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How Are The Relationships Between South African Universities and Development Understood?

The Welfare University

By

Palesa Malehlohonolo Molebatsi

Thesis presented for the degree of

Doctor of Philosophy

In the Graduate School of Education

Faculty of Humanities

University of the Witwatersrand

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Declaration

I declare that *How Are The Relationships Between South African Universities and Development Understood: The Welfare University* is my own work, except where indicated, and that it has not been submitted before for any degree or examination at any university. It is submitted in fulfilment of the requirements for the degree of Doctor of Philosophy at the University of the Witwatersrand, Johannesburg.

Signed:

Palesa Malehlohonolo Molebatsi



November 2021

Abstract

Many development scholars argue that universities can and should address societal problems of poverty, inequality and unemployment. There is international literature that argues, in particular, two things: firstly, that certain economies thrive because they are knowledge driven; and secondly, that universities play a central role in preparing workers for the labour market. That same literature also goes on to argue that under-developed countries should emulate these economies, because this is a good way of achieving development. Thus, an increasing number of researchers and policy-makers in South Africa are interested in how universities do today, and can in the future, contribute to development. Empirical studies have been conducted analysing the relationship between South African universities and development. Yet, the evidence that exists, while useful, remains superficial. Specifically, it gives partial or incomplete analyses of the dynamics underlying the relationships between universities in South Africa, and development. The purpose of this study is to build an understanding of those dynamics. I develop an extended analytic framework with three ideal-types (The Abstract University, the Entrepreneurial University and the Developmental University) and analyse two data sets, with the main finding that South African universities do not make significant entrepreneurial or developmental contributions to development. Simultaneously, they are expected to perform more welfare activities as part of their functions. I argue that a Welfare ideal-type university is emerging in South Africa which seems to undermine the essential core of the university: the development and acquisition of knowledge. A floundering can be observed with respect to the purpose, the norms and the form of the university in South Africa, with the result that the role of universities is increasingly loosely defined. This analysis illuminates a specific aspect of the relationship between universities and development in South Africa, namely that it is a two-way one: different approaches to development nationally and within universities lead to changes in the nature of the university, which in turn affects development. In the case of South Africa, where emphasis is placed on welfare activities, the question arises whether universities will continue to be universities in the future.

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Chapter One

Introduction

Overview

This chapter introduces the background to this study. It sets the scene by exploring some initial international debates on the relationship between universities and development. In particular, the chapter lays the foundation for the study to investigate the way the relationship between universities and development is understood in post-1994 South Africa.

It presents an overview of the research problem that frames the study, the rationale, as well as the aims of the study. It also outlines the organisation of the study, outlining each chapter in the study and summarising the main claims and arguments per chapter.

1.1 Background to the Thesis

I start this section with an overview of the South African context. I present the literature that spotlights the triple crisis of unemployment, poverty and inequality. In response to this triple crisis, researchers and policy-makers believe that a few key ingredients are required to address the social and economic needs of South Africa. I present the literature in which it is believed that one of these key ingredients is a strong higher education system. With respect to universities specifically, this literature argues that the teaching, research and community engagement functions of South African universities can and ought to be strengthened. Further, this literature argues that this strengthening should be done with a view to enable universities to serve labour market needs, innovation needs and place-based community needs.

I also look at three key aspects of the relationship between development internationally and higher education in this section. The first is that while many people have been lifted out of poverty, there are contestations around whether their lives are better or not. This is a major international development policy concern. The second is that higher education has steadily grown in importance since the 2000s. Higher education was finally given a place in

international development policies in 2015, with the formulation of the Sustainable Development Goals of the United Nations (UNESCO, 2018). The Sustainable Development Goals (SDGs) are a set of seventeen international development goals that are intended to guide and monitor/evaluate the progress of all countries towards meeting these goals (UNESCO, 2018). I elaborate on the Sustainable development Goals (SDGs) both in this chapter and in the remainder of this study. The third is that this growth in importance has occurred because higher education is associated with a range of development outcomes. These development outcomes include increased taxes, health improvements and so on.

1.1.1 Overview of the South African Context: Unemployment, Poverty and Inequality, and the Role Universities Can Play

To understand the South African context, a discussion of the structure of the society and economy is required. The triple crisis of unemployment, poverty and inequality is raised in almost all discussions of present and future South Africa. The unemployment problem in South Africa is a pressing one because jobs are negatively correlated with poverty. In other words poverty is a function of unemployment (Turok, 2018). Unfortunately, the unstable South African economy leaves many unemployed. South Africa's Gross Domestic Product (GDP) shrank by an annualised 1.4% in the last quarter of 2019 (Statistics South Africa, 2020). The official unemployment rate remained at 29,1% in the final quarter of 2019, while the expanded definition of unemployment (which includes people who have stopped looking for a work) was 38.7 percent (Statistics South Africa, 2020). Also, the youth unemployment rate dropped to 58.1 percent from 58.2 percent in the previous period (Statistics South Africa, 2020). Because of the urgency that the South African government places on economic development, increasing the numbers of skilled graduates and getting them into employment has been an important imperative supposedly in order to respond to the 'scarce skills' problem. Balwanz and Ngcwangu (2016), however, argue that if the structure of the economy is not realigned, then even if the supply of skills is generated, the demand may not be present in the absence of industrial transformation (Balwanz and Ngcwangu 2016). Together with poverty and unemployment the problem of inequality is equally severe.

South African inequality is the worst in the world. According to the World Bank, 'South Africa is not only the most unequal country in the world, but inequality has increased since the end of apartheid in 1994' (World Bank, 2018: 4). The Gini coefficient is 0.63 for income inequality, but rises all the way up to 0.93 for wealth (World Bank, 2018). The labour market is segmented into a small number of high earners in the formal sector and a large number of very low earners in the informal sector, and poverty is a constant threat for 76% of the population (Turok, 2018). This makes South African inequality structural. Further, Turok (2018: 3) argues that together with racial discrimination, class inequality plays a central role in the structural injustice that plagues South Africa:

> Inequality cannot be addressed by welfare measures or even by taxation alone. Inequality stares us in the face every way we turn in our daily lives. It is prominent where we work, where we live, indeed in every daily experience…in some respects, gross class inequality is as undermining as racial discrimination, though of course the two are linked.

In the next chapter I turn to the literature on racial discrimination and how it has played a central role in contributing to the problems of unemployment, poverty and inequality. For now, I explore the question on the minds of researchers of policy-makers: how can these social and economic conditions be overcome?

1.1.2 The Expansion of Higher Education Internationally and in South Africa

There is the belief that development can be achieved through a few important policy interventions. One of these includes education. However, history shows that there has been no consensus regarding the kind of education that drives development, or how much of it. This is evidenced by the early policy statements (particularly in the 80s) of institutions like the World Bank, which prescribed that developing countries should focus primarily on expanding primary education as it yields the highest returns to development (Carnoy, 2019). Later, access to secondary education grew as a priority too, followed more recently by the notion that a stronger higher education system also makes significant contributions to development. This latter point is related to the point made in the previous section about the ways in which governments can respond to the scarce skills problem in their economies. There is international literature arguing that universities can play a critical role in social and economic development both in terms of skills and other development outcomes (OECD, 2009). Researchers also argue that higher education participation rates are correlated with higher

levels of development (World Bank, 2021). As noted above, the Sustainable Development Goals (SDGs) have brought higher education into the global development agenda (UNESCO, 2018). The role of higher education with respect to this is to form professionals, develop high-level skills, conduct research to produce knowledge, and engage directly with communities to solve social problems (UNESCO, 2018b).

These arguments have inspired a greater focus on the relationship between higher education and development in developing countries. For instance, Athreye (2005) argues that the large numbers of 'inexpensively trained' science and engineering graduates has been vital to India's industrial development. South African researchers are hence more and more convinced that South African universities can do more for development. Waghid (2002: 462) argues that academics who work on teaching and research in South African universities can and should structure their work to be more responsive to the needs of society:

> university academics ought to develop a reflexive praxis. I contend that such a practice would contribute towards ensuring that exclusivity of the traditional academic and disciplinary based teaching and research university does not remain isolated from the social problems of the broader South African society, irrespective of reduced state subsidies for universities.

In response to the idea that higher education can stimulate development through the labour market training role (among others mentioned below), higher education has expanded dramatically in both developed and developing national contexts (Altbach & Peterson, 1999). The United States of America (USA) was the first nation to achieve massification. 40% of the American age cohort were in post-secondary education by the 1960s (Tremblay et al., 2012). Western Europe and Japan soon followed in the 1980s (Tremblay et al., 2012) More recent figures suggest that the remarkable growth in higher education institutions around the world has continued, according to McCowan (2019: 12):

> …there has been a vast expansion in recent years, reaching more than 200 million students and some 20, 000 institutions worldwide … Sub-Saharan Africa has doubled its enrolment ratio since 2007, even in in the context of rapid increases in youth population, and in South and West Asia this figure has tripled. Yet even if these precipitous rates of growth can be maintained it will still take decades to reach the highest enrolment countries.

While enrolment rates in Sub-Saharan African only made up 5% of the 150 million odd globally in 2007 (UIS, 2010), of the countries that make up Sub-Saharan Africa, South Africa has continuously had the most extensive higher education system (UIS, 2010). Expansion in South

Africa meant that by 2015 19% of the age cohort were enrolled in one of South Africa's 26 public universities. The World Bank (World Bank, 2021b) classifies South Africa as an upper-middle income country. Other countries in this category were reported to have enrolment rates of roughly 50% in 2015 (World Bank, 2021b). South Africa currently has 26 universities (DHET, 2020). More detail regarding these universities follows in Chapter Two. As it attempts to expand the university system even further, two new universities have come into the plans of the Department of Higher Education and Training, these are the University of Science and Technology and the University of Crime Detection (DHET, 2021: 4).

