.

This chapter also considered the extent to which 'targets' for postgraduate numbers, coupled with requirements related to supervision in the workload formula implemented in some institutions, constrained emerging supervisors' ability to develop into the role. These were coupled with monetary incentives paid to supervisors in some institutions when their postgraduate students graduated. Such structural mechanisms were designed to increase student enrolment and throughput but were arguably contradictory to many of the ideas of postgraduate education being a transformative process and postgraduate supervision being a personal relationship.

Throughout this chapter, I have pointed at the ways in which various structures have conditioned particular development challenges. While the most dominant finding was a lack of supervision development, as discussed in this chapter, there was also much data about such opportunities. The availability of developmental interventions in the form of workshops and seminars is discussed in the next chapter.

Chapter 6: Available forms of development: "Thou shall attend"

The starting point is to train people, ... The workshop is hit and run but train people for them to understand what supervision means (Trad25).

6.1   Introduction

There was a great deal of data on the lack of supervision development opportunities across all institutional types as discussed in the previous chapter. There is even a debate as to whether supervision is teaching, with many indicating that it is not – it is research. The issue of the need for development and support runs through the data.

This chapter analyses the data related to the workshops and seminars as some of the available forms of supervision development. It was clear that most, though not all, universities now offer some form of supervision development courses, workshops, or seminars. These were a new phenomenon even though postgraduate education has existed for as long as some of the universities (more than one hundred years). While staff development/academic development has existed in South African higher education since the late 1980's, supervision development was seen to have only emerged in the last ten years or so, at around the time that *all* universities began to offer postgraduate studies.

> *So, it is interesting to look at how institutions change over time, and they start prioritising needs, which were just not recognised at other points* (UT7).

The findings that emerged relate to, firstly, generic versus discipline-specific workshops, secondly, the nature of the workshops being long or short-term, and lastly, whether the workshop attendance is mandatory or voluntary. Some participants within a single institution indicated that no supervision development opportunities were available, while others said there were. This contradiction suggests a communication issue whereby "*supervisors have to find their support, workshops, and development opportunities within the university*" (S-Trad39). Figure 6.1 provides a summary of the sub-themes that are discussed in the following sections.

Figure 6.1: Sub-themes that emerged from the theme on workshops and seminars.

6.2 Generic or discipline-specific workshops

The supervisor as holder of research and disciplinary knowledge is expected to guide the student in their own process of developing new knowledge and becoming an independent researcher (Kiley, 2009). Several participants called for field specific rather than generic developmental workshops, because the nature of research and therefore supervision differs across disciplines. McKenna (2017) argues that academics are often unaware of discipline specific norms and values, and the extent to which their acquisition allows actors to write compelling arguments based on chains of claims substantiated by legitimate evidence.

These distinctions in knowledge making practices and the literacy practices that emerge from them may underpin the call in the data for discipline specific interventions. This section presents the two views reflected in the data as to whether supervision development could be generic or whether more focus on a discipline itself is needed.

Because we have a unique discipline, we need discipline specific [interventions] (CU6).

Only the university induction workshops. There are no school or related disciplinary support (S-Trad132).

> *There are some general workshops available on research supervision. However, nothing is field-specific* (S-Trad39).

> *We do not have departmental initiatives. Initiatives come from the central office. They are cascaded into faculties and then into departments* (CU6).

Some workshops offered were often described as being 'too generic' and not customised to a particular institutional type or respective research fields' practices. Participants from across institutional types expressed the need for more customised development forms, with many arguing that the assumptions of genericism in supervision development made them seem vague or out of touch with the participants' contexts. Guerin and Green (2013) propose that there are certainly benefits in delivering staff development activities within disciplines or faculties. They argue that there may be specific issues peculiar to that research culture or research group, as collegially developed initiatives are more likely to be supported than those introduced by a single individual borrowing from external sources without personal expertise. Participants indicated the preference for the supervision development to be field-specific or, importantly, to at least to acknowledge such differences rather than what emerged as a frequent practice of providing generic development across all disciplines – which assumed that there was a one-size-fits-all supervisor identity who simply needed to implement a generic 'best practice'.

> *I did not attend those [workshops] because one of my biggest [problems] was that often, the methodology that I use in my research is not a standard methodology and therefore, what I found happening was when I discussed with people that had attended these workshops; you find that the methodology is not necessarily understood and catered for by the people that are doing the supervision workshops* (UT6).

The concern about the 'generic' nature of some supervision development was not that it included a focus on multiple disciplines, but rather that it assumed that 'good supervision' looks identical across contexts. Interestingly, a study by Pearson & Brew, (2002) suggests that while disciplinary differences of knowledge creation and culture exist, the range of conceptions of scholarship can be found across all fields. Disciplinary allegiance, they argue is only one factor involved. Rath, (2008) argues that supervision development needs to include a focus on developing challenging reflective practices that include a focus on professional and individual

experiences. This allegiance suggests that there is merit in providing supervision development opportunities across disciplines, but that such opportunities should allow for deep reflections on various conceptions of research. The data, however, suggests this was rarely what happened.

The opportunities within the university are not always catered to my discipline and, therefore, not always relevant, or valuable (S-Trad39).

I hear what they say, it is good to go and hear and view new ways of looking at things. Nevertheless, it does not always speak to me. I cannot adopt a new method of supervision if I am not comfortable with it (UT5).

Generic workshops might be seen as irrelevant to participants if they fail to acknowledge how supervision, like undergraduate teaching, differs substantially according to the nature of the knowledge being created and the norms and values of the field in which it is being shaped (Muller, 2009). While it may be challenging to develop courses that take diverse disciplinary expertise and research approaches into account (Hammond et al., 2010), supervision development opportunities need to be flexible enough to address differing institutional, disciplinary, and professional contexts (Pearson & Brew, 2002). Likewise, Rath, (2008) found in her study of supervision development in New Zealand, that there was great support for supervision development to be offered at department or faculty level to allow for discipline specific practices to be considered. However, she argues that such focused initiatives need to be coupled with effective communication with centres responsible for staff development more generally.

Most of the data revealed the preference for discipline-specific interventions. However, Phillips and Pugh, (2010) argue that during developmental interventions that cross fields, emerging supervisors can meet experienced supervisors from different departments and disciplines and share experiences with them. Golde and Walker, (2006) and Lee, (2018) stress the benefits of interdisciplinary supervision development as this facilitates reflection on different disciplinary expectations.

Many participants argued that the different disciplines have different norms and values, which supports the need for discipline-specific workshops. Also, it was evident from the data that mainly the workshops in the universities of technology and historically disadvantaged universities, were often offered by external facilitators who might be less aware of the needs and realities of institutional contexts. Supervision is not a generic skill that can be learned in a decontextualised manner. As Jones & Blass (2019) argue, supervision is conditioned by "institution-specific, discipline-specific and project-specific requirements as well as they expectations and perceptions of the supervisor". Considering that universities of technology focus on applied knowledge (Garraway & Winberg, 2019) and the research outcome is often the construction of an industry model, the emphasis on philosophical deliberations within such workshops was experienced as misplaced or even as alienating.

> *[focus needed on] research process at the institution - every institution has a different process* (S-UoT134).

Institutions with traditionally secure research environments could often draw on established researchers within the university to provide supervision development. In such cases, the facilitators could call on what Archer (2000) terms 'social actors'. These facilitators were accorded credibility by virtue of their research expertise and position as professors with strong research and supervision track records. In such cases, where the facilitators had significant institutional legitimacy, even experienced supervisors sometimes chose to attend the supervision development courses and could then provide inputs about field-specific practices:

> *… the institutional support is very much there through opportunities such as workshops. I recently attended the [Strengthening Postgraduate Supervision course] with invited professors [presenting] the topics* (S-Trad11).

> *I am an excellent supervisor due to the intense training from experts I have received [during my] PhD. [I participated in the] SANTRUST and currently Strengthening Postgraduate Supervision course* (S-CU22).

> *if you were supervising a student who was part of SANTRUST and [they] invited you to a workshop. I attended* (CU2).

As explained in Chapter 2, the Strengthening Postgraduate Supervision course is specifically for supervisors and is offered by experienced researchers over a number of months, followed by assessment and accreditation. As was also detailed in Chapter 2, SANTRUST is a registered educational trust in South Africa that manages a host of programmes. The SANTRUST PhD Proposal Development Programme consisted of approximately seven weeks of contact learning, covered by five modules. The programme provided facilitated research proposal development at doctoral level, which was enabled by leading researchers. The students' supervisors were invited to attend a one- or two-day supervision development opportunity.

There was data that indicated that the generic nature of some initiatives – especially when offered by 'trainers' who did not have supervision experience – were not highly regarded.

> *There are these workshops and things like that, and I honestly feel that the knowledge I gain from there is just repetition. It is not practical, not hands-on, it is not helping me develop in the areas that I need, and that is to get me confidence and do the right things* (UT3).

> *I have attended a few of those, and I walked out there without learning anything. It is just a repetition of what I have previously heard* (UT3).

> *I think that the supervision training, but again, it depends on your candidates because some supervisors are pretty happy to have a recipe and follow a recipe. Moreover, for me, sometimes I think recipes do not necessarily always work* (UT7).

The lack of credibility of facilitators who had not personally done research or supervised students meant they battled to get 'buy-in' from the participants, whereas those opportunities led by experienced supervisors were well attended. The workshop facilitators for internally offered supervision development opportunities were often those employed as academic developers, who were often in administrative posts and on contract (Moyo, 2018), making it unlikely that they would have supervision and research experience, and often did not hold doctorates themselves. This issue was often raised by contrasting initiatives where the facilitators were experienced in these areas.

So, attending a course facilitated by experienced supervisors will help you understand all these grey areas you need to attend when you are providing postgraduate supervision (CU6).

The SPS course was the institution's first bringing outside people to present the staff supervision course (UT5).

The SPS course is massively helpful for both experienced and new supervisors because all the people who teach on it are experienced supervisors (Trad7).

It seems possible that many of the newly created postgraduate centres in South African universities are repeating an issue that has been raised as a concern in the literature about academic development centres (Quinn & Vorster, 2014), whereby the academic development staff are themselves not experienced academics. Their ability to provide development opportunities is questionable because of their lack of authentic experience. Only a few universities in South Africa have postgraduate centres and this was seen to be problematic.

The other problem is the absence of a dedicated postgraduate studies department or unit (CU13).

Likewise, Kiley (2011b) notes that not all Australian universities have a graduate school, although many have some form of Graduate Research Centre or Office. Where they exist, the staffing and mandates of newly formed postgraduate centres differ significantly. In keeping with Lee's discussion of the European context, in South Africa:

The development of supervisors is a relatively new area of academic staff development, and the responsibility for managing this provision (if it exists at all) moves (sometimes uneasily) between various parts of the university's organisation: educational/academic development centres, a director of research, research student support and human resource management in most universities (Lee, 2018).

Also, in keeping with the conversation in the literature, the data in this study suggests that training sessions, typically organised by a central unit, tend to emphasise expectations and

policies with regard to research supervision, rather than aspects such as supervisory styles or goals of supervision (Kreber et al., 2021). Manathunga (2005, p. 22) also points to the need for supervisor training that transfers its focus from the implementation of institutional policies to a pedagogy that can "value, explore, and build upon academics' prior knowledge and understandings". There can also be tensions between different university centres offering such support: academics within faculties, the academic development centre, or the newly formed postgraduate centres. Hamilton and Carson, (2015) argue that this can be seen as:

> a tension between quality assurance and compliance to 'standards' and 'models' of supervision and the need to recognise complexity, differentiation, and emergence. It is not merely a dialogic clash of accented social orientations, perspectives, and voices, but a fundamental tension between the urge to reign in, to standardise and to govern through oversight and regulation and the contesting voices of advocates for diverse practices, and an expansive space for risk, experimentation, and innovation.

Academic development staff, including staff in newly formed Postgraduate Centres, are often hired on one- or two-year contracts using University Capacity Development Grant funding (Moyo, 2018). This arrangement constrains the chances of appointment of highly experienced supervisors to provide the supervision development opportunities. Even where they are appointed into permanent positions, they might not have both supervision experience and pedagogical expertise. Traditionally, most of the activities these centres offer focus more on student development and where there is a focus on staff development, it is related to undergraduate teaching. These centres have not until very recently been expected to offer supervision development. This was raised as an issue in the data where it was clearly stated that supervision development facilitators needed to have supervision experience, otherwise "*it is not helping you as a supervisor*" (CU6).

Manathunga, (2007) argues that academic developers can work in the in-between spaces and 'fault lines' in ways which are productive and transgressive. However, if such staff are positioned as primary agents with limited institutional influence, this becomes a challenge. Furthermore, Quinn and Vorster (2014) argue that if academic development is understood as

'skills training' (in the domain of culture), it is particularly challenging for the facilitators to assume such possibilities of offering transgressive spaces for development.

Many of the concerns raised by the participants about some supervision development being 'generic', echo concerns raised by McKenna (2012, p. 22) that academic staff development initiatives that work towards a "fictitious generic of teaching excellence and disregard issues of institutional context are unlikely to succeed".

In contrast to the lack of buy-in when the supervision development was offered by facilitators with little research and supervision experience, it seems that the SPS course offered by experienced supervisors, including international facilitators, was sometimes closed-off for emerging supervisors because those with more experience and institutional influence filled the spaces. The course can only accommodate twenty-five participants at a time.

> *However, the bottom line is the course should be open for whatever because I think maybe it is another thing, it is a paid course. The department of the University paid for some people from the Netherlands or whatever to give the course. So maybe it entailed the cost. That is their reason [for not opening it to novice supervisors], I do not know* (Trad7).

Institutional cultures came into play in how such opportunities were made available. In some cases, a general advert about the course was sent out and people could sign-up on a first-come, first-served basis, whereas in others, people were selected by the research office or their deans to participate.

> *I was also selected to complete a course in Postgraduate Supervision [the SPS course]. The employer is sponsoring such participation* (S-Trad66).

> *My institution sent me, which I found a valuable course with supervision* (UT2).

In some cases, there a sense that favouritism and 'internal politics' meant the course was not equitably accessible.

They will pick someone who is ten years old [experienced] in the department. I have two years here, so I do not know what they are doing because I saw that the SPS course was attended by people who have 15 years and 20 years in the department (Trad26).

The UK Council for Graduate Education (2021) also indicated that it was generally main supervisors who attended the training, with less on offer at some institutions for [emerging] supervisors, and little for informal supervisors who supervised for the university on a part-time basis. In the data, it was clear that supervision development opportunities, whether offered internally or externally, were for full-time staff only. I did not have data that explicitly considered the supervision development of part-time supervisors or industry supervisors, and this would make for a useful future research focus.

6.3   Short or long-term interventions

The length of the available workshops and seminars ranged in length, as revealed from the data. A few participants who did attend supervision development workshops indicated that these needed more time. There was a call for longer interventions or for these to be staggered over time rather than offered as once-off workshops and seminars of a half or full day.

The research office provides a two-day course in supervision, usually away from campus. I found this very helpful but felt I could have used a refresher in subsequent years (S-Trad38).

Our university has a series of short (one day) to longer (five days) courses available through our centre for teaching and learning development (S-Trad60).

Given the shifts in higher education and the nature of the doctorate (as discussed in Chapter 2), it would seem important for spaces to be made available for supervisors to reflect on their practice on a regular basis.

> *I only had a week workshop on supervision conducted by [the facilitator] from [a traditional university] and nothing else* (CU5).

> *Short- and multi-day workshops on supervision are offered, including outside trainers* (S-Trad76).

> *The general induction programme where you go for the three-day workshops* (Trad14).

Many participants indicated that supervision was 'taught' in a half-day or one- or two-day course, which felt insufficient for their needs. There seemed to be an assumption within the institution (within what Archer terms the 'domain of culture') that, once a short-term workshop has been offered, it could be 'ticked off' on a performance management process. Manathunga (2005) argues that "such short-term interventions deny the genuine difficulties and complexities involved in supervision relationships." The need for accountability and compliance, or to follow a tick box mentality is prevalent in the ideology of managerialism (Grant et al., 2014).

Thanks to the University Development Capacity Grant provided to all public universities in South Africa, staff development opportunities became far more readily available to enhance teaching and research (Moyo, 2018; Moyo & McKenna, 2021). The availability of funding for staff development is undoubtedly a structural enablement. Still, the data suggest that in many cases, the institutional beliefs about staff development generally and postgraduate supervision development in particular, constrained the effective use of such funds. The problems emerging from staff development offered by people who did not have expertise in research and postgraduate education were exacerbated by such offerings being short-term interventions to 'fix' the problem of inefficiencies in postgraduate education.

Several participants called for longer-term support and development through courses that extended beyond the once-off and through ongoing mentoring, such as co-supervision relationships as will be discussed in the next chapter. The longer SPS course was regularly referred to in the data.

> *I recommend that even experienced supervisors attend this course because we supervise how we were supervised* (CU6).

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I attended a supervision course though I had a lot of supervision experience, I learnt a lot from the course (CU13).

You know all the other stuff around how to be a good supervisor, how to keep records, how to make sure you give feedback on time, how to deal with interpersonal problems, all that good stuff that we do in the course (Trad25).

I went to a supervision training workshop where they brought in someone and looked at the expectations, the strategies for supervision, and a lot of it focused on doctoral-level supervision, which was interesting (UT5).

I enrolled on a postgraduate supervision course ... The exposure helped me a lot as I developed a better understanding of [what was] required. I became aware of ways of dealing with some of the challenges involved in supervision (S-Trad31).

Pearson and Brew (2002) indicate that the University of Sydney's supervision development programme was assessed through the development of case studies. Guerin and Green (2013) describe the Research Communication in the Multicultural Academy workshop, the second in a series of three, three-hour workshops that together constitute the Exploring Supervision Program. In order to qualify as principal supervisors, participants attend these workshops, and a Supervisor Induction, submit two written assignments (one critiquing or developing a supervisory 'tool' or technique, the other reflecting on experiences of supervision) and present a research project on a currently topical aspect of research supervision. In the case of the SPS course, participants undertake a number of tasks during the course for formative assessment purposes and then author a reflective essay on a choice of topics.

They receive detailed dialogical feedback on that essay, which they can use to revise and submit a definitive version. That last version is then assessed and moderated and those who meet the criteria receive a certificate from Rhodes University. The certificate can be used as a module of the Postgraduate Diploma in Higher Education at a number of institutions. Though there was ample data about the SPS course, there was no specific reference to this assessment process, apart from a couple of comments about the value of the certificate.

> *I enrolled for the Strengthening Postgraduate Supervision Course with 30 credits* (S-CU4).

> *I have recently completed an internationally recognised course [SPS] on supervision that was [organised] by the postgraduate school* (S-Trad2).

The demand to increase the number of doctoral graduates resulted in the growing need to develop emerging supervisors (Huet & Casanova, 2021). Thus, it is perhaps unsurprising that a course like the SPS was quickly taken up across South African higher education institutions.

> *We need more opportunities to attend courses such as Strengthening PhD supervisory capacity* (S-Trad28).

> *I attended a supervision course though I had a lot of supervision experience, I learnt a lot from the course* (CU13).

It seems that the course was particularly valued because it was presented by people who had extensive personal experience of supervision.

> *I am also enrolled for the SPS course currently, development, and that is something I wish I had done a long time ago. Those people are icons when it comes to facilitation and supervision* (UT3).

Unlike the SPS course, the SANPAD/SANTRUST course was intended to support doctoral candidates with proposal writing rather than being focused on supervision development. But supervisors were invited for a day to discuss supervision issues. Some of my study participants also had an opportunity to attend the SANTRUST course as doctoral candidates.

> *The significant difference was SANTRUST absolutely, and, for my studies, it gave me such a good foundation that I now feel very, very competent* (CU4).

> *[I attended] SANTRUST where if you were supervising a student who was part of SANTRUST, SANTRUST invited you to a workshop which I did attend* (CU2).

> *I believe that I am an excellent supervisor due to the intense training I have received. PhD SANTRUST and currently Strengthening Postgraduate Supervision course has come in handy* (S-CU22).

> *There is a huge need across the country for developing research skills in supervisors so that they can then pass those on* (Trad13).

Hence, it is evident from the data that the opportunity to attend both the SPS and the SANTRUST course allowed participants a better space to understand their supervision practice. It is notable that while the SPS course has been offered across the sector, the most consistent uptake has been in the UoTs, the comprehensive universities sector and the historically Black traditional universities. Perhaps the historically White traditional universities could rely on internal expertise to offer repeated supervision development opportunities, or perhaps (as discussed in Chapter 5), the research focus of such universities meant supervision development was seen to be unnecessary and emerging supervisors were expected to simply know what to do. The uptake of the SPS course was notably in universities that did not have a long or strong history of postgraduate education, thanks to the constraints of apartheid. The role of social actors in such institutions in driving the research agenda and putting in place supervision development opportunities was notable.

> *We had here a DVC he became the VC of a UoT, … he was from [another province] … he also had a strong drive towards research output and so I must say we have got a culture here of research output and so if you do not produce you feel out* (UT4).

> *Later, there was a change in management from the postgraduate school, and workshops were introduced. They asked people to attend workshops on supervision. So, I have been attending some of those workshops as well* (UT5).

Both the SPS and SANTRUST courses are offered by research-active supervisors, which suggests they enjoyed credibility as facilitators. Nonetheless, it would still seem important for such courses to be cognisant of the extent to which institutional types, histories and fields of study have a bearing on postgraduate education. While those who attended such supervision

development opportunities were very positive about the support and learning that such courses offered, some raised concerns that they were not necessarily institutionalised into the university practices for continuous improvement and system-wide changes. In particular, participants noted the extent to which an institutional focus on performance management and student throughput could work against the good supervision practices discussed in such courses.

> *... you have little say in the process [of who you supervise] and knowledge of the topic is a secondary consideration...* (S-UoT121).

Some supervisors reported that they knew about the workshop and its value but could not attend due to other workloads, as already discussed in Chapter 5. Fulgence, (2019, p. 729) suggests that "factors, such as time constraints, commitment, institutional and administrative factors as well as competing priorities, may hinder doctoral supervisors from fully participating in a doctoral supervision training programmes". Equally, Guerin and Green (2013) state that facilitators must provide a learning experience that is a worthwhile use of participants' time, and a safe environment in which sensitive issues can be explored. Likewise, my supervisor and I (Motshoane & McKenna, 2014) have argued that a problematic premise in many supervision development initiatives is that supervisors can be trained to 'fix' low retention and poor throughput rates. This premise fails to acknowledge that supervisors work within structural and cultural mechanisms that condition their agency (Archer, 1995).

In a review of the literature on postgraduate supervision, Bastalich (2017: 1146) argues that "a de-contextualised, psychological lens dominates educational thought about research education and innovation, pointing to the need for a greater emphasis on content and context learning within future research and practice around doctoral education". Denicolo (2017) also notes the resistance to workshop attendance by those who have been supervising for longer and may still be practising in an outdated way. Supervision development also needs to take the institutional culture and structure into account to avoid a problem of upwards conflation where training only considers the supervisor.

> *It is much more important what infrastructure the institution develops. I reject the argument that it is about the individual supervisor. I think it is about the institutional culture* (UT7).

Behari-Leak, (2017) has shown how staff development initiatives can offer a range of critical thinking opportunities and expose participants to new models and ideas; but she goes on to argue that if participants return to rigid departmental structures and conservative cultures, they will be significantly constrained in the extent to which they can implement their plans. Returning to a fixed departmental structure is a particular problem in cases where most of the participants who attended were only or mainly emerging supervisors, some busy completing their doctoral studies, and therefore, perhaps being what Archer (2005) terms 'primary agents' without much by way of institutional influence. In contrast, more established professors who may have some institutional power to effect change Archer's 'social agents', were less likely to attend such courses in some universities, with the exception being whether such opportunities were seen to be attached to some status, as discussed previously.

6.4   Voluntary or mandatory attendance of workshops

As with all other findings emerging from the data, there were conflicting views on whether the supervision development should be mandatory or voluntary. This section presents the two views as were reflected in the data. As indicated, it emerged that where workshops and courses for supervision development were offered, attendance was uneven, and depended to some extent on the credibility of the facilitators and the status of the course.

> *I signed up for them, and I think I will be honest many people do not ever go on those courses. Moreover, I think that that is a terrible thing; I think people should be encouraged to go on those courses and learn things* (Trad9).

> *Some workshops and training opportunities, but participation by academics is limited* (S-CU52).

> *The opportunities are there but are not always used* (S-Trad8).

> *... participation by academics is extremely limited* (S-CU21).

Manathunga, (2005) states "early optional sessions on research supervision have now been replaced, particularly in the UK, continental Europe, and Australasia, by comprehensive and, in some cases, mandatory programs". She shows a shift from more informal, voluntary development opportunities to more formal compulsory ones. It seems likely that similar shifts will happen in South Africa.

The uptake of staff development initiatives is significantly affected by institutional contexts (Leibowitz et al., 2015). A lack of contextualisation of courses, a lack of credibility of the facilitators, and, very commonly, a lack of time, all emerged as conditioning participation. Similarly, the UK report on supervision development stated that some experienced supervisors suggested that training was unnecessary for them (UK Council for Graduate Education, 2021). The pressures on supervisors to undertake heavy teaching loads (as discussed in the previous chapter) was regularly noted in the data. Supervisors did not see why they should leave their teaching for the workshop that would not meet their needs, as "*seminars or training workshops are just too challenging to fit into the calendar*" (S-Trad97).

Another problem with some of the academic development offered in the different institutions was the issue of such opportunities being framed in the domain of culture as compliance instead of development. Given the institutional culture of autonomy in historically White traditional universities, it is perhaps unsurprising that courses were voluntary in these institutions. Despite the voluntary nature of such courses, some academics at such institutions felt they should be mandatory.

> *The institution offers courses for new supervisors; however, these are not mandatory* (S-Trad27).

> *The university and faculty offer several voluntary workshops for new supervisors and supervisors support groups* (S-Trad83).

> *An external mandatory learning module on supervision [should be] required for those at lecturer level* (S-Trad4).

In the data from HBUs, UoTs and comprehensives, it was clear that there was a mixture of mandatory and voluntary opportunities. The managerialist language of mandatory attendance gives an idea of research supervision being an institutional act (Grant et al., 2014), rather than being about personal professional development within an institutional context.

White, (2010) states that one of the strategies adopted for supervision development has been to improve the efficiency and effectiveness of the supervisory process by introducing formal courses on the theory and practice of supervision, and academics being obliged to attend them before being permitted to become supervisors.

> *I think training and awareness in terms of supervision is important and should be made mandatory for supervisors to attend* (CU13).

Allowing academics to make informed decisions regarding attendance at personal development initiatives would strengthen their agency. Still, interestingly, most participants across all institutional types called for supervision development to be made mandatory to ensure that it was recognised that emerging supervisors needed more formal, structured support before taking on this complex pedagogy.

> *I think there should be a mandatory course to introduce the specific institution's supervision strategy and not allow anyone to supervise without completing it successfully* (S-Trad8).

> *I think all new supervisors should first be mentored, and a structured training programme (of whatever sort) should be available and mandatory. The [mandatory idea] would ensure quality control* (S-CU53).

> *Formalised mandatory training (for new supervisors). Refresher courses (also mandatory) for those who have been supervised for several years but never received formal training* (S-Trad27).

The (UK Council for Graduate Education, 2021) reported that supervision development training was available at most universities, with two thirds of respondents suggesting this was mandatory. On the other hand, also reporting on the UK, Duke & Denicolo, (2017, p. 35) indicate that making supervision development compulsory would not be possible, which echoes comments about academics' intrusion into their private space. However, in South Africa, the tendency to use structure in the form of policies and procedures (mandatory attendance, incentives for publications and graduations) to address all challenges related to postgraduate supervision development, arguably brings about recent problems.