The growing numbers in higher education have placed significant strain on higher education institutions across the world. This is in large part because institutions like the university were historically elite and are thus ill-prepared to handle the growing student population that desires a university degree (Trow, 1974). Many regard hyper-massification as a threat to the quality of higher education (Altbach et al., 2009; Altbach, 2016; Owour, 2012). Hence, a central part of the debates regarding access to higher education also emphasises success (McCowan, 2016b, 2019). Indicators like the student: staff ratio are highlighted. The teaching activity in institutions of higher education is not the only one that has come under sharp scrutiny. Questions regarding what kind of knowledge should be developed and taught in universities have also received a lot of focus. This debate revolves around normative judgements (Collini, 2012). These normative judgements have to do with whether or not knowledge ought to serve the function of responding to the immediate needs of society. Again, in the context of financial resource constraints, some researchers claim that higher education institutions should foreground the kind of knowledge most likely to lead to development—although establishing what kind of knowledge this is is not always straightforward. The debate picks up on old educational debates that juxtapose 'useless' knowledge with 'useful' knowledge. In relation to higher education, these two positions are most famously attributed to Bacon (1884) and Newman (1863). The contemporary form of the debate categorises these two sets of knowledge as either 'intrinsically' valuable or 'instrumentally' valuable (Unterhalter et al., 2019). I discuss this useless-useful dichotomy more in Chapter Four. In the South African case, all of these matters—quality and the ways in which expansion affects it, the need for knowledge that is useful— arise in Chapter Two of this study.

The university, however, does not have a singular 'functional' purpose, and instead adds value to societies through a number of areas – all of which can exist at the same time. McCowan (2016) produces a three-dimensional framework in which the university and its various roles can be understood. These roles are first, in terms of the 'value' that is intrinsic; second, in terms of the 'function' that is producing, storing, transmitting and applying knowledge; and lastly, in terms of the 'interaction' of the university with the external world (i.e. the flow of ideas between actors across the university and society) (McCowan, 2016). McCowan (2016) explains that the university will perform roles across all of these functions, but the point of contention lies in the extent to which it does or should be focused on particular roles. Arguing similarly, Unterhalter (2017) suggests that the role of education is not a singular thing such as learning outcomes; therefore, to the extent that the university has numerous roles, it is difficult to say what exactly higher education should do, or what kind of knowledge should be foregrounded.

In sum, higher education has taken centre-stage in development policies both across the world and in South Africa. As a result, more work is being done to gather empirical evidence for the causal and correlational relationship between universities and development in South Africa.

The next section looks at this evidence in South Africa. There I problematise the seeming gaps in the evidence. These gaps make it difficult to establish the extent to which higher education contributes to the development outcomes described so far in this chapter.

1.2 Problem Statement

As shown in the previous section, researchers and policymakers appear to believe that universities can and should contribute to development in South Africa. They believe that universities can do so by preparing graduates to work in the economy, by creating knowledge that can be applied in new innovations that can stimulate economic growth, and by supporting the needs of communities. The extent to which, and how exactly, universities contribute in these ways is less clear. Below, I consider the ways in which this relationship is explored in South Africa.

There are rates of return studies which provide analyses of the benefits that individuals enjoy through the labour market rewards from investing in more higher education (Morris 2015, Marias 1994, Hosking 2003, Bhorat et al. 2017, Bhorat et al. 2014). These provide information regarding aggregate outcomes (Allais, 2017). Then there are tracer studies which provide a more nuanced overview (Allais, 2017). There are also studies that look at the perceptions of employers and graduates themselves regarding what capabilities they believe arise from more higher education. Cloete & Maassen (2017) explore the relationships between universities and development by looking at the academic core in one of South Africa's universities (Cloete & Maassen, 2017). Grobbelaar & de Wet (2016) looks at the relationship between a developmental university in South Africa and its contribution to socio-economic outcomes it the immediate city/town (Grobbelaar, 2018; Grobbelaar & de Wet, 2016).

Yet these analyses are seemingly superficial. The reason for which we lack insight into these relationships has do with the under-theorisation of what universities in South Africa contribute to development. There are three main ways in which this relationship has been under-theorised. The first way in which this under-theorisation occurs is through the lack of contextualisation of the concepts being used. The social and economic context of university systems differs across places and changes over time (Carnoy et al., 2014; Leibowitz, 2012a). This requires that we reframe the concepts we are working with as they arise in particular settings and as they change over time (UNESCO, 2018a). The second way in which under-theorisation occurs is through the use of these concepts in ways that are embedded in economistic ways of thinking (Marginson, 2011). We thus need to break from this way of thinking and think in ways that are oriented more towards broader social development. Finally, the third way in which the under-theorisation occurs is through the overall ambiguity of the concepts we are working with (Prates et al., 2020). For example, the notions of what development is or what a university is are contested (as I will show in Chapters Three and Four of this thesis). Failing to address these theoretical shortcomings perpetuates our lack of understanding of the nature and the extent of the relationship between universities and the development of society and the economy. Therefore, despite the literature that says that universities should contribute to national development, or the literature that tries to show how they do contribute to development, not enough is known about how higher education contributes to development and the extent to which it does so.

1.3 Purpose and Aims of the Study

The purpose of the study is to build insight into the dynamics of the relationships between universities and development in South Africa. The problem of under-theorisation suggests that there is value in conducting a theoretical assessment of the higher education and development field and trying to establish better premises regarding how higher education contributes to development. To do this, better conceptual tools and empirical methods are required. The aim of this study is to make a new knowledge contribution by offering an analysis of the relationship between universities and development that uses new conceptual tools to deconstruct the dynamics underlying the relationship between South African universities and development. I expand on this in the next two sections. The first describes the research questions that guide this study. The next discusses, among other things, the method I use deconstruct these relationships.

1.4 Research Questions

Given the aim of this study, my main research question is 'What are the relationships between South African universities and the development of South Africa's economy and society?'

I have broken this question into three sub-questions:

1. What do existing notions say about the relationships between universities in South Africa and the development of South Africa's society and economy?
2. What notions are emerging in South Africa and how do conceptions of the public good contribute to these emerging theories in South Africa?
3. What are the implications of these emerging notions for providing a new analysis of the relationship between universities and the development of South Africa?

The next section describes how I proceed with this thesis in order to answer these questions.

1.5 Outline of the Study

So far, this chapter has given the background to the study, the problem statement that this thesis aims to examine, the purpose or rationale, the aim and objectives, and the research questions of the thesis. I now turn to the structure of the thesis, which has three parts: Part One is the literature review. Part Two is the extended analytic framework and methodology. Finally, Part Three is the findings, analysis and discussion.

Chapters Two to Five make up Part One, where I provide a comprehensive literature review of the varying bodies of literature. The literature on universities and development spans a number of fields, but for this thesis the focus will be on: the relationship between universities and development in South Africa; development theories; the history of the university and the sociology of scientific knowledge; and finally, the international literature that looks at the measurement of the relationship between universities and development.

I start, in Chapter Two by considering the history of South African higher education. The focus is on how universities in South African emerged as part of the perverse power relations that have shaped society, the economy, as well as the nature of universities. Affected by both colonisation and Apartheid, South Africa's universities have played a substantial role in facilitating the ability of these oppressive regimes to extract resources from South Africa—minerals, labour, etc.—for the benefit of a few. This past means that present-day South African universities inevitably reproduce inequalities, rather than alleviating them. This South African literature on higher education and development is necessary in order to understand how the relationship between universities and development in South Africa has been shaped by the past. This chapter provides key concepts regarding the ways in which teaching, research and community-engagement are influenced by past institutional arrangements. This affects what universities can and cannot contribute to development in different contexts.

Chapter Three focuses on showing that development is a contested concept, and that beneath some of the dominant conceptions of development lie historical and contemporary global power relations. We cannot study or observe the relationship between universities and

development without first grappling with the problem of the ways in which power relations affect the way development is conceptualised or the way it is framed in policies.

In the main, this literature shows that development theory has been dominated by a focus on two groups: first, the advanced (Western) industrial countries of today, and second, scholars of neoclassical economics. As a result, for a long time distributionally neutral economic growth was regarded as development. This is the first point that I take from the literature. My second point is that since then, revisions of the concept of development have led to a turn in the tide so that now development is conceptualised in a multi-dimensional way that foregrounds human flourishing. However, the way in which international development agencies define and measure development in their policies, even when these policies are based on multi-dimensional paradigms of development, continues to follow a linear and extractive logic. This logic is derived from the methodological traditions that underpin the school of neoclassical economics that continues to dominate development theory and policy today. This tradition of method and research fails to capture the complex, non-linear social relations that affect development. The third point describes the theories of the public good and public spheres. This area of development theory is moving the field forward by bringing in debates about who is included and excluded in enjoying the benefits of the public good and participating in debates in the public sphere. Finally, the fourth point that I make is that this literature review only begins this discussion, but it barely scratches the surface for the African context. This context must be understood in terms of institutional arrangements. Conditions like traditional authority and traditional moral codes like Ubuntu shape development in ways that lead to patterns of neo-patrimonialism and the personlisation of politics on the African continent.