Manathunga (2005) and Lee (2009) warn against forcing supervisors to attend development programmes. There is a concern that if the development programmes are mandatory, attendance would be a matter of compliance (Sankey & Machin, 2014). The same authors agree with Lee (2018) who argue that the supervisors may attend workshops but might not learn because their attendance was not self-motivated. Though presumably, while they may attend begrudgingly, they might nonetheless benefit from the process. It seems to be a challenge to balance the 'carrot' and 'stick' approaches to supervision development (Hammond et al., 2010).

On the one hand, voluntary attendance could allow supervisors with problematic conceptions of students or doctoral education to simply avoid attending development opportunities. Since the programs are predominantly voluntary, there is a risk that the programmes are mostly attended by supervisors who are already engaged in self-development (Wichmann-Hansen, et al., 2020) and this was indeed raised in the data:

> *The current model of voluntary attendance only draws those who are already trying to supervise better* (S-Trad24).

On the other hand, compulsory attendance could entail the supervision development opportunities being framed as part of a larger managerial agenda.

> *I think that can be a risk, and it can become something that does not transfer any skills. It just becomes like a human resource checklist that you have got to complete* (UT5).

So there needs to be a conscious effort to avoid [ticking boxes] that and to make it [development] meaningful and useful intervention (CU6).

It can also become extreme, in any case. It can become pedantic where these are just boxes that you must check that you must go and sit in so many hours of [tedious] and irrelevant things that are common sense (UT7).

The 'carrot' and 'stick' concerns about supervision development emerged in the data across institutional types. In some institutions, formal professional development opportunities are established and are often mandatory (Huet & Casanova, 2021). Some participants had the agency to seek out their own opportunities for development.

Whenever I see an opportunity, I take it. As I said, no one told me to do the Strengthening Supervision Course; no one told me to do it in higher education (Trad3).

Institutions with traditionally strong research environments and a well-established academic culture can provide not just training in research techniques or access to advanced infrastructures, but an introduction to other ways of thinking about and conducting research that expands the outlook and skills of those who experience them (Jorgensen, 2012). There was a sense among some participants that the research-intensive nature of the institution provided ample opportunity for development in regard to both research and supervision and a resistance to attending supervision development courses, but concerns need to be addressed that the university should not assume that participants can simply absorb how to supervise from the institutional culture.

In some cases, it would seem that the available forms of workshops were meant to equip supervisors with an administrative framing for doctoral supervision rather than the pedagogical frame (Huet & Casanova, 2021). In some cases, there was evidence of corporate agency (Archer, 1995; 2000) to establish collaborative intellectual spaces, which is the discussion of the next section.

6.5   The need for collaborative intellectual spaces

Without structured support opportunities, there is a reliance on the agency of the individual supervisor to find the support they need. Supervision development and support occurs in collaborative contexts, regardless of the level of experience between the supervisors (Robertson, 2017b). Engaging in collaborative spaces would benefit emerging supervisors since this practice would enrich the dialogue and make discussions more fruitful, since supervision is by nature a transdisciplinary practice (Manathunga, 2005). A few emerging supervisors indicated that they supported each other by creating their own personal structures of collaborative spaces.

> *Furthermore, you know, check with people that "I do not understand this, whom do you think can help me with this?" Alternatively, sometimes I would even phone the college office, the postgraduate officer, and I have asked him. "Sorry I am a bit confused; can you just explain this to me". I have got help in that way. However, many people do not do that.* (UT21).

Supervisors often exercised corporate agency in creating collaborative intellectual spaces where intervention strategies for effective doctoral learning could be maximised (Cross, 2021). Agency was exercised as several participants expressed the need for collaborative intellectual spaces beyond workshops and seminars, although the workshops and seminars seem too often have served as a springboard.

> *The workshop that you go to for a day and then get someone to take you through the things that you can expect when you are supervising, and then in that course, you have other supervisors that are also new to supervision. You can then discuss the problems that you encounter, and you also discuss how you can overcome that problem* (Trad10).

Boud (1999, p. 6) argues that much staff development is best undertaken by groups of academics working collaboratively, in the absence of any designated 'teacher'; as such groups take "collective responsibility for identifying their own learning needs and discuss how these might be addressed". Several participants indicated that the supervision development opportunities allowed for forging of collaborative intellectual spaces.

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We would sit and discuss and work through various supervision processes (UT6).

... practical, hands-on things like, for instance, where the department or the faculty gets together. More heads make it easier, make you think broader. (UT3).

"Learning is necessarily a social, dialogical process in which communities of practitioners socially negotiate the meaning of phenomena" (Jonassen et al., 1995, p. 9). The benefit is to embrace group diversity and not to reach a rigid consensus with which all must comply. (McAlpine et al., 2011) also found that their participants longed for a sense of community and the personal validation that comes from being part of a scholarly group. The developmental activities need to be structured in such a way that there is an opportunity for supervisors to think about issues specific to managing research; to listen to what specialists in the area have to say, and to discuss any doubts or problems they may experience (Phillips & Pugh, 2010). The nurturing of such intellectual spaces emerged as highly desirable:

It is developing those open platforms where colleagues can sit down and discuss and decide: "we are going to be agents of change and we are going to promote addressing the gaps and promoting growth" (UT3).

Learning from the community was also found to be beneficial for supervisor and student groupings, to counter the one-on-one model of supervision discussed earlier:

because initially, often when people start the degree, they are not ready to start writing. What we do is we start with reading groups. We identify either a common theoretical area or a standard research method, and we read around that and have weekly meetings where each student presents on a chapter, say from a methods book or something or a chapter on a particular (UT7).

Manyike (2017) suggests that a 'community of practice' consisting of experienced and novice supervisors can resolve the differences in respect of communication and feedback. The extent to which emerging supervisors could enact corporate agency to set up such department or faculty opportunities was strongly conditioned by the culture of the context. For some, the institutional research culture allowed for an enabling environment where supervisors could

engage in conversations around supervision. Such informal learning can be highly productive and occur through informal conversations in a community of practice (Huet & Casanova, 2021).

> *Yes, and that was very enabling, and that continues now. We have a community of practice in this research methodology, and we meet [to discuss] ideas at pointers* (UT6). *Identifying your training needs and making sure that they are met, and having the experts walk you through the experience of supervision based on their experiences would be essential* (UT7).

It was clear that supervision development needed to offer more nuanced development spaces than simply working through the institutional policies and requirements. There was a call for these development opportunities to have spaces for the nurturing of agency of supervisors and for debates about institutional culture. According to Evans (2018, p. 6), "informal learning occurs when participants engage with forms of professional learning and development that are not explicitly labelled or signposted". Also, Huet & Casanova (2020) argue that professional development is best achieved when seen not as a training event but rather as participating in an ongoing community of practice. This idea was echoed in the data as something in existence in some cases, or lacking but desired in others:

> *Informal discussions with experienced colleagues* (S-Trad95).

> *We are in a supervision collaboration with the Centre for Educational Rights and Transformation. Furthermore, we are working together with the school of education* (CU6).

> *More discussion among supervisors shows that most of the critical learning happens during discussions and not at formal workshops* (S-Trad13).

Some supervision workshops were more informal and had more porous boundaries where people worked together through communities of practice. Similarly, there was a call in the literature for supervision development to be based on collaboration, mediation, and communication (Guan & Blair, 2020).

We operated as a community of practice. It is a multi-institutional project that we work on, and through that, we are working with supervision (UT7).

There are colleagues in the department who are going through similar supervision experiences, so we always talk to each other and support each other (Trad9).

Experienced supervisors are necessary to share the professional knowledge and skills that emerging supervisors need. It was also clear that professional development is more successful if development opportunities are combined with informal collaborative spaces where emerging supervisors can question their own practise or the practice of others in safe conversations with experienced others (Huet & Casanova, 2021). A community of practice approach is based on the sharing of participants' experiences and reflections through conversations, but the possibilities of this is strongly conditioned by the cultural domain. Therefore, supervision development is best conceptualised simultaneously at individual, group, and community levels (Vehviläinen & Löfström, 2016).

6.6   Conclusion

In this chapter, I addressed the different forms in which development was provided through workshops and seminars. Interestingly, the data about extended workshop opportunities came mainly from participants in UoTs, where research became part of the institutional focus only after 2005 when UoTs first came into existence.

Some have argued that the rapid rise in focus on research and postgraduate education – particularly when framed as publication and throughput – means that South African academics are often conditioned into the competitive neoliberal subject which potentially undermines acknowledging the extent to which knowledge creation is inherently collaborative and supervision is inherently social (McKenna, 2021). "How the individual supervisor inherits and reproduces what is considered good research within a discipline is dependent on traditions, customs, and beliefs" (Grant et al., 2014, p. 44). It is clear that individuals call upon their powers

(PEPs), identify opportunities and find learning possibilities within their own particular situations, but are conditioned in doing so by the cultural and structural mechanisms in which they work.

The Strengthening Postgraduate Supervision course was reported as valuable for both emerging and experienced supervisors. It addressed issues that were often taken for granted and allowed for extensive engagement from participants[2]. Experienced supervisors were aware of the scale of change in research education and implications for changing supervision practices. Therefore, they also felt the need to be further developed to supervise to their best ability. A key issue seemed to be the legitimacy of facilitators as experienced supervisors and researchers and the interactive nature of the course. The demand for such workshops often exceeds supply.

> *I have not been able to do the [SPS] course because it has been so full. There is a waiting list* (Trad7).

In summary, most universities already have in place structured workshops for the induction of new supervisors. However, different research opportunities call for different supervision practices. Hence, Halse (2011) recommends that formalised supervisor development programmes include explicit discussions of 'becoming a supervisor', which refer to continuous learning and knowledge generation. Data from both the survey and the interviews indicate that these workshops should acknowledge the way in which supervision is discipline-specific rather than some kind of generic best-practice. Supervisors desired opportunities to engage in discussion about doctoral education in their field and grapple with their institutional contexts and were complimentary where workshops offered such opportunities. Where they experienced the workshops as 'generic training', they found them to be less useful.

It was further suggested that such workshops should be longer rather than a short intervention. Regarding attendance, there were contradictory views about whether this should be mandatory or voluntary. Making workshops mandatory could act either as constraints or enable development and may encourage resistance or engagement. Again, institutional cultures seemed to play a role. The data provided evidence that there is a need to rethink how supervisor

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[2] The data for this study was collected before COVID19. Since 2020 the SPS course has been offered entirely online. Whether or not the extent to which this course has retained the features commented here is unclear.

development is currently perceived and provided. The data also indicated that except for the external SPS and SANTRUST offerings, most of the developmental initiatives were provided by either the postgraduate school, the central research office, or the academic development centre. Concerns were raised that in some cases these were more about training for compliance than opening possibilities for enhanced supervision practices and were often offered by facilitators who did not have personal supervision experience.

A key finding emerging from this study is that there is a need for a well-structured form of supervision development, especially for emerging supervisors. The discussion is also conversant with the study of Steyn and van Schalkwyk (2017) who remind us that apart from national workshops and conferences, supervision training has been primarily left to individual institutions, mainly through their research divisions, with uneven opportunities.

Another significant finding is that supervision development opportunities need to take institutional contexts into account. Where supervision development courses focus on 'training' the supervisor without a look at the institutional context in which postgraduate education takes place, it is guilty of what (Archer, 2000) calls 'upward conflation'. Calls to increase postgraduate student numbers and throughput by providing supervisors with 'skills' and without looking at the extent to which institutional structures (policies and processes) and cultures (discourses) support postgraduate education, are highly problematic.

Besides formal supervision development opportunities through courses, workshops and seminars, there was also data related to supervision development occurring through individual relationships with more experienced others. However, Robertson (2017b) reminds us that impediments to working collaboratively in supervisory teams is often constrained by the lack of supervision development and workloads. It is to this that I now turn.

Chapter 7: Learning from each other: "How it is conducted"

I am learning ... that is why I am co-supervising first (CU2).

7.1   Introduction

In the previous chapter I explored formal supervision development opportunities in the form of workshops and seminars. I also briefly considered data calling for intellectual communities whereby development could be integrated into departmental practices. This chapter explores the data whereby supervision development occurred through both formal and informal relationships with other supervisors. Formal relationships are where the university or department coordinates the process as part of a larger structure. Some of these were explicitly aimed at supervision development (as will be shown), and others at sharing specific expertise. Informal relationships were instituted by the participants involved, where they sought out such relationships themselves.

The supervision development that occurred through peer relationships took two primary forms: by working together in co-supervision relationships and by forging mentoring relationships. Co-supervision is related to working together as recognised and approved joint supervisors of a project, and mentorship entails a broader relationship beyond any specific student's study. Nevertheless, although often there was an overlap between the two, I separate them in this chapter for ease of discussion. In the first quote below, the participant refers to mentoring, though on closer examination, they were referring to a co-supervision relationship:

> *When the student comes for a consultation, my mentor would call me to discuss and initially explain or engage with the student* (Trad5).

> *I try to help the people that I co-supervise with, I am their mentor as well. I make a point of it to inform them, keep them within the process* (UT2).

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It has already been indicated in Chapter 5 that the findings on any particular issue indicate that the same phenomenon could lead to both enabling and constraining experiences in a different context for different people. Different people could have different opinions regarding a single issue – possibly affected by their institutional type, culture, history, personal experience and personalities – and many other issues. The Archerian framework underpinning this study allowed me to account for the emerging mechanisms because each participant's reported experience would emerge from the interplay of many mechanisms. Not every mechanism would be at play for each person. This complexity is essential to understand as it prevents simplistic causal accounts. In some of the literature, co-supervision and mentoring phenomena are positioned as being either good or problematic rather than as potentially enabling or constraining, depending on the context. Figure 7.1 is an offers an illustration of the sub-themes that are discussed in co-supervision and mentoring.
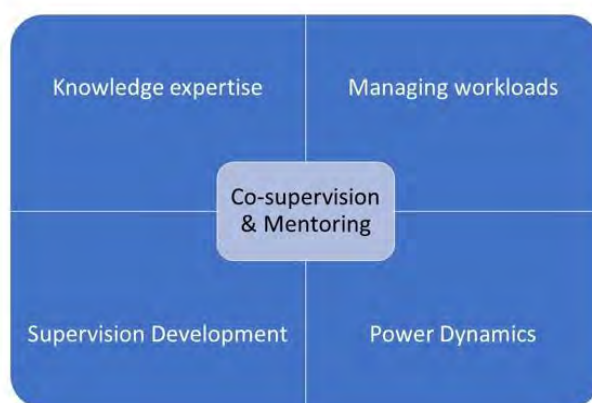
Figure 7.1: Sub-themes from co-supervision and mentoring.