In Chapter Four I present the history of ancient higher learning centres and higher education. It opens by showing that the university is also a contested term. Given this contestation, how can we observe, understand and measure what the university contributes to society and the economy if we cannot agree on what it is? The chapter then settles on some key features that we can accept as being the fundamental features that make institutions that we call universities, even though these institutions may have other differences between them. In other words, the focus is on what makes a university a university—what is the essential core without which a university is not a university? Based on the sociology of science literature, I

argue that the development and acquisition of knowledge is at the core of any institution we call a university. Furthermore, institutions that we call universities are scientific communities with a network of interacting scientists who develop and exchange knowledge (both among themselves and their students). I then define the purpose of institutions that we call universities as increasing the stock of knowledge. Thereafter, I define the set of norms operating in any institution that we call a university as: universalism, communism, disinterestedness, organised scepticism. Lastly, I define their form as an abstract network of ideas. These features of universities that I pull out from this literature are the basis of the four features that I use to construct the three ideal-type universities in Chapter Six.

Finally, in Chapter Five I discuss the international literature on monitoring and evaluation in higher education. I also look at the international literature on measuring the impact of higher education. The aim of this chapter is to map out the main ways in which the relationship between universities and development is understood internationally. How this relationship is understood, or conceptualised, determines how it is measured. The measures that have grown the most prominent have played a strikingly dominant role in shaping the global higher education landscape. Their influence on national higher education systems has informed debates regarding who ought to pay for higher education. This literature also shows that two main theories of development, entrepreneurial theory and developmental theory, are used to explore pathways of change. The chapter contributes to the extended analytic framework underpinning this study by highlighting how the relationship between universities and development is understood through those pathways, which there are five of: economic growth, technology transfer, individual capabilities, and institutional capabilities. This brings Part One of the study to an end.

Moving on to Part Two, Chapters Six and Seven respectively, these chapters present the extended analytic framework and the methodology in this study. These two aspects of my work are based on the literature review chapters developed in Part One of the study.

Chapter Six presents the beginning of my methodology: the extended analytic framework of my study where I conceptualise three university ideal-types. This chapter starts by explaining the steps where I build up the set of ideal-types. It also explains how I go about defining the

features in the ideal-types using a functionalist methodology. I explain the application of these steps in order to embed the concepts from the literature review within the three different ideal-type universities. I also explain that the ideal-types serve to categorise the main relationships between universities and development in South Africa. I start by constructing the Abstract University ideal-type. The first feature in it is the core. Based on the claim established in Chapter Four that the essential core of a university is the acquisition and development of knowledge, I define the core of the Abstract University as this acquisition and development of knowledge. Based on that same chapter, the Abstract University is a scientific community. This means that it is a network of interacting scientists who develop and exchange knowledge. The purpose feature, the norms feature and the form feature of the Abstract University are based on the three claims from Chapter Four. The purpose of the Abstract University is to increase the stock of knowledge. The norms working within this kind of university are: universalism, communism, disinterestedness and organised scepticism. Finally, its form is that of an abstract network of ideas. Therefore, the Abstract University is a system with these four features that function to maintain and reproduce the system.

I then turn to the two other ideal-types. First, is the Entrepreneurial University, and second is the Developmental University. These two types are drawn from the measurement literature in Chapter Five. I demonstrate that there is a difference in the cores, purposes, norms, and forms of these universities. Their four features also differ respectively from the four features in the Abstract University. This difference arises because these two types are based not just on the sociology of science literature, but also the development theories literature. While these ideal-types are the extended analytic framework that I develop from the literature in order to analyse the data, as discussed in the following chapter, they also present significant new conceptual work, and are thus the first component of the contribution to knowledge of my thesis.

Chapter Seven moves on to the next part of my methodology in this study. In that chapter I explain that the first component of the data analysis is an evidence-review of empirical studies in South Africa. These studies measure the relationships between South African universities and one of the following four development outcomes: economic growth, technology transfer, individual capabilities and institutional capabilities. I discuss how I selected the data, and how

I apply my three ideal-type universities to these empirical studies and demonstrate that many of their assumptions are seemingly flawed. The second component of my data analysis is an analysis of key informant interviews with actors in South Africa's higher education sector. I that next section of the chapter I explain how I use the three ideal-type universities to analyse the interview data. I elaborate that this approach to analysing the data shows that respondents' perceptions about how the universities in South Africa contribute to development differ from what the empirical studies tell us about how universities make their contribution.

This brings me to Part Three of the study. There I present Chapters Eight and Nine, where I present the analysis of the two data sets. Again, the first data set is a set of empirical studies and the second data set is interview data from stakeholders in South Africa's university sector.

Chapter Eight presents the evidence review of South African studies examining the contribution of universities to development. I show that many of the studies use the sort of language that is consistent with the entrepreneurial and developmental theories of development. By applying my ideal-types to a consideration of these studies I demonstrate that most of the studies have superficial or weakly formulated assumptions. I show that the assumptions upon which these studies are built are unable to capture complex dynamics between universities in South Africa and development. This is because they do not attempt to formulate an in-depth description of these dynamics. By using the features that I have defined in the different ideal-type universities, I demonstrate how these assumptions fail to capture the many layers of the complex dynamics at work when universities interact with society and the economy.

In Chapter Nine I move on to present the interview analysis. This data set is important because while the empirical studies conducted by researchers may say one thing, the perceptions of those in the university sector may say another. These perceptions are important as they seem to have a bearing on the way that policies change over time. The interview data was analysed using the three ideal-type universities and the features within each of the different ideal-types. By way of this, I attempt to make sense of how respondents understand the complex and layered dynamics between universities and society and the economy. My findings there show that South African respondents seem to mainly see universities as contributing not

entrepreneurially or developmentally, but more in a welfare-oriented manner. This welfare-oriented view is presented in the specific South African terminology of 'Ubuntu'. From this kind of analysis, I glean that the views of respondents diverge from the findings established in the empirical studies in the evidence review. Because the data is perceptual data, it does have its limitations. However, it serves as a useful example of a qualitative analysis that offers a rich description of the dynamics of the relationship between universities and society and the economy in South Africa.

In Chapter Ten I discuss these findings. I argue that a fourth type of university, which I call the 'Welfare University' emerges from the interview data. This type of university in South Africa seems to seriously downplay or undermine the essential core of the university. We see floundering with respect to the purpose, the norms (which are mainly based on Ubuntu-communitarianism) and the form of universities in South Africa. This is because the knowledge development and acquisition core feature in South African universities seems to be lost. The main result of that is a very narrow instrumental perspective of what universities can or should contribute towards development in South Africa. Another implication is that this welfare-oriented emphasis is so broad and loose, it seems to dismiss anything intrinsic about universities, and at the same time it seems to be used to list unrealistic expectations from universities. Further, much in the same way as the idea of caring was used historically to extract free or cheap labour from women in their professional work as nurses and teachers (among other similar professions), the Ubuntu notion seems to be invoked in order to extract more free labour from university staff.

Chapter Two

Universities and Development in South Africa

Overview

The aim of the chapter is to describe the complex relationships between universities and development in South Africa. This is necessary because I seek to investigate this relationship in this study. I consider the ways in which the teaching, research and service/community engagement activities in universities articulate with development in South Africa. I start by looking at how apartheid has shaped the structure of South Africa's economy and society today. Then I look at how this structure influences outcomes across all segments of education in South Africa. One of the post-apartheid government's biggest goals has been to widen access to previously marginalised students. I show how some of the government's policies have unintentionally reproduced rather than ruptured the inequalities in the system. I look at how the policies have done so in terms of the teaching function of South African universities. I then look at the research policies relating to South Africa's university system. I consider how these also appear to reproduce inequalities. I do the same in terms of the service/community engagement activities in South African universities to again show the unintentional reproduction of inequalities. The main take-away point is that it is not a simple task to create a higher education system that undoes the injustices of the past and bolsters future development.

2.1 The Continuities of South Africa's Past into its Present

In Chapter One I described the South Africa context as one in which unemployment, poverty and inequality are urgent socio-economic problems. In section 2.1.1 I show that most researchers would, and do, argue that this triple crisis is largely the result of apartheid. I illustrate the ways in which higher education facilitated the separate development that led to unequal social and economic opportunities between white and non-white citizens of South Africa.

2.1.1 The Apartheid Context and Higher Education Policies in South Africa

The inequalities described in the South African context in Chapter One seem to arise because of one main historical factor—that the social and economic structures in the country are inherited from the institutionalised racism of apartheid. As explained by (Turok, 2018: 3), apartheid is everywhere in the daily lives of South Africans:

> This [context] is obviously a legacy of the rigors and discriminations of apartheid, at least in part.

Under apartheid, the set-up of all institutions was mainly based on race. The apartheid education system ensured that black people (referred to as 'bantu') were largely excluded from social and economic structures, and only allowed to participate as labour. South Africa's Department of Planning Monitoring and Evaluation (DPME, 2014: 40) explains how the primary and secondary education systems were structured to manage non-white labour such that the 'bantu' were only allowed to learn what allowed them to serve white interests:

> Africans remained a source of unskilled labour for the economy. Former Prime Minister Verwoerd stated that: "The Bantu must be guided to serve his own community in all respects. There is no place for him in the European community above the level of certain forms of labour". At the height of apartheid white per capita funding was 10 times that of African learners.