7.2   Co-supervision

Co-supervision is defined in the literature as two or more academics sharing the full responsibility of supervising postgraduate students, from admission to programme completion (King, 2007; Paul et al., 2014). As increasingly complex knowledge problems have led to more interdisciplinary studies, the use of co-supervision has become more frequent (Watts, 2010). Similarly, Robertson (2017b) reports that the co-supervisor/s are often selected in response to the need for particular expertise required for the student's project, and to provide some form of

development to qualify as a primary supervisor. Nevertheless, the arrangements between co-supervisors and the reasons for their appointment differed across the data, and it was clear that they did not always share 'full responsibility'. The reasons for co-supervision that emerged in the data were three-fold. Firstly, in some cases, the co-supervisor was appointed to provide expertise on a particular aspect of the study. Secondly, co-supervision happened as a way of managing the supervision workload. Lastly, co-supervision was more explicitly a form of peer-mentoring and development:

> *Being thrown in the deep end can be mitigated through co-supervision as emerging supervisors would need guidance to succeed* (Trad7).

The reasons for the co-supervision arrangement were all presented as a potentially enabling condition for emerging supervisors to learn about the supervision process but were not always experienced as such. While the concern in this study is with supervision development, which relates to the third reason given for co-supervision arrangements, all three are relevant to some extent, so I now discuss each in turn as they emerged in the data.

7.2.1 Co-supervision to provide specific expertise

In several cases, the data showed that co-supervision was used to address gaps in expertise whereby one supervisor knew the methodology, for example, and the other knew about the specific phenomenon being studied:

> *The co-supervision is mainly because of different expertise. A colleague from next door is good at entrepreneurship. I am good in development studies* (CU6).

> *He is ... willing to share his expertise with colleagues* (UT1).

Someone will provide strength in methodology, and someone brings stability in the finalisation of the project (CU6).

I also get an expert in the field to be the co-supervisor because I am not an expert on all the topics I need to supervise (S-Trad91).

Some co-supervision occurred when postgraduates were registered in one faculty or department, but their study focused on two disciplines[3]. In these situations, co-supervisors from different departments were appointed to support the postgraduate student and ensure continuity and oversight.

The logic underpinning such arrangements were, however, not always related to the knowledge project. In some institutions, budgets are determined per income and expenditure of the department. So, there were cases where the structural arrangements of the institution worked against the fluid sharing of expertise. The increasing focus on managing university academics' time also worked against supervising studies externally from the university where the participant worked. External co-supervision (that is, supervision at another university) was not counted in academic workloads and so there was sometimes a sense that this was not worth undertaking (see Chapter 5). There were nonetheless examples of co-supervision with colleagues outside of the home university and even beyond the university sector:

I am working with colleagues from the municipalities. I am also working with a colleague from the department of economic development on electricity and water. Those are the two projects, and I have four students working on those two projects, two on electricity and two on water. So, that works well. They are co-supervisors; they are specialists in how the local government and the delivery of services operate (CU6).

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[3] The term 'discipline' is sometimes associated with a more highly bounded and established area of study. The term 'field' is sometimes associated with a less bounded area of study that looks outwards to real-world contexts. However, the terms discipline and field have been used interchangeably throughout the thesis.

In the above example, the external co-supervisors brought industry expertise, while in the example below the supervisor did not have opportunities to supervise in their own university, possibly because they did not offer postgraduate studies, and so sought these elsewhere:

All my students are outside South Africa, and that is how I got to do co-supervision (CU8).

The complexity of many students' studies, particularly in cases of transdisciplinary studies, means that having a team of supervisors with differing areas of expertise is likely to become more and more necessary (Grossman & Crowther, 2015). One participant expressed how they benefited from knowledge sharing:

that [exposure] also boosts a lot of my confidence in supervision and, assists me in my ability to transfer my training and experience to other people in the department (UT2).

But such sharing of knowledge across fields requires an enabling institutional structure. In institutions where departments' sustainability is evaluated on a strict Full-Time Equivalent (FTE[4]) and cost basis, co-supervision can be a challenge to implement. There is an internal logic that works against co-supervision across such financial units. There is sometimes an attempt to keep the student's total funding within one department, which works against more flexible arrangements based on the focus of the study. In some cases, this was to include seeking such FTEs on their workload, with problematic results:

What you are only seeing you are seeing your name … The student is about to graduate but I have not even received any input from that person (CU5).

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[4] FTE means Full-Time Equivalent and is the means whereby the state subsidy is allocated to universities. This formula is replicated at the department or individual level in some universities, meaning that cross-subsidisation across departments is not possible and so working across departments is undesirable.

In some universities, the process of supervision allocation and supervision practice was at least in part conditioned by such institutional structures such as funding structures and the workload policies and incentive schemes discussed in Chapter 5, as much as it was conditioned by participants' research interests.

7.2.2 Co-supervision to manage the supervision workload

The general workload issue was discussed in Chapter 5; however, it also emerged in relation to co-supervision being allocated a lower weighting on the workloads. In institutions where workloads are tightly monitored and performance management systems are developed against these, and because co-supervision is allocated a lower workload than sole supervision, this can be a constraint against collaboration. Nonetheless, some supervisors, especially emerging supervisors, saw co-supervision as a means of managing a heavy workload, and I now turn to this issue.

> *In some departments, there was a sharing of supervision to free-up colleagues who were still busy with their studies as some supervisors take more students because some of the staff members are also studying* (Trad6).

> *Those who are done with their postgraduate studies take more students to allow those studying to complete their studies* (S-Trad67).

> *To me, it worked excellently. The same experienced supervisor … whenever she was the principal supervisor, I was the co-supervisor, and whenever I was the principal supervisor, she was the co-supervisor* (Trad20).

> *Another staff member with a PhD starts supervising [while] younger staff members work on their postgraduate studies for PhD* (S-Trad70).

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In this scenario, the academics who were busy with their postgraduate studies were relieved from supervision to manage their workloads. However, it was not the same across all institutions. Many of the participants in this study were having to supervise while undertaking their postgraduate studies. They also had to juggle undergraduate teaching and other work responsibilities. As these participants explained:

> *I have a pretty heavy teaching load on top of studying and doing a PhD, so quite a few things are happening* (Trad8).

> *So, we are sitting with extremely high supervision loads, and at the same time, the programme I am working in is an undergraduate programme* (Trad14).

> *I was busy with my master's at that time, and I was a co-supervisor because one of my colleagues was doing her master's in Chemistry. I was still a Chemistry lecturer then* (UT6).

As indicated in Chapter Two, only 54% of academics in South Africa have doctorates, and there is enormous pressure on the rest to attain theirs. In some cases, co-supervision was seen to be a means of supporting such academics who were expected to take on postgraduate supervision at honours or master's level while busy with their doctoral studies. While some saw co-supervision as a means of managing the workloads and supervising while studying (see Chapter 5), there was also ample data that suggested that such institutional expectations were unrealistic and placed too significant a burden on both emerging and experienced supervisors.

> *They are being allowed to be overstretched, overburdened with too many things, and then they get told they must supervise more doctorates and masters than they can handle* (CU2).

60% of my time is co-supervision, and then I am also [authoring] articles, and I am the programme coordinator. So that is keeping much administration around that. (CU4).

... if the administrative duties could be given to research assistants because anyone can do that, I can have more time dedicated to supervision (UT21).

The data showed that co-supervision was a means of attending to institutional supervision requirements, which were written into performance management workload requirements. In some universities this was despite the participants being busy with their studies. Co-supervision arrangements allowed them to take on this role without the full responsibility for the postgraduate scholar and allowed them to navigate their workloads better as they had a more experienced peer alongside them for their supervision role. However, some data suggested that in some cases, co-supervision was not readily enabled by the institution because this could result in FTEs going to one department while the co-supervisor was a member of another. Policy documents may be perceived by senior managers to enhance practice, but they do not actively engage the community of supervisors (Grant et al., 2014) to look at what would work for them.

7.2.3   Co-supervision as supervision development

Nothnagel (2015) notes that the postgraduate supervisor may have the theoretical knowledge of their subject, but not the knowledge of the practice of postgraduate supervision, and this emerged in the study data too.

When you are co-supervising with experienced [supervisors], you build your confidence and begin to understand that there is no one way of looking at things (CU10).

Co-supervision was part of the institutional culture in some cases, whereby processes were put in place to develop and mentor emerging supervisors through co-supervision alongside experienced peers. A few emerging supervisors identified the role model aspect of supervision that enabled them to supervise alongside others. They highlighted the learning about supervision behaviour and pedagogy embedded in the relationship between supervisor and student and between an emerging and an experienced supervisor.

> *New supervisors are usually appointed in a co-supervisor position at the start to develop expertise* (S-Trad1; S-UT2).

> *I have now four colleagues that I am acting with as co-supervisors. They are the principal supervisor. Nevertheless, I am training [them] but they are getting the main supervision points because I think they need it to build their careers* (CU3).

It is not clear that all experienced supervisors would as willingly share the kudos and 'points' allocated to the principal supervisor, given the extent to which workload requirements and performance management processes conditioned supervision arrangements in some universities. Nonetheless, many participants recognised the benefits of co-supervision as a means of development.

> *The experience helped them build confidence and understand that there is no one way of supervising* (CU10).

The presented data points to the consistency in supervision concepts across institutional types. This partnership, where the supervisor guides the student and navigates with the student along the research journey alongside the co-supervisor, can be a powerful way to generate or discover new knowledge, as the junior colleague has new eyes, and the supervisor has the experience to see it through them (Grant et al., 2014).

> *That was my first experience as a co-supervisor, so I worked closely with him* (UT6).

> *Co-supervision to work under an experienced supervisor for two to three years* (S-Trad10).

The data on co-supervision showed that it allowed some emerging supervisors to be exposed to different supervisory styles with the added benefit of widening their research prospects with varying research topics and different methodologies. The data relating to co-supervision was generally favourable, as most participants indicated that it provided spaces to develop supervision experience without the risks and challenges related to being a sole supervisor.

> *I initially engaged as a co-supervisor under a senior colleague. The exposure helped me a lot as I developed a better understanding of what is required of a supervisor as I became aware of ways of dealing with some of the challenges.* (S-Trad31).

> *The exposure helped develop a better understanding of what is required of a supervisor as they became aware of different ways of dealing with some of the challenges involved in supervision* (CU4).

> *I think co-supervising you are [developed] over the years; I think to supervise, ja. Moreover, the more you do it, the better you hopefully become in doing that* (Trad27).

Many participants indicated that working with a more experienced colleague allowed them to establish steps to be followed within the institution while coming to grips with the academic aspects. In many cases, co-supervision allowed emerging supervisors to 'learn the ropes' of supervision from both administrative and student development perspectives. Furthermore, many emerging supervisors commented positively about having an "*expert in the field*" (S-Trad19; S-Trad19; S-UT1). Co-supervision was thus related to a more experienced person bringing specific areas of expertise to the study, or a more experienced person simply bringing general supervision experience and understanding of institutional processes and requirements.

Co-supervision was also cited in the data as being beneficial to students who then had more than one supervisor to support them and a range of advice available to them:

> *Our co-supervision works well because the student gets comments and reviews from the supervisor and two different [people]. All of us have different supervision styles and compliments one another* (CU6).

> *… supervising with another [person] who is at another university. She is not even here; she is in another university, and we co-supervise* (Trad3).

Manathunga and Goozée, (2007) argue that there is a need for practical support for supervisors through learning from experienced supervisors about solving real supervision problems. This study data also showed that co-supervision can be a powerful means of supervision development. However, to a considerable extent, how that relationship works was conditioned by the general ethos of the department.

> *But I must say if you have a nurturing environment, where you have also trust in colleague with whom you are supervising, you know* (UT2).

> *I always supervise with somebody else. I must say that also boosts a lot of my confidence in supervision and also assists me in my ability to transfer my training and experience to other people in the department* (UT2).

However, it was also clear that co-supervision could be a challenge when students had to navigate conflicting suggestions and where there were problematic power issues at play.

... co-supervision conflict and contradictory feedback. In my case, I am aware of that, and I am aware of the possible conflict, but I think the important thing is to think of the student first and not the supervisor's ego (Trad29).

The relationship with your co-supervisor is significant because what often happens is that I will say something to the co-supervisor. They will say something different to the student, and it confuses the student completely (Trad26).

In a case whereby you find that the supervisor and the co-supervisor, when they give feedback, they give contradicting messages to the student, then the students find themselves confused (Trad29).

In a similar view, a UK survey respondent found concerns over how candidates might cope with conflicting voices (UK Council for Graduate Education, 2021). Guan and Blair, (2020) further note that it is a norm to have more than one supervisor, but the challenge becomes the conflicting feedback. In some cases, the principal supervisor made it clear that their word goes, so where the co-supervisor/s may suggest something else, the principal supervisor dictates the direction to take rather than the doctoral candidate.

The buck stops with me, so even with students I make sure to make the final decision whenever there is a conflict. When a student has two other comments, I always have to make the final decision based on this and that. This is how you should approach it. My students always come to me when there is conflicting feedback. You come to me (Trad3).

Furthermore, the data suggested that developing supervision expertise was a lengthy process that takes time. Thus, rather than simply offering a training programme, co-supervision allowed for development opportunities to be ongoing.