Under the Nationalist Party which came into government in 1948, all segments of society and the economy were structured along racial lines (Feinstein, 2005). By the 1970s South Africa was formally divided into ten separate territories on the basis of ethnicity (Feinstein, 2005). All people who were classified as African were considered citizens of one of these territories, called bantustans, even though in practice this was a law that was impossible to put into practice. The different independent and non-independent states and bantustans were governed through different sets of policies. The over-arching motivation of all policies across all groups of states was to advance the development of the white Republic of South Africa (Posel, 2011).

The Extension of University Education Act of 1959 was established in order to racially segregate the higher education system (Bunting, 2006). The act meant that a number of new universities

were established[1] and that individuals from each of South Africa's four designated race groups—Black, Coloured, Indian and White—were only allowed to attend universities that catered to their respective group (Bunting, 2006). Only in an exceptional case could a university that catered to one race group, enroll a student from another race group. An exceptional case was one where none of the relevant universities for a certain race could provide the type of course that a particular student was interested in (Bunting, 2006). Under these circumstances only, a Black student for instance could be allowed access to a university legally designated for one of the other three races. Even so, this was only possible if the enrolling institution could acquire a permit from its respective department of education (Bunting, 2006). Separate education departments were demarcated for Black, Coloured, Indian and White education (Bunting, 2006). In total, there were 22 universities in South Africa in the period right before democracy. See Appendix B for the complete list and a descriptor of each at the time (i.e. Bantu, English white, and Afrikaner white). Badat (1999: 4) emphasises the active role that the state played in seeing to it that education policy served the separate development goals of that period: 'African education was to reflect the dominance of the ideology of white rule and superiority'. For instance, the University of the Transkei was set up in 1977, and it was believed by the apartheid government that this would produce the bantu labour required to run this independent economy, too (Khunou, 2009). So, under apartheid, universities in the bantustans played an instrumental role as spatially-oriented agents of change linked to the apartheid project (Bank, 2018).

Because of its very repressive nature the apartheid state was situated in an 'organic crisis', a term coined by Gramsci (Badat, 1999). What this means is that apartheid was situated in an incurable set of structural contradictions that 'erupted' into areas of society beyond political and economic life, into broader polemic, morality, etc. (Badat, 1999). The apartheid project was also costly because of the magnitude of the regulation that it required given the intensely subsidized nature of industrial activity, education, and most other aspects of social or economic life (Lewis, 1990; Lipton, 1986; Lowenberg, 2007). It resulted in capital flight and

1 The new universities that emerged included the University Colleges of the North (Turfloop), Zululand, Western Cape and Durban-Westville (Illorah, 2006). Some of the bantustans were also accorded a university.

skills shortages among black people, leading to a gap in the occupational attainments between white and black labour (Fine & Rustomjee, 1996; Mariotti, 2012; Mohamed, 2019).

To summarise, the extractive nature of the apartheid state was largely unsustainable and led to repeated gaps and shortages in the economy. When democracy finally came around, the social and economic needs of the country had reached a state of urgency. This brief historical review of apartheid and the South African economy gives a glimpse of the enormous work that the democratic government was faced with in order to begin reconstructing South Africa. What follows shows, however, that the government was largely unable to restructure institutions in the ways required to overcome the injustices of the past. This was mainly because of the neoliberal character of post-apartheid policies.

2.2 Post-1994 Higher Education Transformation: Universities and their Teaching Function

We need now to turn to the higher education system under the new democratic government. In section 2.2.1. I cover some of the higher education policies introduced post-1994. Next, I show how the system, in response, quickly increased the numbers of non-white students who were previously subsidized under apartheid. At the same time the success of non-white groups in the system was harder to achieve. In section 2.2.2 I discuss the transformation of the university sector under democracy.

2.2.1 Post-1994 Policies for the Transformation of Historically Black and White Universities

The democratic government of South Africa understood the difficulty of changing the decades of old institutional arrangements that it had inherited from the apartheid state. The policy making process for a post-apartheid South Africa was hence structured to negotiate this complex institutional terrain in the university sector. In 1996 the National Commission on Higher Education (NCHE) was directed by the newly elected president. It was set up to investigate, among other things, the structures required to govern higher education under the new democratic government (NCHE, 1996). The president also declared that based on what it found, the National Commission on Higher Education (NCHE) was required to 'preserve what is valuable and to address what is defective and requires transformation' (NCHE, 1996: 1).

Under the Government of National Unity, the policy making process for higher education included a variety of actors: political parties that had been involved in the liberation process together with the newly elected ANC government, student organisations, academics and civil society to name a few (Davies, 1996). Contestations arose between these actors. The source of these contestations was the need to respond to both the instrumental needs of society through higher education, and the need to maintain the intrinsic ideals associated with higher education. Specifically, these instrumental needs were meeting the professional skills needs of the society and economy, producing, acquiring and applying new knowledge, developing socially conscious and responsible knowledge workers (DoE, 1997). On the other hand, the maintenance of intrinsic ideals referred to the need to ensure academic freedom for universities and give them the space to lead critical public discourse (Bank, 2019).

In an attempt to balance these potentially contradictory demands, the transformation project was framed in a two-pronged manner by the new South African government: the first goal was to create a higher education system aligned to racial redress, and the second was to contribute to the common good of society through the production and application of knowledge, human capacity building, and widening access to lifelong learning opportunities (DoE, 1997). There were, therefore, a number of 'transformation' oriented initiatives and processes that sought to develop policies and implementation strategies in areas like the size and shape of higher education, governance, funding, quality assurance and so on (Badat, 2010).

For example, the National Higher Education Plan (DoE, 1997) would establish targets for participation rates, institutional and programme mixes, the vision and policy goals for the system. With respect to changing the size and shape of the system, closing the gap between historically black universities (HBU) and historically white universities (HWU) was a critical imperative. The former group comprised of the white English and white Afrikaner universities, while the latter comprised of the universities that historically had catered to students in the Bantustans (Bunting, 2006). Black, Coloured and Indian students were to be given better physical and financial access to higher education (DoE, 1997). This would serve to unify the system by addressing the imbalance in resources availed to white and non-white groups of students in the South African university system. Previously, most non-white students were in Historically Black Universities with fewer resources (e.g. staffing resources (Odhav, 2009),

while white students often had greater and easier access to higher education in the better resourced Historically White Universities (Reddy, 2004).

As the Nationalist Party government assumed power in 1948, only 4.8% of black students were enrolled at universities (Badat, 1999: 48), mostly enrolled at the University of Fort Hare. The fast-growing numbers of students meant that the policy framework for transformation grew progressively more focused on the quality of higher education. When the subject of quality arises, usually what is being referred to is the staff-student ratio. The South African Department of Higher Education and Training (DHET) has indicated how it plans to improve the quality of higher education in its policy statements. The White Paper on Higher Education released in 2013 stated that the Department of Higher Education and Training (DHET) would focus on staffing, retaining academics and ensuring that academic careers are attractive in order to meet the needs of the quickly expanding system (DHET, 2013).

In the next section I cover the literature that explains how the rapid expansion of the South African university system compromised the success rates of students in the system.

2.2.2 Physical Access, Success and Transformation in in Post-1994 Higher Education

So far in this study I have mainly considered how universities contribute to development. Some researchers argue, however, that the direction of the correlational/causal relationship between universities and development is debatable. Recent evidence suggests that higher education is both a determinant and an outcome of increases in income. In Greece a strong relationship was found between development and tertiary education outcomes (Pegkas & Tsamadias, 2014). It seems that the same is arguably true in the South Africa case. The literature here shows that across all segments of education students from poor socio-economic backgrounds do not do as well as those from good socio-economic backgrounds. Given the socio-economic nature of South African relations, the reality is that less affluent non-white majorities enter poor primary and secondary schooling institutions. The South African case is such that out of every 100 children who start school, only 14 will gain access to university, only 12 will actually enroll in higher education and 6 will get an undergraduate

qualification within 6 years (van Broekhuizen et al., 2016). In short, conditions of poverty make it less likely that people will do well in higher education.

In 2013 just over 86% of the age cohort who had entered primary education together was in the secondary education system (Taylor & Shindler, 2016). The number leaving with a university qualification is far lower (Taylor & Shindler, 2016). The large numbers of students who leave the system in the last three years of high school, and the remaining students who pass final examinations with weak grades in most cases contributes to the low through-put rates among university students. When thinking about inclusivity, South Africa is required to focus on access in relation to success. In 2007, there were just under a million South African youths in the age cohort expected to sit for the national matriculation examination (Hall, 2012). 83% were African and 7% White (Hall, 2012: 19). 64% of White youths and 35% of African youths wrote the examinations and passed (Hall, 2012: 19). Of the white youths, 34% obtained an 'endorsement' (Hall, 2012). Only 6% of African candidates did too (Hall, 2012: 19).

Although black representation has improved in South African universities, this group remains not only less successful in graduation rates, but also concentrated in the much lower status historically black institutions. Some historically white institutions have increased their numbers of black students very slowly, and a few white students have enrolled at historically black institutions (CHE, 2013). But the historically black institutions continue to be almost entirely black. They also tend to enrol students from less advantaged socio-economic backgrounds than those in historically white institutions. Whereas poor students constituted 50% and 54% of students at Wits and Stellenbosch universities respectively (both historically white institutions), poor students made up 82% of the student body at the universities of Fort-Hare and the North West (both historically black institutions) (CHE, 2013: 9).

The increased enrolments in South African higher education have not been associated with comparable rates of student academic success, especially for black students. Success is mainly measured by throughput, success, graduation and drop-out rates. Rapid massification is widely seen to have been at the expense of quality (Akoojee & Nkomo, 2010). The data shows, for example, that the success rates for Black, Coloured and Indian students were 74%, 77% and 78% respectively. White students achieve a national average of 84% (CHE, 2012). In 2010 the

graduation rate among Black students stood at 16% and 22% for White students (CHE, 2012). Only 35% of the total intake including distance education students, and 48% excluding distance education students, graduate within five years (CHE, 2012). It is estimated that 55% of the student intake do not graduate (CHE, 2013: 15). Success rates are particularly low among non-white students. By 2013 only 5% of Black and Coloured youths were succeeding in higher education (CHE, 2013).

Success rates are also skewed when considered in terms of students from historically black and white universities. For Africans at historically black universities, the share of drop-outs is double that of graduates (about 32% and 15% respectively) (CHE, 2013). At historically white institutions the rate of graduation among Black students was 24% (CHE, 2013). The main factor influencing the high levels of 'leaving' among the students in historically black universities was a lack of finance for most students (Letseka et al., 2010).

Gender equality has also featured on the agenda for transformation. During 2014, female students made up 58.3% of total student enrolment, compared with 41.7% of males (DHET, 2016b). While this means a relative balance with respect to the gender representation, there remain concerns regarding the lower research productivity of women in the academy for example.

In reality, the changes in enrollment rates mean less than they should. The large emphasis on enrollment rates rather than success rates has meant that the effects on equity have arguably been diluted. The reduction of transformation to numbers has meant a limited engagement in critical issues like deracialisation given the deeply embedded cultures of whiteness at historically white institutions, and degendering of institutional academic culture (Badat, 2009). Black students at historically white institutions have sometimes suffered racism, while sexual harassment is also reportedly a problem for female students (Badat, 2009). Poor students, disabled students, students from rural areas, as well as adult students suffer because institutions are ill-prepared for those who come from disadvantaged backgrounds (Badat, 2009). Further, the system as a whole has inadequate facilities and staff to cater for the needs of the disabled (Mutanga & Melanie, 2015).

In summary, the transformation turn in higher education has had positive effects in terms of increasing the numbers of previously subsidized groups. However, their poor socio-economic backgrounds lead to poor education outcomes among these groups. This is because they find themselves in historically disadvantaged universities. At the same time, this seems mainly a statistical change than a substantive one. I elaborate on this in the next section. Using the example of the funding system, I show how certain higher education policies seem to reproduce the inequalities in South Africa's university system.

2.3 Universities and Funding Dynamics in South Africa Today

This next section looks at the specific ways in which the state of today's South African economy and society has played a role in reproducing inequalities in the university system, rather than eliminating them. I look at the funding of higher education under apartheid in section 2.3.1. In section 2.3.2 I move on and look at post-apartheid funding policies. I show how funding policies have reproduced inequalities, rather than rupturing them. This has been the case even under the democratic government's new funding frameworks.

2.3.1 Changing Funding Models for Apartheid Higher Education

The expansion described in the previous section has had complex effects on the organisation of the South African university system. As the system has expanded, the ability of the government to use public tax contributions to cover the growing need for higher education funding has been stretched thin. This shifts the pressure towards students and parents to meet the growing financial needs of institutions through fees. Debates about how much funding is given to the sector as well as how these funds are allocated within the sector impact the extent to which higher education can promote the public good and contribute to the development of society.

While universities do the work of securing funding through their students or through the private sector; South African higher education is also subsidized by the government through the South African National Treasury, and the Department of Higher Education and Training (DHET) (CHE, 2015). Four funding frameworks have been in place since the 1950s (Styger, 2014; Styger et al., 2015).

First was the Holloway formula for universities in 1953 (Styger, 2014; Styger et al., 2015). Under this framework, funding for higher education had been tied to graduate outputs, research outputs, and student intake. The structure of funding was 80% public and 20% private (Steyn & de Villiers, 2005). During the apartheid era, universities were funded along racial lines and the funding favoured the historically white institutions. This made it impossible for historically black universities to achieve even a fraction of the 20% of private funding support (Leshoro, 2008). This is because they had no access to funding sources and limited links with the business community (Leshoro, 2008).

In 1986, the second funding framework was introduced, the South African Post-Secondary Education (SAPSE) subsidy formula (Steyn, 2002). It was changed in 1993 in order to meet the needs of all universities (Steyn, 2002). The funding allocated to universities was based on student enrolments and success rates—this meant that the funding system was market-oriented funding system (Steyn & de Villiers, 2005), rather than an explicitly racialized one. The 1997 White Paper called for a new funding model. The new model would promote equity in access and outcomes, as well as support national and regional needs (Steyn, 2002).

2.3.2 Post-1994 Funding Models: Strengths and Weaknesses

In 2004/05, the National Funding Framework was introduced. This was the beginning of a shift from the apartheid era funding formula which mainly used enrolment-driven assessments to establish an institutional funding formula. The National Funding Framework links funding to national and institutional planning through allocations in accordance with national planning priorities. Funds are made available in the national education budget and allocated through three categories: block grants, earmarked funds and funds for institutional reshaping. Wangenge-Ouma (2010: 483) notes about the first block grant category:

> Block grants comprise of a teaching input grant generated through a formula which considers approved full time equivalent (FTE) student places weighted against predetermined teaching input indicators or criteria (e.g. course material, course level, and instruction-delivery mode); teaching output grant which is dependent on the institution's actual number of non-research graduates and diplomates and a normative total of non-research graduates and diplomates which it should have produced in terms of national benchmarks. These totals produce different grants for an institution. Other components of the block grant are research output and

> institutional factor grants. An institution's research output grant is dependent on actual totals of research graduates and research publication units and a normative total which the institution should have produced in terms of national benchmarks. Institutional factor grants are for institutions with a large proportion of disadvantaged students. The setting aside of funds for institutions with large proportions of disadvantaged students is in line with one of the priorities set by the National Plan for Higher Education (NPHE); that of increasing 'the participation, success and graduation rates of Black students in general and African and coloured students in particular' (MoE, 2001, p. 35). There are also institutional factor grants allocated on the basis of the size of institutions.

Although aimed at redressing the injustices of the past, problems abound. This is particularly true of the institutional factor grants which add an amount to the teaching input grants of institutions based on their numbers of disadvantaged students (DHET, 2013). For this grant, disadvantaged students are categorized as Black and Coloured students who are South African citizens (DHET, 2013: 2-3). However, Indian students born in South Africa are not regarded as part of the disadvantaged group, thus institutional factor grants are not allocated for them (Wangenge-Ouma, 2010).

Using race and not socio-economic disadvantage as a marker for financial need has several implications: an institution with a low number of poor Black and Coloured students cannot benefit from these funds (de Villiers, 2012; DHET, 2010; Wangenge-Ouma, 2013). In addition, institutions with large groups of African and Coloured students from socio-economically well-off backgrounds will benefit. Further, the relatively small size of the grant (about 6% of block grants) may not incentivise historically white universities enough to increase their numbers of disadvantaged students (Wangenge-Ouma, 2010).

The National Funding Framework also allocates funds to institutions that have high success rates. This means that if students graduate on time, the relevant institution receives funding. According to Le Roux & Breier (2007) this aspect of the formula may discourage elite universities from taking in students who may be too ill-prepared to succeed, and therefore likely to perform relatively poorly.

The second category of funding, earmarked funding, is intended to assist with teaching, research and community development, interest and redemption payments for loans before 1999 (Government of South Africa, 2003). This funding may also go towards the costs of

merging and other developmental ends such as new capital projects or institutional restructuring (Government of South Africa, 2003). It can also go towards quality assurance frameworks. Allocations from earmarked funding in many cases may hence involve the submission of detailed project proposals to the DHET (2013).

For a long time, funding was not determined by the real costs of higher education but by the funds available in the higher education budget. Part of the reason for the weakness in infrastructure provision has been due to the lack of funding allocations for the expansion of fixed assets (e.g. laboratories, new residential buildings, etc.) until 2011 (DHET, 2012). The introduction of the infrastructure and efficiency grant in 2011, enrolment planning requirements which include infrastructure could now be budgeted for (DHET, 2012: 16).

Still, the current South African funding formula appears to have adverse effects on some of the transformative goals it is pursuing. For example, the inequalities of society are inevitably reproduced if students in historically black institutions continue to have limited access to elite professions if their institutions inadequately prepare them for these because of a lack of facilities like labs (Unterhalter et al., 2019). Giroux (2010: 186) argues the same point regarding global higher education, which he describes as being in a '…worldwide crisis'. He argues that increasingly universities produce a vast range of hardships and suffering both within themselves and in the rest of the social world (Giroux, 2010).

To reiterate the problem of declining funding, the figures for the split between different funding categories reveal the allocation of cost-cutting across the funding framework: in 2003, the initial split between the different funding categories was roughly 89% block grants, 5% direct earmarked transfers, and 6% for the National Student Financial Aid Scheme (NSFAS) (Fiscal an Financial Commission, ND). Later, only 74% went to block grants in 2011 (Fiscal an Financial Commission, ND). As fiscal allocations to higher education have declined, the student fee component in university budgets has been on the rise. This component is typically in the region of 30-40%, an amount approaching R30 billion per annum if the cost of accommodation of students in residences is included (Universities South Africa, 2016). Given that the students in historically black institutions come from disadvantaged backgrounds, these institutions struggle with the non-payment of fees by students (Jansen, 2019: 207).