Training emerging supervisors take time, as they need to understand the research language. I go beyond assisting my staff from how I was also [supported] (CU4).

People must learn the discipline of being in supervision because supervision takes an awful lot of time (UT2).

It was also evident across the data that co-supervision can emerge as a very productive educational process whereby supervisors combine their knowledge and expertise regarding the research project, student development and institutional requirements. Where these relationships worked in mutually beneficial ways, it was clear that explicit negotiations as to roles and expectations had taken place.

... the two roles need to be clarified (CU2).

Wichmann-Hansen et al., (2020) also note that co-supervisors sometimes undertake more responsibility than the principal supervisor. Furthermore, there is a need for the relationships to be mutually beneficial; and though one supervisor might be more experienced, they need to share power and respect all parties.

Although I am the principal supervisor ..., I always learn a lot from the co-supervisor from things she adds to the comments I make. I learn a lot from her (Trad27).

Co-supervision needs to have roles clearly articulated to minimise power imbalances, and this requires reflexivity. Lee (2007, p. 691) asks, "how sure can it be that supervisors can supervise effectively in isolation, or even in pairs if they have not examined their own experience and developed a mature conceptual framework?" Simply putting people into a co-supervision relationship is thus not sufficient to ensure that the practices being shared are meaningful and socially just; and it is not sufficient to ensure that the relationship between the supervisors is one of mutual respect. Co-supervision roles and power differences between the supervisors need to be carefully managed.

My first PhD, I co-supervised with a much more experienced supervisor, which was helpful but also problematic. So problematic because he and I did not meet very often, and sometimes we did not understand each other (Trad25).

I was able to say to this person, "This, and this, and this is problematic. You are going to need to work on that… but you need to take the lead from your [principal] supervisor"

(CU2).

The highly unequal power relations in the South African academy, particularly along the lines of race and gender, were seen to undermine the potential for the co-supervision to work well if these were not explicitly engaged with. Gardner (2010) notes that the process of supervision has connotations of power and power differentials, of those who have and those who have not. The data about power-relations in co-supervision relationships mainly emerged when co-supervision was implemented so that the emerging supervisor would be mentored into the role, rather than where it was to share different areas of expertise (as discussed in 7.2.1) or to share workload (as discussed in 7.2.2).

I was just determined that as a person of colour and as a woman, I will not let, you know, that people's prejudices about certain genders or race groups ever block me from achieving my goals. (UT21).

Despite many positive experiences, there was evidence of negative experiences in the data, whereby power dynamics between supervisors undermined the potential for development. It is important to note that in most cases where power relations were seen to undermine the potential for co-supervision to work as a means of staff development, the co-supervision relationships were obligatory or enforced through university structures. In reflecting on one problematic experience with a highly regarded principal supervisor, one participant indicated:

She no longer takes someone in as a supervisor team, and I think that she realised that she could not co-supervise and so that is another option where if you now are an established supervisor. You know that you cannot work with somebody else. Take the student by yourself (Trad6).

In some cases, these power relations were subtly expressed, for example, the different hierarchies of experienced and emerging supervisors were denoted by terms such as 'under' and 'stand back' and 'a student' in the following three data quotes:

I started supervising under a colleague (UT2).

I am the co-supervisor. I stand back for the supervisor, to take the lead, and do not try and take over (Trad29).

Experienced supervisors would guide emerging supervisors in the same way you [teach] a student through the process (Trad6).

It should be noted that there was no data related to other forms of joint supervision, such as panel supervision or team supervision. The lack of joint supervision is unsurprising, given the dominance and resilience of the traditional master-apprentice supervision model (as discussed in Chapter 2). If more collaborative postgraduate education became common in South Africa, perhaps there would be more opportunities for emerging supervisors to learn from each other. Supervision development through peer learning was not only through co-supervision relationships; many participants referred to a mentors' role in their development as supervisors, as I discuss next.

7.3   Mentoring as a means of supervision development

In this section, I discuss the role of mentoring as a form of supervision development. Mentoring is understood as knowledge and guidance from a more experienced colleague to an inexperienced or less experienced individual and includes personal and career advice and access to resources such as professional networks (Pearson & C Kayrooz, 2007). Most of the available literature on mentoring focuses more on the supervisor as a mentor to the candidate (Pearson & Brew, 2002). However, I will present the experienced supervisors as the mentor to the emerging supervisor, as it was revealed in the data. Molla and Cuthbert (2016) also note that emerging supervisors may need additional mentoring and capacity building to build their supervision confidence. As Guerin and Green (2013) argue, doctoral education is as much about identity formation as it is about knowledge production, and this holds true for the supervisor too.

Alongside data about co-supervision as a means of developing supervision capacity, was a frequent reference in the data to mentorship. "Academic mentoring refers to informal and formal efforts to mentor faculty members in higher education" (Lunsford, 2017, p 325).

There was a great deal of discussion about the role of mentors in the data. Furthermore, many suggested that this was the primary means by which they had developed as supervisors.

> *After [being mentored], I felt competent, and my student did well, and I thought I learnt a lot, and I am ready for the next one* (CU4).

> *The mentoring [and] peer support has been instrumental* (Trad14).

> *A professor mentored me; she took me through steps besides telling me the concepts* (Trad5).

> *[I had] a mentoring relationship with a more experienced supervisor* (S-Trad45).

The data suggested that emerging supervisors benefited from the mentoring relationships they had. Experienced supervisors indicated that they took responsibility for mentoring emerging supervisors to understand institutional processes, as much as approaches to supervision.

> *Supervise somebody with me, and I almost guide that person as much as I guide the student through the process, which is extremely useful for the university* (Trad6).

> *I see a lot of the teaching and the learning happening in understanding the approaches, why you do things and how you do them. So – and then you need someone to assist you with expertise around knowledge [to guide] you* (Trad25).

> *The most important thing that can be provided to emerging researchers is having senior mentors to help with the system* (Trad12).

Consistent with understandings in the literature (for example, Savage et al., 2010), mentoring was seen by many of the participants as an opportunity for self-development across all aspects of academic work and in relation to their identity. Some saw this as an opportunity to pass along the mentorship they had benefitted from when they were emerging academics:

> *I would just say that confidence and being a mentor have been in all the roles. I have been a mentor and a mentee as well* (UT2).

> *At the moment, it is not official; it is more like; I think it is more people who like volunteering to be a mentor* (Trad26).

Often such informal mentorship relationships emerged as extensions of the emerging supervisor's relationship with their supervisor. Such positive relationships enabled emerging supervisors to be better prepared:

I feel I grew so much under her guidance as a scholar and am lucky enough to have continued this relationship into my post-doc (S-Trad82).

My doctoral supervisor mentored me and took me through that supervision process. So, there was very much a one-on-one development process (UT6).

I am lucky because I had the world's best supervisor, and she has continued as my [mentor] (Trad7).

I learnt mentoring from him [my supervisor] from how he was doing things until I was on my own (Trad19).

I am passionate about continuing mentorship beyond supervision (Trad5).

This understanding suggests that for many supervisors, supervision does not end with graduation. Robertson (2017b) reports that the doctoral supervision arrangement between supervisors and the candidate can be construed as a formal mentorship. There was ample evidence that positive supervision relationships extended for many years through co-publications, co-supervision, and mentorship. Emerging supervision expressed a need for "*a mix of formal and informal mentoring*" (Trad7).

McKenna (2017) argues for programme projects that would bring together teams of supervisors and provide spaces of mentorship and support for the supervisors involved. Similarly, Rath, (2008) calls for a professional development model that should seek to facilitate a process that honours, amongst others, the supervisory relationship as requiring not only competent individual supervisors, but also a supportive community of academics.

7.3.1 Mentorship as an informal arrangement

In many cases, mentorship was an informal arrangement, neither coordinated nor required by the university. It emerged through the interplay of the agency of individuals seeking or offering mentorship and the culture of collaboration and support in the department, university or beyond.

> *Now informally, I went to two different people, and I asked for help and guidance and had questions* (Trad14).

> *I have good role models and mentors, but not at my university* (Trad91).

> *So, I know that I can call her, and I can say, "Ah, she helps." Moreover, she will go, "Okay what do you need?"* (Trad7).

It emerged in the case of the person quoted above (Trad7) that her supervisor explicitly discussed the issue of supervision pedagogy throughout the PhD and the student found this to be a really pleasant experience. So, we have a rare case where the HEQSF's assumptions could be seen to be correct in that getting a doctorate meant that this person felt confident to supervise a doctorate. Furthermore, the participant had an ongoing positive relationship with their supervisor after she had graduated and could call on her for mentorship when the student became a supervisor herself. Enriching relationships between mentors and mentees often endured beyond the student-supervisor relationship whereby emerging supervisors could engage with their supervisors regarding their own supervision (Robertson, 2017).

> *My doctoral supervisor mentored me and took me through that supervision process. There was very much a one-on-one development process you might say because ja, she was my Doctoral supervisor and so she mentored me through that supervision process.* (UT6).

It was clear that the departmental ethos in some cases also facilitated the forging of informal mentorship relationships.

> *[My department] is an informal mentoring space, and I think it is because I learnt so much from that mentoring space* (Trad29).

In terms of non-official support, you know you always ask senior academics for advice (Trad17).

Informal mentoring, [whereby] other people will take you through and explain how to do things (Trad8).

It seems that individual agency was also central to these informal relationships in that some of the mentees were able to determine when to seek assistance and from whom to seek it:

The people who mentored me were people I chose and who were prepared to spend time with me (Trad8).

I linked myself to several more experienced supervisors where I receive mentorship and have the courage to go and ask for help (S-Trad62).

The help that I have received is mostly from finding people I know (Trad7).

The agency of those seeking mentorship was met in many cases by experienced supervisors happy to mentor others. Equally so, it can be concluded that the mentor understands what it takes to be an emerging supervisor as they have once been in the same position.

It is now not official; it is more like I think more people like volunteering to be a mentor (Trad6).

I am head of a division here; I mentor and co-supervise with more junior people (Trad24).

Moreover, where mentorship was spontaneous, a great deal of mentorship was reported to happen across the department and not just at a one-on-one level:

[Inexperienced] staff are mentored by the more experienced staff (S-Trad21).

I used more of an informal peer network, and I surrounded myself ... with experts that I could go and talk to (Trad29).

The mentoring I received or sought out has been [from] informal intellectual spaces (Trad7).

I also need to keep mentoring my staff members to the point that they can supervise independently (Trad5).

It was significant that the data related to informal mentorship relationships emerged exclusively from those traditional universities with relatively strong research cultures (Cloete et al., 2015b), and where most departments have a mix of experienced and emerging supervisors. Various researchers have indicated that different institutional types have quite diverse cultures. These include the extent to which academics are seen as 'trustworthy' and left to their processes and practices (McKenna & Boughey, 2014), such as in traditional, historically White universities, compared to the more hierarchical, compliance cultures of universities of technology (White, et al., 2011) and historically Black universities (Bozalek & Boughey, 2012; Muthama, 2018), which both endured state interference and firm compliance regulations under apartheid, with arguably residual effects on institutional culture (Moyo, 2018). It is, therefore, perhaps expected that how mentorship was enacted would reflect such histories, and there was thus a split in the data according to institutional type, around the extent to which mentorship was informally arranged and readily available.

It may be that historically White universities have a stronger sense of collaboration because research is so imbued in the institution that such mentorship relationships emerge from that culture. However, it may also be that such institutions are less likely to have formal supervision development programmes (as indicate in Chapter 6), so these informal arrangements emerge in the gap. Robertson (2017b, p. 411) argues that "formalising mentorship agreements would add to the richness of the pedagogies of supervision". Data related to formal mentorship arranged by the universities, was found across all institutional types as I will now show.

7.3.2 Mentorship as a formal arrangement

Mentorship was in terms of institutional requirements (S-UT6).

Mentorship is an institutional requirement (S-UT7).

Mentoring is supposed to involve more personal, pastoral relations (Lindén et al., 2013) and knowledge and skills can certainly be acquired through both formal and informal opportunities. In some universities, there were formal mentorship arrangements for emerging supervisors, and often these were a requirement; and, as indicated earlier, these repeatedly overlapped with requirements around co-supervision. Mentorship can be seen as an apprenticeship whereby an academic has the opportunity to learn to supervise through practical experience, through shadowing skilled and experienced supervisors (Lee, 2013).

New staff members are provided mentors who also support them with supervision expertise (S-Trad66).

Included in my job is to give mentorship (CU6).

The employer also provided me with a mentor (S-Trad 94).

Lin and Liu (2021) note that the Iranian higher education system has neglected the importance of mentorship by experienced supervisors, and it would seem from the data in this study that the extent of mentoring support can be linked to the institutional research culture (Visser & van Dyk, 2011). It was clear that some institutions valued mentoring more than others, but it would be a mistake to think that this would always be evidenced as mentorship being mandatory. Where mentorship is a formal requirement, it can become yet another compliance issue as one emerging supervisor mentioned:

my university has a mentorship programme; the mentor I saw was a performative exercise ... she saw me at a particular time, and she had three more appointments and was seeing people every ten minutes (Trad8).

In some cases, mandatory mentorship may emerge as a structure in a university because of a culture of risk-aversion and compliance, whereby the university culture allows for such relationships to be imposed on individuals and for them to be allocated specific mentors. In other universities, such a structure might be dismissed in the name of academic freedom, but there might still be a strong culture of mentorship, though this would be implemented in a voluntary, bottom-up manner. The data suggested varied views with regard to whether mentorship should be formal or informal, compulsory, or voluntary.

I feel there should be formal and informal [mentoring] programmes targeting emerging supervisors (S-Trad65).

Formalised mentorship at initial stages, with roles clearly defined (S-Trad19).

Hollingsworth and Fassinger (2002) suggest that mentoring should be a more explicit element of the research training environment, and there was much data to show where mentorship was not formally arranged. This informal arrangement often made it challenging for individuals to access the mentorship they required, and some called for this to be formalised.