The Higher Education Price Index (HEPI) is a measure of the inflation rate for higher education which takes into account the typical spending patterns of universities. For the period 2010/11-2012/13, the higher education price index was 1.7% above the CPI2. The index has grown at rates higher than CPI on an annual basis (Universities South Africa, 2016). This makes it difficult for them to rely on the fee component of their incomes to run their institutions.

This brings us to the fourth model, the introduction of the National Student Financial Aid Scheme (NSFAS) of 1999 (NSFAS, 2016). This scheme has assisted many poor students and served the purpose of alleviating the negative effects of non-payment. In 1999, the National Student Financial Aid Scheme Act was passed (NSFAS, 2016). NSFAS expanded the availability of loans to students, sadly universities generally considered to have lower fee structures still remain too high for many families (NSFAS, 2016). Even though NSFAS specifically targets the poorest students, historically white universities seemingly secure a significant portion of this funding for their students, as highlighted by Le Roux and Brier (2007). The historically black universities share of the NSFAS award fell from 36% in 1999 to 27% in 2003 (Jobbins, 2012). That of historically white universities increased by 27% from 20% within the same period of time (Jobbins, 2012). These statistics indicate that historically white universities managed to secure a significant proportion of the funding that, in theory, should be allocated to institutions that continue to limp as a result of their historical disadvantage (Le Roux & Breier, 2007). The latest problem to be spotlighted with respect to the NSFAS is the need for a funding model that includes not only the poorest but also the 'missing middle'. These are students whose families earn above the R122 000 per annum qualification threshold used in the NSFAS means test (DHET, 2013).

The New Funding Framework or fifth model emphasises the importance of research productivity. With the introduction of the New Funding Framework in 2005, block grants

[2] Where the key drivers of the Higher Education Pricing Index are: rises in academic salary, utility costs (like electricity), costs determined by foreign-exchange (like book and scientific journal costs, research equipment, experimental consumables, etc.) as well as security and cleaning costs.

awarded to higher educational institutions for research were stopped. R1.5 billion was available to reward research output on a competitive, individual basis (Muller, 2015).

The strategy of most of South Africa's public universities in order to overcome this declining state financial support over the years is regular tuition fee increases. These encourage higher education's tendency to reproduce social inequalities. Given that historically white institutions are able to charge higher fees to their students while the historically black charge lower fees to their less advantaged students, the former secure more tuition fees (Wangenge-Ouma, 2010).

In addition to problems such as declining funding, the problem of corruption has seemingly affected the South African university system. It has come out through national news outlets that some members of the South African university sector have personally benefitted from the misallocation of COVID-19 relief funding—specifically, a student beneficiary of the National Student Financial Aid Scheme (NSFAS) received a sum of R10 million (USAF 2020). This seems to have been money that should have gone towards COVID-19 personal protective equipment (PPE) for universities (USAF 2020). Members of the university sector said that they could not rule out the possible involvement of individuals in the university sector (USAF 2020).

Despite the challenges, unlike in the apartheid era, the current higher education system is less fragmented (CHE, 2016). The system is arguably more unified not only in terms of funding, but also in terms of governance, quality assurance, qualification types and enrolment planning processes (CHE, 2016). As briefly noted earlier, mergers have been a feature of the institutional restructuring of the landscape, taking the system from the 36 public universities and 300 private that existed under apartheid, to today's system with 26 public universities and over 100 private universities (CHE, 2016). See Appendix A for the complete list of universities and their categories according to research, comprehensive and universities of technology. As noted in Chapter 1, two new universities are being established in addition to the current 26.

In this section I have presented a detailed overview of funding models in South Africa's higher education system. I have done this in order to show that with each new framework, some aspects of inequality in the higher education sector have been addressed while others have

been created or exacerbated. This occurs through, for example, funding towards infrastructure or the NSFAS that continues to somehow privilege those in historically white universities or exclude the 'missing middle'. A university system with so many internal contradictions can only contribute so much to the development of society.

The next section looks at the South African university system in terms of its research function. Here too inequalities are reproduced. Universities in South Africa struggle to keep up with international research outputs because of their limited funding, and the fact that they are required to secure private funding by producing research.

2.4 Universities and their Research Function

In this section I turn to the second activity that universities carry out. This is the research function of universities. The previous section showed that even though state funding forms a large portion of the total income for almost every university, research funding has been in decline. Universities thus need to secure additional income sources. The search for additional income streams requires universities to, among other things, partner with the private sector. Through these partnerships universities are able to generate income through the private sector market for knowledge products and services that support innovation.

In section 2.4.1 I consider South Africa's strained effort towards becoming a knowledge economy. I highlight that the policy discourse emphasises the importance of university research for broader knowledge-economy reasons. This is in spite of the jarring inequalities in terms of research activities within the university system itself. Because of these inequalities, South African universities have a weak academic core that renders them ill-prepared to participate as key drivers of the so-called South African knowledge-economy.

2.4.1 Knowledge System and Knowledge Transfer in South Africa

Globalisation has led to an intensification of competition between industries. This means that knowledge and innovation have become the new revolution; this is sometimes called the knowledge revolution (Harris, 2002). Proponents of the knowledge revolution believe that adaptation has occurred through the creation, transfer and application of knowledge through

innovation systems and learning regions (Morgan, 1997; OECD, 2001). As noted in Chapter Five, the application and use of knowledge has been successfully institutionalised in the economies of America, Finland and Singapore. The literature that describes these as knowledge-intensive economies argues that key to this has been the university-industry interface. This is because there is the strong belief that the application of university knowledge has been critical in generating new products, services and processes that have enhanced the development of these economies. Late industrialisers, like South Africa are encouraged to emulate these knowledge-intensive economies. South Africa is investing significant effort in pursuing the idea of a knowledge-based economy (Castells, 2001). As the National Development Plan (2011) puts it, one of the main functions that university knowledge serves is its use in new applications. Put specifically, the second function of higher education is to produce new knowledge and find new applications for existing knowledge (National Planning Commission, 2011).

The role of the university in innovation policies appears strong in South Africa if we count the sheer size and cost of some of the country's most prominent innovation projects. For example, the Square Kilometre Array and Meerkat is a project where the largest and most sensitive telescope in the world is being built (DST, 2007). More than 100 private companies and 20 research institutions across 20 countries are involved (DST, 2007). However, it is constrained by poor state co-ordination. Cloete et al. (2011) argue that there are no formal policies in South Africa situating the university's role in national development planning or in institutional plans. Cloete et al. (2011) found that there was a lack of agreement (or pact) about a development model and the role of universities in development at both national and institutional levels. This is especially ironic given that South Africa has had an elaborate, co-ordinated innovation strategy for the duration of its democracy.

The 1994 White Paper on Innovation placed emphasis on collaboration between eight main actors in the system (DACST, 1996). These were: the central policy departments, government line departments, government agencies, science, engineering and technology institutions, business enterprises, the higher education sector, and non-governmental organisations (DACST, 1996). It also highlighted eight requirements to build a knowledge intensive innovation

system: 1) a competitive environment for employment creation; 2) the development of human resources; 3) ensuring a sustainable environment; 4) realising important knowledge making; 5) supporting the information and knowledge society; 6) centering the role of the humanities and social sciences in innovation; 7) supporting and allocating funding towards good management and performance systems; and 8) public awareness of science and technology (DACST, 1996). By 2002 the National Research and Development Strategy (NRDS) was established by government to meet needs like research, development and skills production in the country (UNIDO, 2008). It was then followed by the 2008–2018 Innovation Plan (DST, 2007). This is a report by the Department of Science and Technology, which presents the challenges identified by the Department of Science and Technology (DST, 2007: iv). Similar to the plans described thus far, it highlights such things as human capital development and knowledge infrastructure. The difference is that the plan is much more sector-specific than any of the ones prior (DST, 2007). The government states that there is a need for sector specific industrial transformation in order to meet national economic and social needs.

For example, the 2008-2018 Innovation Plan highlights the need for South Africa to become a leader in biotechnology innovation. This is, according to government, needed in order to resolve problems related to industrial applications for health care (DST, 2007: 11). The bigger goal stipulated in this policy-framework is the need to respond to socio-economic issues around human and social dynamics. The latter include, but are not limited to, poverty-related issues and addressing the sociocultural needs of South Africa (DST, 2007: 24). In 2012, the National Development Plan made reference to the importance of knowledge in the development plans of South Africa (South African Government, 2011). To support this plan, the Human Resource Development Strategy points out that South Africa ought to be ranked within the top 10% among countries at similar stages with respect to the development of knowledge and human capital (DHET, 2009).

As evidenced by this detailed outline of the policy-frameworks for innovation I have presented here, significant work has gone into policy planning. Cloete et al. (2011) argue that there have been significant coordinated action, including clusters and the re-organisation of the science, technology and innovation, and higher education ministries. However, they spotlight the seeming non-coordination between different ministries, especially between the ministries of

higher education and science and technology appears to have continued (Cloete et al., 2011). Hence, because of poor co-ordination one of the major weaknesses of the state is also poor implementation: although South Africa may have steering strategies, there seems to be no national human resource plan within a broader development model (Cloete et al., 2011). Personal networks appear to have existed between government and university employees. However, because they were of a more political than productive advantage, they appear not to have contributed towards improving higher education (Cloete et al., 2011).