Simply embarking on the doctoral supervision process is not sufficient to develop supervision skills unless supplemented by other mechanisms, such as collaborating within the institution and beyond. Mentoring by experienced supervisors has the potential to provide reassurance to new supervisors of what is expected (Taylor, 2019; Taylor et al., 2020). Those who had enjoyed positive mentorship relationships made it clear that this was something that they saw as ideal for supervision development:

We had an influential mentor. So, I think mentoring is the one thing that institutions should do (UT2).

It would be easier if it were formalised where my boss said that you would sit with this person once a month, and you know, then I am not the one asking for a favour (Trad9).

The most important thing that can be provided to emerging researchers is having senior mentors to help with the system (Trad12).

As some participants indicated, allowing mentorship to emerge voluntarily assumes a culture of collaboration and the agency of emerging supervisors to access a mentor.

It would be [good] for every young supervisor or researcher to have a mentor, and unfortunately, not everyone has access to someone like that. I think I am so privileged because the person who was a mentor for me, her personality and how she does things, she is the kind of person you would look up to (Trad11).

In many aspects, participants indicated that they needed explicit support and an identified person from whom to seek support as they developed as supervisors, however, such institutional arrangements were not in place to support their desires:

I have never really had any mentorship from somebody above me (Trad9).

[You get] mentoring if you are lucky to have a good mentor in the department. (S-Trad39).

Most of the colleagues they find themselves supervising [without having] had any mentorship from experienced supervisors (S-CU6).

I felt like I could have done [well] with senior mentorship and more support (Trad17).

Both formal and informal mentoring enabled the development of emerging supervisors in diverse ways. However, like any other relationships, including co-supervision, mentoring had its challenges in terms of power dynamics.

7.3.3   Power dynamics in mentorship relationships

As with co-supervision, the many benefits outlined by participants need to be balanced against reports of problematic power relations. There are arguably benefits to matching the mentee with mentors of similar demographic characteristics to lessen power dynamics (Lunsford, 2017). Power relations, ethnicity, gender, and personal circumstances often play a critical role in the supervision relationship as racial tensions still exist in profound ways between people in South Africa (Naidoo, 2017). Soudien (2018) notes that the power relations in co-supervision and mentoring emerge in the South African context due to the historical legacy of apartheid.

> *The university looks good on paper to have these mentors, but it did not work as expected* (Trad 9).

Reports of power differential problems emerged across institutional types and within both formal and informal mentorship arrangements, though they were notably more dominant where the arrangements were formal. In such cases, the mentee had little choice in determining their mentor. In some instances, the mentoring did not work well because those assigned as mentors were not committed.

> *I came to her, and I said I would really like your support in understanding the rules, the context of how to do this, and she said, "Well, you will learn of it as you go along."* (Trad8).

> *… you are more worried about your work than mentoring somebody else* (CU2).

Even in cases where mentorship arrangements were formally arranged, some emerging supervisors felt alone. The participant below had been allocated a mentor but still said that:

No one tells you how to do it. No one tells you how you need to help a student get to a certain level (CU10).

Given South Africa's history, it is unsurprising that power relations often played out along the lines of race as indicated in the discussion on co-supervision. One emerging supervisor indicated that a more senior White mentor would often enjoy institutional authority not awarded to younger, Black supervisors. So, his advice to request specific processes from administrators would not be met as supportively as when they came from the mentee:

I keep on bringing the 60-year-old male professor that even the administrative support you require from the university makes it difficult to get it if you are Black and young (Trad10).

According to this participant, administrators would listen to the instruction of an elderly White male more readily than they would with his young, Black counterpart and the mentor was unaware of how they inhabited different contexts even within the same university. Such behaviour was conditioned by the history of the country.

There was a sense that the mentors were sometimes unaware of their privileged positions in the university and so were 'out of touch' with the emerging supervisors' experience. This lack of awareness was not only related to the mentees' academic credentials but also because of their race. Co-supervision was used to diffuse the power differences in some cases. Such power differences also emerged in the relationship between supervisors and students. One Black African emerging supervisor indicated:

I have had one opportunity to co-supervise, and that was because the student was of a different race [White] and she [the student] saw me as not being able to. She wanted to have me removed [as supervisor], and fortunately, another [White] senior lecturer said "No, no, we will not remove you, we will co-supervise". (Trad8).

This problematic racism was also evident in the following quote:

> *In a historically White university, there are so many white people. Then there are very few Black academics, and when you supervise, they [the students] think they [the white supervisors] are better* (Trad7).

For a mentor to make the implicit norms, values, and practices explicit for their mentee to navigate, they need to be conscious of the extent to which such norms, values and practices may privilege some people over others.

> *Moreover, by that time, Black people were not allowed to supervise students at that institution, primarily white people* (Trad19).

> *I was still at VISTA [former technikon] then. And by that time, Black people were not allowed to supervise* (Trad17).

Understanding the historical context of racialised postgraduate education alongside the racism of the current context would be essential for meaningful mentorship to take place. Given this history, experienced supervisors who could function as mentors were almost always White and often male. While emerging supervisors, the mentees, were often African male or female. Alongside the continued racist and sexist nature of the universities conditioning the mentorship relationships, was the current managerial culture evidenced thus far in mention of workloads requirements and performance management targets. This also had effects on the potential for mentorship to enable supervision development.

> *Some colleagues have experienced much tension, and their environment is competitive. So experienced supervisors are not willing to help* (Trad11).

> *It is a very contested space. It is a contested space that does not care* (Trad16).

South Africa is faced with multiple problems inherited from the apartheid system where higher education was the domain of a White minority favoured by the apartheid regime (Waghid, 2015). Given that only 4 911 of Black academics in South Africa had doctorates in 2019 compared to 7 636 Whites (CHE, 2021), despite white people making up only 9% of the population, it is not surprising that the mentors were White in most cases, and the mentees were

often Black emerging scholars. This inequality is attributable to the fact that South African universities are differently positioned in terms of material resources, historical legacies, and critical mass of qualified staff to supervise doctoral students and undertake quality research (Breier & Herman, 2017). Thus, it was clear that the success of mentorship as a means of supervision development depends mainly on the relationship of respect and trust between all parties and the extent to which they can reflect on their roles and the changing context:

> *The co-supervision is working well because there is an excellent relation of trust amongst us, and she is an expert* (UT3).

> *My mentor has been [an excellent] sounding board in terms of my science supervision because he is [an excellent] listener and can see things from a different point of view* (Trad15)

> *The Dean of the school mentored us a lot. Also, my supervisor. I will always be indebted to that older man* (CU1).

The above extracts indicate that in some instances, the support was highly beneficial, and the relationship was able to overcome the historically structured power imbalances. The Dean in the above quote did not consider emerging supervisors as less legitimate but supported them to succeed. The data shows that mentorship by someone who differs from an emerging supervisor – along the lines of age, race, language and more – relies on careful navigation of power dynamics. In response to such issues, there was also evidence in the data of participants electing to work together to support each other as emerging supervisors, rather than seeking the support of more experienced colleagues (as discussed in Chapter 6). In such cases, the mentorship was more equitable, and all who participated did so on a more even footing. There were examples where this was an informal arrangement between friends who were all emerging supervisors and examples whereby this was a slightly more formal arrangement at the departmental level:

> *The other [form of] support that I have received has been collegial peer support in other lecturers, not necessarily older and more experienced* (Trad8).

Participants received the support in diverse ways and from within and outside their institutions. Besides institutional supervision development initiatives, many individuals took their own initiative to develop their doctoral supervision practice through relationships with more experienced others.

7.4   Conclusion

According to my research findings, it was evident that the lines between co-supervision and mentoring for supervision development were blurred but both were used to develop and support emerging supervisors. Both co-supervision and mentoring can provide emerging supervisors with enormous support in navigating their interactions with postgraduate students. While co-supervision is a popular model to use with emerging academics who benefit from the mentorship of established supervisors when taking on students (Bitzer & Albertyn, 2011), co supervision often plays out in the same ways as sole supervision in that there is a strong reliance on the supervisory relationship and an absence of other support structures for the student and supervisor. Questions about the quality of a doctorate in a massified system were brought up: "*I know people whose writing is so poor that I cannot believe they could have written a PhD and got the title doctor to their name*" (CU2). Supervision has only recently emerged in some universities, given that they were not allowed to offer postgraduate education during apartheid and where some limited postgraduate education had happened, it had been the preserve of white academics.

Mentorship constitutes another developmental relationship emerging supervisors may benefit from (Lindén et al., 2013). There were ample examples of development across the data, to the extent that many called for such arrangements to be formalised to ensure that all emerging supervisors can access them. Nevertheless, some data suggested that the extent to which such arrangements can be formalised depends on the university's culture. Furthermore, in informal arrangements the emerging supervisor has agency in determining when they want assistance and from whom they want it, so this meant fewer problems with power differences. Where power differences arose, it seems these were generally when the co-supervision or mentorship relationship was imposed and the mentor was not sufficiently reflective of the emerging supervisor's context. Universities as highly managed spaces with many constraining

institutional structures that may undermine supervision development, need a collegial culture of support. Despite undergoing substantial shifts in recent times, some patterns of dominant power relations remain in place.

The latest literature on structured supervisor development programmes marks a shift from emphasising the administrative and policy compliance aspects of research supervision to concentrating on the pedagogical elements of supervisors' responsibilities (Guerin & Green, 2013). The mode of supervisor development initiatives in the South African context also needs to be reimagined. The CREST (2018) report revealed that a considerable number of emerging scholars reported the lack of mentorship as a hindrance to their academic success. This, therefore, is an indication that formal mentorship programmes can be introduced to support emerging scholars to improve their supervision capacities, thus contributing to the economic development of the country through the production of well-qualified human resources needed for international competition (Manyike, 2017). To varying degrees, mentoring with senior colleagues, peer mentoring and supervision discussion groups were in evidence across institutions.

Chapter 8: Conclusion: Looking backwards, looking forwards

There was no kind of mentoring or training as a supervisor, like, nothing! (UT7).

8.1   Introduction and overview

This study opened with an argument that a key challenge facing the South African higher education sector is the slow rate at which it is producing a new generation of academics and the poor retention and throughput of doctoral graduates required for the so-called knowledge economy. The purpose of this study was to investigate the enablements and constraints in supervision development from across South African public universities. It set out to explore supervisors' experiences of postgraduate supervision development, in particular, to see how emerging supervisors are developed before taking on the supervision role. The essential aspects of doctoral education and the need for South Africa to produce more doctoral graduates were discussed.

The objective of this study was not to compare these universities but to use the data from them to answer the research question. Bhaskar's (2013) theory of critical realism as a metatheory informed this study and provided a space to investigate the phenomena through the three levels of the Actual, the Empirical and the Real. The use of Critical Realism as an the 'underlabourer' made explicit the ontological position of the study and forced me to go beyond description of data or the assumption that the experiences and events in that data represent 'truth'. It further required me to identify the underlying mechanisms that conditioned how the development of emerging supervisors was conducted.

In the introduction of this thesis, I stated that the there was a need for emerging supervisors to be developed before taking on the supervision role, but, drawing on a social realist position meant that I understood such development as being conditioned by the multiple mechanisms at play in each context. Thus, the research question that informed this study was, "*what mechanisms condition postgraduate supervision development across South African public universities?*" The study used Bhaskar's critical realism as the metatheory and Archer's social

realism as the analytical framework to account for the interplay between structure, culture, and agency. The theory allowed me to investigate the social world of postgraduate supervision development and how it was conditioned by the mechanisms at play.

As explained in Chapter 1, supervision is a specialised form of teaching (Bengtsen, 2016; Lee, 2009) and therefore there is a need to develop and support emerging supervisors to supervise to their best ability. To develop my research question, I investigated the current literature on doctoral education and supervision and identified a gap that led to this study. I have argued that much of the research on postgraduate supervision and literature on how to successfully supervise fails to take the issues of institutional context and research culture sufficiently into account and that there is a real need for studies that look at postgraduate supervision more holistically and I have published this argument in more detail (Motshoane & McKenna, 2014). I have attempted to address these matters in this thesis, to contribute to the ongoing conversations around supervision development and support.

I suggested in the discussion on institutional differentiation in Chapter 1, that many of the traditional universities are 'research focused' or 'research intensive' where the 'focus' or 'intensity' is indicated by the number of postgraduate enrolments and the amount of research produced. The South African higher education context, in particular the differentiation in the sector and how different institutions value research, was discussed as this was found to inform how emerging supervisors were developed and supported. The aim of the study was not to compare these universities but to use their data to answer the research question and thereby to make sense of the complexities of nurturing emerging supervisors to take on this complex pedagogical and research role. A focus on the structural conditions at the domain of the real would mean being deliberately conscious about the interplays of structure, culture and agency. The findings presented in Chapters 5, 6 and 7, to a considerable extent, answered the research question stated above, though any realist study acknowledges that multiple mechanisms are at play in conditioning any social phenomenon and no study can identify them all.

In this concluding chapter, I bring together the key findings from the study and how supervision development or lack thereof emerged from the data. The chapter is concluded with a section that explores the implications of the findings for emerging supervisors and the higher education sector. The overarching finding is that there is a need for well-structured forms of supervision

development, especially for emerging supervisors. As already mentioned, my intention of using the framework of Critical and Social Realism was to identify the multiple mechanisms from which supervision development emerges. I used Bhaskar's Critical Realist Theory to lead me to the essence of the mechanisms at the level of the Real that condition the development and support of emerging supervisors. I also employed Archer's Social Realist Theory, which enabled me to focus my attention in the study on the interplay of structures, culture and agency.

In Chapter 1, I looked at the global drive for postgraduate education and the national policy drivers put in place in this regard. It is important for supervisors to have a sense of how their practices fit within and are shaped by such larger forces. As pointed out in Chapter 2, different models of supervision are available, despite the continued dominance of the master-apprentice model in South Africa, especially in the Humanities and Social Sciences. The use of this model, particularly in most cases where there are no additional opportunities in the form of short courses orseminars, , can exacerbate problematic power differentials between supervisor and student. The responsibility of the supervisor as the sole resource for the student is also high. There is a need for supervision development opportunities to expose emerging supervisors to a range of doctoral education models and approaches so that they can navigate what would work best in their context.