Taking the example of the Nelson Mandela Metropolitan University, the study cites this as one case of a university that has had development-related policies co-ordinating the relationship between the university and development through various initiatives (Cloete et al., 2011). The problem though was that in a number of instances these initiatives were led by individuals instead of being institutionalised (Cloete et al., 2011). Finally, despite policies that extoled the critical nature of research related to development activities, these activities are not rewarded through incentives other than the traditional or existing set of incentives (Cloete et al., 2011).

Also noted in Chapter One, although the university system has come far, South Africa has a weak academic core. This makes it difficult for South Africa to imitate other knowledge economies. Cloete et al. (2011) conducted a study that scores eight African universities in terms of their academic core. To assess this academic core, the following dimensions made up the academic core indicator: Science, Engineering and Technology (SET) enrolments; postgraduate enrolments; teaching load; qualifications of staff; research funding; doctoral graduates; and research publications (Cloete et al., 2011). Based on the findings of this particular study South Africa does not compare well internationally in terms of the academic core of the university system. Although the number of doctoral graduates in South Africa rose from 972 in 2000 to 2794 in 2016, meaning that the average number of doctorates per million people in the population increased from 21 in 2000 to 49 in 2015, in contrast, the UK, Switzerland and Slovenia had more than 400 PhDs per million in 2015 (Mouton et al., 2019). The countries that compare with South Africa in terms of level of academic core development, like Malaysia, had 132 PhDs per million in the population, while Greece had 148 (Mouton et al., 2019). In terms of scientific publications, South Africa's world share in 2015 was 0,88% and was ranked 28th in the world rankings in 2016 (Mouton et al., 2019: 3). Of the BRICS (Brazil,

Russia, India, China and South Africa) countries, China has done the best, reaching a share of 17,5% in 2015 from 4,2% in 2000 (Mouton et al., 2019).

Based on this data, the degree to which South African universities embody the necessary conditions to enable them to perform like Singapore, Finland or America in terms of research and innovation remains unclear. The literature also shows that although there has been an increase in research outputs, some of the effects of this on the national system have been adverse. Under the New Funding Framework presented earlier (with block grants for teaching and research), research outputs increased dramatically, from 3617 to 7468 between 2000 and 2010 (C Soudien & Gripper, 2016). This, however, has led to mission-drift because formerly less research-intensive institutions have fought to catch up with the more productive research-intensive institutions in order to secure higher levels of funding and status (Tonga, 2013). Under the 2004 New Funding Framework universities are rewarded more for post-graduate graduations (as these students are regarded as research outputs which are given a higher status than teaching outputs) (DHET, 2016a). While perhaps unintentionally, the framework seemingly reproduces the historical inequalities between historically white and historically black universities. The historically white institutions outdo the historically black universities as the former graduate the largest numbers of postgraduate students. They thus received a larger share of the subsidy for post-graduate graduations than do historically black universities.

The body of literature that compares South Africa to other countries highlights just how far behind South Africa is lagging. The funding problem faced by South Africa can largely be attributed to the inability of the state to co-ordinate. The South African state has seemingly struggled to manage the relationships between its widely different universities and the private sector. The United States' research and development (R&D) budget, for instance, shows just how much funding is available in such countries that are considered innovation successes. $343 billion in R&D expenditures in 2006, or about one-third of the entire world's R&D was spent in the US (Roos et al., 2005). In 2007 South Africa, by comparison, spent 0,92% of GDP on research and development (R&D), compared to Sweden's 3,5%, Finland's 3,49%, and the USA's 2,77% (Roos et al., 2005). By comparison, countries within the Organisation for Economic Co-operation and Development (OECD) on average spend about 2.4% of their substantially larger GDPs on R&D (Roos et al., 2005). Even when compared with countries at a similar stage

of development, South Africa is second last behind Malaysia (1.3%), Portugal (1.24%), Poland (1.0%), Greece (0.97%) and Turkey (0.88%) in terms of R&D spending (Mouton et al., 2019). Somehow, those in government working directly on innovation policy continue to loosely state that South Africa should be making plans to emulate innovation clusters like Silicon Valley.

Not only are the problems in the system to do with either research and development funding or the mission-drift caused by the incentive structure of the 2004 New Funding Framework, but South African universities appear to have pressure on them to do more than can be asked of them. As Castells mentions, there is an awareness that universities are being submitted to the pressures of society, beyond the explicit roles they have been asked to assume (Castells, 2017). Castells (2017) highlights that so much is being asked of higher education that it has reached the 'status of a social need'. The result is downgrading of certain features, like the academic core in the system, and hence contradictions that reproduce inequalities (Castells, 2017: 41):

> Thus, an implicit function of modern university systems is that of surplus labor absorption, particularly for those lower-middle class sectors who think their children are entitled to social mobility through the university system. But the more a university system is able to separate this 'warehouse function' from the rest, the more it is both successful and unjust. The more a university system is politically or socially forced to make coexist the implicitly excluded segments with its productive functions, the less effective it is, actually disintegrating into various organisational systems that try to recreate social segregation outside the formal institutional system. Indeed, the critical element in the structure and dynamics of the university system is their ability to combine and make compatible seemingly contradictory functions which have all constituted the system historically and are all probably being required at any given moment by the social interests underlying higher education policies. This is probably the most complex analytical element to convey to policy-makers: namely, that because universities are social systems and historically produced institutions, all their functions take place simultaneously within the same structure, although with different emphases. It is not possible to have a pure, or quasi-pure, model of the university.

In short, while the idea of a knowledge economy has gained prominence in some higher education research as well as in the development discourse, South Africa remains in a fairly weak position in this regard. This is because of its weak academic core, the mission-drift that is the result of the pressure for all universities to produce research for income, as well as the overall downgrading of the key elements in the university because at the same time it is still required to serve functions like the warehousing function.

I now turn to a discussion on the third function of universities in South Africa. That is the service or community-engagement function. The pressure on universities to be responsive has given rise to an emphasis on their role in place-based development in South Africa.

2.5 South Africa's Universities and their Service/Community-Engagement Functions

In this section I focus on the debates regarding the extent to which South African universities do or do not contribute to place-based development. I illustrate in section 2.5.1 that in addition to the problems highlighted so far, there is again the problem of poor state capacity to guide the service/community-engagement function of universities.

2.5.1 The Role of Universities in Place-based Development and Responsiveness

The term 'place-based' refers to the extent to which development strategies are firstly relevant, and secondly responsive, to the specific needs of a spatial location; the location may be rural/urban, and it may be a town/city, region, or country (Barca et al., 2012). These kinds of interventions sit in opposition to spatially neutral development, where similar (if not identical) development strategies are adopted in different places (Chien, 2008). Historically, a notable share of South African universities served place-based roles in development. This has since changed and the literature argues that the choices of the democratic government, maybe inadvertently, led to this.

Under apartheid, the Afrikaner, English and Bantustan universities played strong roles in the states' separate development plans. I have already described the roles of Bantustan universities in supporting the Bantustan economies earlier in this chapter. So, here I only discuss the Afrikaner and English white universities. In the white areas of South Africa, the Afrikaans universities played significant spatially-oriented roles (Bank, 2019). One of the main Afrikaans institutions, Stellenbosch University established in 1918 (Baumert & Botha, 2016) , produced research and skilled graduates to support the wine industry in the Western Cape (Bank, 2019: 4). To give another example, in the 1930s the state committed to addressing the 'poor white' problem in part through universities too (Fourie, 2006). The University of Pretoria established departments of social work and applied sociology to manage and correct social

deviance among poor whites (Thumbran, 2017). In contrast, the English-speaking universities rejected spatially-oriented notions of their functions under the apartheid regime (Bank, 2019). They distanced themselves from making an instrumental contribution as it was associated with propping up apartheid. They branded themselves as universities committed to academic freedom and merit, distinct from the 'applied universities' of the Afrikaners and Africans (Davies, 1996). These universities took a place-neutral stance, and played an intrinsic role in South Africa society. Even some of the English-speaking universities that were initially established for an instrumental role gradually distanced themselves from their geographic locations.

Some researchers argue that when the democratic government took over in 1994, the focus was on unifying an unintegrated system and reinserting South Africa in the global community it had been sanctioned from (Reddy, 2004). According to this view, the new democratic government's policies neglected to adequately promote the idea of universities with spatially-oriented development roles and responsibilities. For example, Kaplan (2004) argues that the National Research and Development Strategy that followed in 2002 was also largely unsuccessful in driving spatially-oriented development. Among other things, the strategy stated that a key goal in the set of innovation policies was the protection of indigenous knowledge (South African Government, 2002). This point, however, was not made in relation to any of the local communities that this knowledge comes from, or the local actors in these places. Fongwa (2019: 53) expands on this problem in relation to the National Development Plan:

> In the Free State Growth and Development Strategy there is no clear strategy to ensure significant transfer of knowledge between the local universities, especially the University of the Free State with its strong agricultural faculty, the local commercial and emerging farmers, and government stakeholders.

Finally, the 2013 White Paper for Higher Education (DHET, 2013: 39) in South Africa states that most community engagement in South African universities has been undertaken on an ad hoc basis; the policy document further states that the government has not and will not support community engagement efforts that are not linked to the academic project:

> the community engagement initiatives conducted by universities have been of an ad hoc nature, fragmented and not linked in any way to the academic project. These initiatives are generally not state-funded and are not linked to measurable outcomes. Given budgetary and other resource constraints within higher education

> and the vastly different ways in which universities approach community engagement, it is likely that future funding of such initiatives in universities will be restricted to programmes linked directly to the academic programme of universities, and form part of the teaching and research function of these institutions.