Bhaskar's (2013) theory of critical realism as a metatheory informed this study and provided a space to investigate the phenomena through the three levels of the Actual, the Empirical and the Real. The theory allowed me to see beyond the limitations of both empiricisms, with its assumptions that knowledge and reality can be conflated; and relativism, with its concept of constantly changing multiple realities. It further allowed to [me] uncover and identify the underlying mechanisms that conditioned supervision development. Archer's (1995; 2000) work enabled [me] to understand the interplay between the 'people' (that is, human agents) and the 'parts' (structure and culture). Then the construct of analytical dualism (Archer, 2005) which requires the temporal separation of these for analytical purposes only, was useful to further investigate their interplay in this matter. Furthermore, the use of Bhaskar's and Archer's work allowed me to see the data differently and not rely on my everyday knowledge. My role was to 'discover' or 'uncover' supervision development events and the mechanisms that conditioned the emergence of such events. It was important, as I did so, to understand supervision and supervision development as drawing on the agency of individuals but not as being entirely

within the control of such agents. The structural and cultural environment can condition the agency of supervisors.

Accordingly, the need to strengthen agency would be a key aim of any supervision development initiatives. In a call for more formalised supervision development, Fulgence (2019, p. 731) proposes that usually, "the development of doctoral supervisors takes many forms, one being collective institutional responsibility." This idea would assist in avoiding upward conflation and enable us to understand the ways in which supervisors may be enabled or constrained in their development by the structures and cultures that pre-date them.

The study was qualitative with participants from across South African public institutions and disciplines. The online survey yielded 186 responses and 54 supervisors participated in semi-structured interviews. Interviews were conducted face-to-face, telephonically and through Skype. The data was analysed qualitatively though analytical dualism to separate the 'parts' from the 'people' as a way to investigate their interplay. The analysis led to the emergence of three main sets of findings. These were lack of support for emerging supervisors, available forms of development through workshops and seminars, and co-supervision and mentoring as another form of development and support. The study was large-scale research that took me into unknown spaces and assisted me to discover how emerging supervisors are inducted into the supervision academy.

In all aspects, participants held contradictory views and the findings attempted to present these differences and consider how they emerged. It must further be noted that the findings that I identified in the data and presented in Chapters 5, 6 and 7 could not always be clearly separated from each other as they were intertwined. In these findings chapters, it has been noted that the structures and culture seemed to condition the way in which several participants experienced supervision development and support. Steyn and van Schalkwyk, (2017) remind us that in South Africa, supervision training has primarily been left up to individual institutions, and that supervision development is a recent phenomenon. Such development opportunities are mostly offered through their research divisions (Bitzer, 2010), though I also found evidence of them being offered by academic development centres and through postgraduate centres in those institutions that had these new structures.

I explored the interplay between the individual values and concerns of emerging supervisors with those of more experienced supervisors and with the social and institutional structures in place. The use of critical and social realism supported me in understanding how participants conceptualise their personal development, and how they are conditioned by the institutional structures and cultures within which they find themselves. While many universities around the world provide some form of supervision development opportunities, these are often focused on compliance issues and degree progression, and not on developing supervision pedagogy (Jones & Blass, 2019).

As reported in Chapter 5, the lack of support for emerging supervisors was complained about across much of the data. It was interesting to note that none of the institutional documents directly mentioned the supervision development of emerging supervisors, apart from one mention in one university's supervision policy that recommended that all supervisors participate in a supervision development course. The analysis of the data revealed that most participants were conscious of the complexity and range of supervision practices, yet they were not provided with the kind of development they desired. The supervisors expressed their frustration at being thrown into the deep end as they had to supervise without being prepared for the task. It was evident that the need to nurture emerging supervisors was overlooked, which could be articulated to the institutional structures and culture. Archer (1995) argues that culture is a difficult construct to change as it is embedded in history.

It was interesting, therefore, that across all participants the concept of a lack of development and support were evident. Although some indicated that they learned to supervise on the job, they were concerned that this meant that their students may bear the brunt of their incompetence. Furthermore, there was a great deal of data indicating that most supervisors used their own experience of being supervised to inform how they would supervise, as that was the only experience they could draw from. This culture of supervising from experience emerged as a constraint. Most academics told stories about their own experience of good and bad supervision, the latter of which they did not want to transfer to their students. Although people use these PEPs to pursue their concerns and projects they have identified for themselves, they are conditioned in the way and to the extent they use them by their previous experiences of being supervised. This explanation brings me to the point that CEPs and SEPs are not activated autonomously. Rather, it is only through the exercise of agency, exercising their own PEPs,

that they are activated. In context of this study, most of the respondents felt that most postgraduate supervisors learn the importance of the supervisory relationship and what makes a good supervisor by reflecting on their own, sometimes disappointing, experiences of being supervised. It was difficult to draw attention to issues of culture because as agents we hold and live with multiple contradicting ideologies, belief systems, and values, and often we are not aware of our ideological positions (Archer, 1995).

It was clear that many, or perhaps even most, institutions do not appear to induct their emerging supervisors sufficiently. There were various metaphors in the data such as `being thrown in the deep end', `learning on the go'. The PhD study by Searle (2014) revealed that academics are expected to know how to supervise upon graduation and this was certainly evident in the data of this study. The expectation seems to be that because they have done a higher degree themselves, they are therefore capable of supervising. It is interesting to note that the two studies – Searle's 2014 study and this one – were conducted six years apart but it seems that little has changed. The culture of the system has been entrenched in the belief that emerging supervisors can find their way through supervision because they have the doctoral qualification.

Another interesting finding of this study is the workload issue, which was a cross-cutting sub-theme presented in more detail in Chapter 5 and briefly in Chapter 7. Looking at the higher education landscape, it is hard to ignore the claims by supervisors on how they battle with workloads. There is substantial pressure on supervisors to manage teaching, research, and community engagement workloads, which impacted on their decisions to attend or not attend the developmental programmes. The interplay of the 'people' and the 'parts' led to the emergence of more enrolment of doctoral candidates and an ever-rising supervision burden.

Postgraduate graduations and accredited publications are counted as 'outputs' in the national funding formula and, as a result, have come to be perceived as particularly lucrative across the system. In some universities, this has led to these activities of research and supervision being thought of as metrics in the form of points towards promotion or counts on the workload. In universities where incentives are paid for successful supervision of students, there seemed to be the likelihood that such instrumentalist understandings were made worse.

Attention was drawn to the ways in which academic and departmental cultures could enable or constrain the development of emerging supervisors. The lack of support is concerning, due to

the drive to increase the number of postgraduate students and supervisors across the sector. Therefore, there is a need for a closer look at how supervision development can be provided.

In Chapter 6, the available forms of development through workshops and seminars were presented. There were some differing views amongst participants. Some thought the discipline-specific workshops would have benefited them better than the generic ones. Though the key issue seems to have been whether or not the workshops acknowledged disciplinary differences or worked from a premise of 'generic best practice' which could be uniformly implemented regardless of context. It seems that in some cases the available training was basic and was not always specifically focused on supervision, but more on administrative matters.

Some participants believed that these interventions would be more beneficial to emerging supervisors if they were mandatory rather than voluntary. Those institutions with strong research cultures seemed to value academic freedom and would thus not impose a mandatory course. On the other hand, some indicated that if it was mandatory, then time would have to be allocated for it and those supervisors who may be 'stuck in their ways' would be unable to avoid engagement. This notion of mandatory or voluntary participation in developmental initiatives can be articulated to the institutional structures and culture.

There was data that suggested that supervision development opportunities would need to be more extended in nature and go beyond one course. There was a call for intellectual spaces to be developed where supervisors could work collaboratively to develop their supervision expertise. Moreover, there were calls for collegiality in terms of collaborative spaces and the responsibilities of institutions in guiding emerging supervisors. White (2010, p. 91) calls for "supervision practices to be understood as communities of individuals at different levels of expertise each of whom either implicitly or explicitly, learn from each other." There was some concern that the emergence of supervision training was part of the increasing managerialism and performance management oversight of academics. In institutions where this is a culture of compliance, it would be possible for such training to become a 'tick box' activity. Key to the offering of supervision development initiatives, is that the facilitators need to have credibility, and this seemed largely to relate to their having supervision experience and therefore offering the development as more experienced peers rather than as 'trainers'. Generic claims within workshops are problematic as supervisors are being told what to do, often in the form of what

is regarded as best practice, without considering the discipline or other contextual issues. It is a giving of instructions instead of allowing a space for more collaborative process.

Chapter 7 addressed the availability or lack of development and support through co-supervision and mentoring. A particularly noteworthy finding was that co-supervision was presented as useful for sharing expertise and managing the workload, as well as a means by which to support and induct novice supervisors. Mentoring often included a broader focus than supervision and comprised both institutionally coordinated and informal arrangements. There was a call by participants for a formalised mentoring programme to be provided but there was also evidence that in cases where this occurred, and the mentees did not select their mentors, the issues of power imbalances were stronger. In particular, mentors have to reflect upon how their privilege (regarding experience and seniority as well as in relation to the racist and sexist structuring of institutions) may afford them very different experiences of the university than the person they are mentoring.

Writing from the South African context, Botha, Muller, & Webber (2016) call for more supervision and other forms of staff development. Indeed, there are limited continuous professional development courses on supervision skills for doctoral supervisors at the institutional level (Botha et al., 2016). The study findings provide an understanding of the complexities of the professional development of supervisors and how professional development is offered and perceived in different institutions around the South African higher education sector. Any improvement in supervision development needs to take the institutional culture into account. Implementing compulsory development may only result in compliance and may well take the form of training that would result in 'skills' development rather than practice development that provides a space for more nuanced discussions and deliberations. Thus, the following recommendations may be considered to reimagine how supervision development and support can be conducted.

8.2   Recommendations

The findings from the research suggest various recommendations.

Firstly, the South African public higher education sector needs discussions about the nature of supervision, the supervision development initiatives in each university and the responsibility of each stakeholder for such initiatives. I have presented from the data several calls for higher education institutions to reimagine how they develop and support emerging supervisors. The rush to achieve the targets is a constraint on supervision development and possibly on the quality of the studies being supervised. It is against this background that there is a need for supervision development and support that would help re-think, re-imagine, and reflect on the current processes.

The PhD is meant to be a public good, whereby it is a benefit to society as a whole to have more people with doctorates. In part, it is through the topics we choose to research interrogating social justice issues, which guide us towards becoming a better society and taking better care of the planet (McKenna, 2017; 2021). But it is also through the development of graduates who assume their responsibilities towards people and the planet. The national review of doctorates in South Africa included a set of doctoral graduate attributes and it would be important for universities to consider their role in this regard. Supervision development initiatives could be one site for such deliberations.

Secondly, to achieve the reimagining of supervision development, the entire process needs to be understood as one of ongoing commitment to knowledge creation and the complex pedagogy of doctoral education. The study data suggests that at times, supervision development was understood as comprising an induction into institutional policies and processes or the sharing of generic 'skills' rather than the negotiation of social practices. Lee (2018) reports on a large Norwegian supervision project entitled 'train the trainers' and it is clear from this and other research, including this study, that there is a need to interrogate the issue of development of practices versus training of skills. It would seem that in Universities of Technology, Comprehensive Universities and Historically Black traditional universities (in other words all institutions that did not until recently offer a large number of postgraduate programmes and undertake a large amount of research) that supervision development opportunities are likely to

be compulsory and attendance more closely monitored. This could be seen to be related to a history of more hierarchical control and could potentially lead to such initiatives being understood as compliance requirements rather than development opportunities.

Grappling with such differences between training and development would mean thinking carefully about who the facilitators are. McKenna (2012) argues that many academic developers positioned in South African universities are structurally positioned to provide 'training' (not development) in the interest of maintaining the status quo. In relation to this study, I would argue that this 'training' was at times focused on increasing student numbers and throughput rather than providing "a space of contestation and transculturation … [through] reciprocal exchanges with others" (Manathunga, 2007, p. 25). Therefore, academic development professionals in universities charged with providing professional development on supervision can be encouraged to consider new ways of developing and presenting the workshops. Furthermore, faculties and departments need to develop collaborative spaces where critical deliberations are encouraged.

If those who facilitate such initiatives do not have supervision experience, as was seemingly often the case as evidenced in the data, then it would be especially important for them to conceptualise their role as opening up spaces for reflection and collaboration, rather than transmitting information about best practice.

Considering that supervision is a shared responsibility, another recommendation concerns the need for institutions to address the capacity issue without compromising the quality. Bawa (2005, p. 60) has argued that "there is an important imperative to ensure that the research capacity of the system is reviewed and reloaded to safeguard that we can build a broad-based knowledgeable culture that takes its nourishment from this society's universities". Moreover, recognising research supervision as rigorous professional work might change a faculty's supervision practices (Halse & Malfroy, 2010), and may well challenge the ways in which the workload policies, performance management processes and incentives are managed.

The issues presented will need to be addressed holistically if there is to be a significant shift in addressing the inequalities in the system and in the representation of both supervisors and doctoral candidates provided in Chapters 1 and 2. A holistic approach to supervision

development would consist of more than a particular workshop or course: it would need to engage with issues of institutional structure and culture too.

The development of emerging supervisors is a slow process, given the complexity of the supervision task. One possible enabling mechanism that might be used to facilitate the development of emerging supervisors would be formal mentoring. However, this would need to be managed with an explicit consideration of power imbalances and the ways in which different people can experience the same institution or department in very different ways. In the South African context, Manyike (2017) called for a strong relationship to be established between emerging and experienced supervisors to share their supervisory experiences.

The data suggested that some institutions provided more supportive opportunities than others, and that in the case of historically White traditional universities in particular, there was often an assumption that the supervisor should know what they are doing. This meant that few development opportunities were made available, and, in some cases, individual academics felt embarrassed to seek out information or support.

Bitzer (2016, p. 289) notes that topics such as throughput, efficiency and quality, equity and access, and supervision development are often addressed at institutional level and not widely discussed and understood at department and individual level, although they have their effects at these levels. South African higher education histories, institutional differentiation, and the drivers of national policies and the funding formula should all be considered when conversations take place about how postgraduate supervision should be conducted in these institutions and how supervisors should be developed. Postgraduate output growth in quantity and quality will not occur if the role of structure and culture are ignored.

Having explored supervision development from across the differentiated South African system, I can argue that blunt drivers of postgraduate education can have unintended consequences if mechanisms such as institutional structures and cultures are not considered. As a final thought, the sector needs to consider the benefit that would come with allowing collaborative spaces for engagement around supervision issues among experienced and emerging supervisors.

8.3   Contribution to the current debates

This study has identified various mechanisms which need to be considered to achieve the desired form of supervision development in the South African higher education context and beyond. The findings that this research has contributed have implications for supervision development and policy. Within each finding, I explored the structural, cultural, and agential mechanisms that conditioned how these issues emerged as they did. This study advances the literature by making several contributions regarding the need for supervision development beyond the available workshops and seminars. The realist approach contributed a new angle to the supervision development conversations as it enabled me to investigate the phenomenon beyond experiences thereof.

Another strength of the study is that it includes data from both emerging and experienced supervisors, both of whom provided rich data around the lack of supervision development initiatives or the nature of available opportunities.

As Case (2015, p. 848) observes, "a social realist analysis focuses on identifying systems of mechanisms which give rise to observed social phenomena", and these can be both particular and universal. The social realist framing of this study contributed to the existing knowledge on supervision development and how structure and culture condition postgraduate supervision development. The study further extended the analysis beyond its particular data context to allow readers to tease out broad lessons which could be relevant beyond the specifics of the South African case.

8.4   Conclusion

The HEQSF indicates that at least part of a doctorate should "merit publication" and I have been most lucky to have been able to publish some of the findings from this study as I went along, with the help of my supervisor. The HEQSF also says a doctorate must "make a contribution at the frontiers of a discipline or field" (HEQSF, 2012, p. 41). I hope that this thesis has managed to do this by providing a comprehensive picture of supervision development across the South African higher education sector.

If universities are able to use some of these findings to reflect on doctoral education, the nature of supervision and how best to nurture and support novice supervisors, then I will be very pleased indeed.

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Appendices

Appendix A

RHODES UNIVERSITY
Grahamstown • 6140 • South Africa

CENTRE FOR HIGHER EDUCATION RESEARCH, TEACHING AND LEARNING
P O Box 94, Grahamstown, 6140, South Africa
Email: chertl-admin@ru.ac.za
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Fax: +27 (0)46 622 8587

19 January 2016

To whom it may concern

Approval of proposal for Doctor Of Philosophy (Higher Education) and ethical clearance:

Puleng Motshoane   Student Number: 14M8781

Provisional Title: The enabling and constraining mechanisms for doctoral supervision development in South African institutions

Appointment of Professor Sioux McKenna and Professor Lynn Quinn as supervisors.

Ethical Clearance Number: **2015.09.3**

This letter confirms the approval of the above proposal at a meeting of the Faculty of Education Higher Degrees' Committee on 17 September 2015.

In the event that the proposal demonstrates an awareness of ethical responsibilities and a commitment to ethical research processes, the approval of the proposal by the committee constitutes ethical clearance. This was the case with this proposal and the committee thus approved ethical clearance.

Yours sincerely

Prof S. McKenna
Chairperson of Education Higher Degrees Committee
s.mckenna@ru.ac.za

Appendix B

Dear Puleng

Here with the process to apply for ethical clearance at the Faculty Humanities:

The contact person is … Her details are at the bottom of the email.

You can advise that your application has been provisionally approved and we are waiting for ethical clearance letter.

" Please be advised that prior to permitting you to conduct your research, you would have to apply for ethical clearance from the University of Ethics and obtain the necessary permissions and clearance. This is a 3-fold process as the University is very strict on permitting surveys/ research on staff and students: obtain ethical clearance and then from the Survey Committee.

To obtain ethical clearance, you will have to apply on-line for which you would require log-in access (which ... will arrange) onto the institutional system. You would also need to upload a brief description of the research, a copy of ethical clearance from your institution, letters of informed consent, interview schedule/ questionnaire/ survey etc. onto the application. The Ethics Committee meets once a month and applications must reach us by the 15th of each month for review at the end of that month. Once your application is conditionally approved, the Committee would apply on your behalf to the Dean and Registrar for their permission. Once this is received, we would then refer you to the Survey Committee for them recommendation.

The University also charges a levy of R3000 to review private external ethics applications, proof of payment must accompany your application"

Appendix C

Cape Peninsula
University of Technology

FACULTY OF EDUCATION

RESEARCH ETHICS CLEARANCE CERTIFICATE

This certificate is issued by the Education Faculty Ethics Committee (EFEC) at Cape Peninsula University of Technology to the applicant/s whose details appear below.

1. **Applicant and project details (Applicant to complete this section of the certificate and submit with application as a Word document)**

Name(s) of applicant(s):	Puleng Motshoane		
Project/study Title:	The enabling and constraining mechanisms for doctoral supervision development across South African institutions		
Is this a staff research project, i.e. not for degree purposes?	It is a degree project		
If for degree purposes the degree is indicated:	Doctoral degree		
If for degree purposes, the proposal has been approved by the FRC	Yes, it was approved by the Rhodes ethics committee		
Funding sources:	No funding		

2. **Remarks by Education Faculty Ethics Committee:**

This doctoral research project is granted ethical clearance valid until 2 May 2021.

Approved: X	Referred back:	Approved subject to adaptations:
Chairperson Name: Chiwimbiso Kwenda **Chairperson Signature:**		**Date: 3 May 2017**
Approval Certificate/Reference: EFEC 2-5/2017		

Appendix D

Postgraduate supervision development

Good day, Colleagues!

I hereby invite you to participate in this postgraduate supervision development survey. This survey will form part of the data collection for a doctoral study, and I intend using it as the basis for a series of interviews with supervisors across South African Higher Education Institutions.

The title of the research is: "The enabling and constraining mechanisms for doctoral supervision development in South African institutions". The aim of the study is to determine the level of development and support that has been offered to you as a postgraduate supervisor and which forms of support you might wish to have. Participants should have been supervising for two years or more.

The survey should take approximately 20 minutes of your time.
The Rhodes University ethical clearance number is: 2015.09.3.

Feel free to contact me with any questions.
Puleng Motshoane
pulengmotsh@gmail.com

Or you can contact my supervisors
Prof Sioux McKenna, s.mckenna@ru.ac.za
or Prof Lynn Quinn, l.quinn@ru.ac.za

*Required

Informed Consent	By completing this survey, you agree that the information you provide may be used for research purposes, including dissemination through peer-reviewed publications and conference proceedings.You are, however, under no obligation to complete the survey and you can withdraw from the study prior to submitting the survey. The survey is developed to be anonymous, meaning that the researcher will have no way of connecting the information that you provide to you personally. The records will be kept for five years for audit purposes whereafter they will be permanently destroyed. Only the researcher and the supervisors will have access to the raw data. You are making a decision whether or not to participate by continuing to the next page.
Biographical data	As per the DHET (2014), the traditional universities offer mainly formative and professional undergraduate degrees, and more significant numbers of postgraduate degrees. The comprehensives offer a mix of programmes typical of both the traditional university as well as the universities of technology. The universities of technology (UoT) offer mainly vocational or career-focused undergraduate diplomas with a limited postgraduate sector.

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1.

Mark only one oval.

⬭ Traditional University

⬭ University of Technology

2. 2. From which institutional type was your highest degree awarded?

Mark only one oval.

⬭ Traditional University

⬭ University of Technology

⬭ Comprehensive University

⬭ International Institution

3. 3. In which discipline do you supervise? (Tick as many as relevant.) *

Tick all that apply.

☐ Education

☐ Humanities

☐ Natural Science

☐ Health Sciences

☐ Financial and Economic Sciences

☐ Law

☐ Management

☐ Engineering & the Built Environment

Other: ☐ _____

4. 4. How long have you co-supervised? *

Tick all that apply.

☐ Less than 5 years

☐ 5 to 10 years

☐ More than 10 years

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5.   5. How long have you supervised as sole supervisor? *

    Tick all that apply.

    ☐ Not yet
    ☐ Less than 5 years
    ☐ 5 years or more

6.   6. How many students are you currently supervising at master's level? *

    Mark only one oval.

    ◯ 0
    ◯ 1 - 5
    ◯ 6 - 10
    ◯ More than 10

7.   7. How many students have you supervised to completion/graduation at master's level? *

    Mark only one oval.

    ◯ 0
    ◯ 1 - 5
    ◯ 6 - 10
    ◯ 11 - 15
    ◯ 16 - 20
    ◯ More than 20

231

8. 8. How many students are you currently supervising at doctoral level? *

   Mark only one oval.

   ⬭ 0

   ⬭ 1 - 5

   ⬭ 6 - 10

   ⬭ More than 10

9. 9. How many students have you supervised to completion/graduation at doctoral level? *

   Mark only one oval.

   ⬭ 0

   ⬭ 1-5

   ⬭ 6-10

   ⬭ 11-15

   ⬭ 16 - 20

   ⬭ More than 20

   Supervision development

10. 10. Does your institution, faculty or department host research seminars and conferences?

   Mark only one oval.

   ⬭ Yes

   ⬭ No

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11.   11. If Yes, what has your participation been in those seminars and conferences?

Tick all that apply.

☐ Participant
☐ Presenter
☐ Session facilitator
☐ Organiser
☐ Have not participated
Other: ☐ _____

12.   12. Where relevant and if possible, please provide some examples of the topics that are covered in such seminars.

_____

_____

_____

_____

_____

13.   13. How are new supervisors prepared for the role and processes of supervision? Please describe any workshops, mentoring, or other training and development opportunities available for supervisors at your institution. *

_____

_____

_____

_____

_____

14.   14. What development and support would you like the institution to provide for
        supervisors? *

_____

_____

_____

_____

_____

15.   15. How have you as an emerging supervisor built your supervisory capacity? *

_____

_____

_____

_____

_____

16.   16. How do you seek assistance with supervision challenges? *

_____

_____

_____

_____

_____

17.   17. How has your own supervisor influenced your approach to supervision? *

_____

_____

_____

_____

_____

Supervision process

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18.   18. How are the students allocated to supervisors in your department? *

_____

_____

_____

_____

_____

19.   19. How is the supervision load shared within your department? *

_____

_____

_____

_____

_____

20.   20. Select the doctoral supervision models that are common in your discipline
       from the list below.

       Tick all that apply.

       ☐ Co-supervision
       ☐ One-on-one
       ☐ Project
       ☐ Team
       ☐ Cohort
       Other: ☐ _____

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21.   21. How would you define your role as a supervisor? You can select more than one option from the list below.

Tick all that apply.

☐ Director
☐ Facilitator
☐ Advisor
☐ Teacher
☐ Critic
☐ Supporter
☐ Critical Friend
☐ Mentor
☐ Coach
Other: ☐ _____

22.   22. How does your supervision affect your own research output? *

_____
_____
_____
_____
_____

23.   23. Do you consider co-publishing with your students as part of your supervisory role? Please explain your answer. *

_____
_____
_____
_____
_____

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24. 24. How are your postgraduate students supported by the institution? Select the relevant options. *

Tick all that apply.

☐ Academic writing support
☐ Research design workshops
☐ Other research workshops and seminars
☐ Thesis writing workshops
Other: ☐ _____

25. 25. How often do you seek input about supervision from other supervisors? *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Often

26. 26. How often are you requested to give input about supervision by other supervisors? *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Often

Thank you for your time in completing the survey.

If you are willing for me to contact you for an interview then please provide your details below. Your details will not be attached to your survey data.

Thank you for participating in this survey.

27. Full Name

_____

237

28.   Contact number and email

_____

_____

_____

_____

_____

Appendix E

Consent to participate in supervision development study interviews

Dear Participant

I want to request your voluntary participation in a research project that I plan to conduct, and I would like to involve your institution. My research is based on the national need to increase doctoral outputs in South Africa (CHE, 2009; ASSAf, 2010; DST, 2008). The purpose of the study is to explore how South African institutions are developing their emerging supervisors. I envision that the survey will help inform emerging supervisors' needs and how support for their potential development can be maximised.

You have indicated in the online survey on postgraduate supervision development that you would like to participate in this study's semi-structured interviews. The interviews aim to obtain a clear understanding of supervisor development at your institution. The interview should last for about an hour. With your permission, it will be audio recorded. All information provided will be treated with confidentiality, and codes will be used for both the institution and the research participants in the report.

It is anticipated that the knowledge generated from this research will guide higher education institutions in terms of their emerging supervisors' needs. The benefits could potentially filter down to the individual supervisors as they might receive appropriate support and development forms.

The ethical clearance letter is attached to the email.

Your willingness to participate in this study will be much appreciated.

Please sign this letter to indicate your willingness to participate in this research project. Feel free to contact the researcher Puleng Motshoane pulengmotsh@gmail.com or 084 464 7272, should you require additional information.

Alternatively, you can contact any of my supervisors.

Supervisor: Prof Sioux McKenna, s.mckenna@ru.ac.za

Co-Supervisor: Prof Lynn Quinn, l.quinn@ru.ac.za

I understand that:

Ethical statement	Please Tick

All information provided by the participants will be treated with confidentiality.	
Participation in this study is voluntary.	
There will be a recorded interview which will last for about an hour.	
The results will be used in the doctoral thesis and may be reported in accredited journals and conferences. Participants will be made aware of the publications that will come from the results.	
The participants are free to withdraw their consent at any time.	
Once the information has been processed, it is not possible to withdraw consent to participate.	

Participant's Full Name	Institution	Signature	Date