It would appear that the incentive structure as it currently exists only facilitates spatially-oriented community engagement to a limited extent. In relation to place-based initiatives in universities, Tilak (2018) warns that there is a delicate balance to be struck so that universities do not become too parochial when striving to be relevant and responsive.

The final major problem with respect to innovation in South Africa is that some of the knowledge generated for innovation policy is too far removed from the communities where universities stand. This is a view held by Grobbelaar (2018) and Nkomo & Sehoole (2007) among others. These scholars argue that innovation must attempt to reflect much more the local contexts. Immense pressure is on South African universities to show that they can respond to the needs of their immediate communities.

In summary, South African universities are not located in a strong enough set of co-ordinated state policies. Because of this, not nearly enough funding goes towards research and development (R&D). In addition, the innovation that is produced is not immediately useful to the communities around South African universities. Together, this and the other problems described throughout this chapter make it exceedingly difficult for South African universities to contribute to development in the way universities in developed countries might.

Conclusion

The aim of this chapter was to describe the complex relationship between universities and development in South Africa. I highlighted that we cannot necessarily expect the universities in developing contexts like South Africa to make the same contributions to development that universities in developed contexts make. I illustrated that South Africa's history has shaped the country's university system. More specifically, I argued that South African universities emerged as part of the perverse power relations in the country. I started by looking at how apartheid has shaped the structure of South Africa's economy and society today. Thereafter, I showed

that the nature of post-apartheid socio-economic policies affected universities in such a way that they have since inevitably reproduced inequalities, rather than alleviating them. I highlighted the main problems in the South African funding system and how it shapes teaching, I also looked at research and innovation policies and service/community-engagement policies that are meant to help universities make place-based contributions and how they sometimes do not.

Now that I have introduced the relationship between universities and development in South Africa, chapters Three and Four treat the concepts of 'development' and 'universities' respectively.

Chapter Three

Conceptions of Development

Overview

In this chapter I discuss the concept of development. I present a tentative definition of development. However, I then also flag the ambiguity around the concept of development. Following this, I discuss the different international frameworks that have been used to mark the process of development. Then I discuss the various labels that have been used to describe stages of development. I show that these labels are steeped in historical power relations. Next, I turn to a discussion of classical and neo-classical theories of development. Through these I show that previously, development was simply understood as distributionally neutral growth. But frameworks like the 'capabilities approach' and concepts like the 'public good' as well as the 'public sphere' have turned attention towards conceptions of development that do two things. In the first instance, the capabilities approach foregrounds human flourishing as a key means of defining the different aspects of development. In the second instance, the public good and the public sphere help us to think about the instrumental and intrinsic aspects of development, as well as about how inequalities can be ruptured when the public sphere is inclusive. These debates help me to frame development so that all its complexities and nuances are captured in the analytic framework that I develop later in the study. I close the chapter with a note on the conditions that have shaped development on the African continent. I do so because while the general literature covered on development is useful, other conditions like traditional authority and traditional moral codes shape development on the continent in ways that are peculiar to the African context.

3.1 The Trouble with Development

In the first part of this section, section 3.1.1, I open by considering the ambiguity of development. Through this discussion I also introduce the problem that development is a contested concept. Notwithstanding, I provide a tentative definition of development. My next consideration in section 3.1.2 is the different international frameworks for development that

have existed over time—modernisation, structuralism, etc. In that section I demonstrate the ideological problems that these frameworks present. In section 3.1.3 I turn to the literature on the labels used to denote different conceptions of development and the contents of these labels. I ask the question: What is in a name?, in order to show that the labels used to denote different conceptions of development are steeped in historical and contemporary power relations. These power relations are used to separate the West from 'the rest'. Finally, I call attention to the neo-coloniality of these labels. I argue that they have created and maintained the hegemony of early developers. Based on these two sections I argue that development is a socio-historically constructed concept that is viewed with much suspicion by late developers.

3.1.1 The Ambiguity of Development, Tentative Definitions of Development and the Power of Labels in Conceptions of Development

I start this section by giving some definition of development. This is by no means a simple task. Broadly there are two definitions of economic growth, according to: first, growth as growth in output per capita, and second growth as qualitative change (Chang, 2017). The latter means a change in the sphere of production and a change in the underlying capabilities that make production possible (Chang, 2017). Then there is the definition that equates it with poverty reduction. This definition is associated with the Millennium Development Goals introduced in Chapter One. However, this is static because all it requires is income growth to reduce abject poverty (which at the time was defined as $2 a day) and then redistribution in order to eliminate abject poverty. It is not a notion of development that is about shifting productive capabilities or individual capabilities, according to Chang (2017).

While these definitions are helpful, in reality the task of defining development is a difficult one. This is because of the ambiguity of development. As a concept, development finds its ambiguity in the fact that it is a multi-dimensional and multi-directional process (Alkire, 2000; Alkire & Foster, 2011; Klugman et al., 2011). Because of this, it is hard to know what development is (Rist, 2008). Some dimensions of development are normative—meaning that they are concerned with what should happen (Rist, 2008). Others are instrumental—meaning that they are concerned with what the purpose of development is (Rist, 2008). These dimensions cut across a number of areas. They range from social evolutionism (which refers to catching up

with the industrialised countries), to individualism (which refers to developing each human being so that they can achieve human flourishing), and economism (which refers to achieving growth and access to income) (Rist, 2008). While Ghosh & Kurain (1979) are uncomfortable with the ambiguity of development, in contrast Castells' (2017) stance is that development must be left open-ended in definition, thus allowing the definition of development to be formulated within its context-bound parameters. On a different note and making the point that definitions can change over time, McCowan (2019) problematises the assumption that development 'is a fixed notion'. He (2019) argues that to think that development is fixed is a static view, when in truth development is constructed over the course of many generations. Further, McCowan (2019) highlights that the shifts in conceptions of development capture moral and political views as they become current and underpin the conceptions of the day.

The next section presents modernisation theory, structuralism, industrialization and dependency theory.

3.1.2 Modernisation Theory, Structuralism, Industrialisation and Dependency Theory

This literature review looks first at modernisation theory, then structuralism and finally industrialisation. It surfaces two main problems with these development theories. The first is that these development theories define development as a linear process, and the second is that some of these theories also perpetuate the ability of the dominators to continue extracting from the dominated, as dependency theory suggests. I show that these problems give reason for the dominated parts of the world to view conceptions of development with suspicion and caution.

Modernisation theory emerged in the 1930s in response to the global economic depression (Thatcher, 1987). Thereafter, development studies became dominated by this paradigm, which argued for the establishment of one framework for modernity which would be based on the experiences of a handful of industrialised nations (Brohman, 1995). The assumptions of modernisation theory are: 1) that modernisation is a complete social process accompanied by economic development where the right pre-conditions lead to development; 2) that this process is somehow a 'universal pattern' (Bernstein, 1971: 141). This conception is linear in

framing, seeing countries as moving from traditional to modern countries in a sequential process. Modernisation theory places the causes of underdevelopment within countries, rather than outside them, and leans biasedly towards the culture of the West by arguing that 'take-off' requires not just savings, but 'modernising elites', or simply the adoption of liberal capitalist values (Reyes, 2001). Rostow provided the most well-known modernisation theory in five stages: first is traditional society; and then the 'pre-conditions' stage; followed by the 'take-off' stage; the 'drive to maturity'; and finally, the 'age of mass consumption' (Rostow, 1991).

The problem with modernisation theory is that it universalises the progress of countries. This determinism was challenged by MacNamara (Bernstein, 1971), who pointed out the lack of uniformity among countries and their rate of progress. In fact, the trajectories that countries follow in order to transition through any of the stages of the linear process of development are path dependent–they are set on a particular trajectory influenced by the institutional arrangements inherited in that country (Hall & Soskice, 2001).

I now move on to structuralism. Structuralism gained influence in the 1950s in Latin America and it was named so by those who viewed underdevelopment as caused by the structures of the international economy (Reinert et al., 2016) and the nature of the societies under consideration. Import substitution industrialisation (ISI) in the 1950s and 1960s was closely related to structuralism (Love, 2005). It promoted self-reliance through the limitation of imports and the stimulation of infant industries (UNCTAD & UNIDO, 2011). It involved subsidising industries, nationalisation, encouraging foreign direct investment (FDI), etc. and many Latin American countries adopted this approach in response to the Great Depression in the 1930s. Later Asian and African countries took it up from the 1950s onwards (UNCTAD & UNIDO, 2011).

Dependency theory analyses the dependent relations between the core and the periphery, stating that the nature of contemporary southern development can only be understood in relation to global power relations and the effects of imperialism on the south. As Hopper (2018) writes: 'Their general position is that international capitalism increases disparities in

levels of development because it is based upon a series of imperialistic and exploitative relationships which enable the North to extract wealth from the South'. Samir Amin argues that colonies were customised for European markets such that today most are one-commodity economies trading in items like banana, cane sugar, etc. (Amin, 1976). In the post-colonial era, the aid and loans extended to the Third World only intensified the dependency by locking African and Latin American economies into poverty traps and pushed them to enforce orthodox policies (Mkandawire, 2001). These obligations placed emphasis on the exploitation of existing comparative advantage (usually in primary resources) (Chang & Grabel, 2004). Dependency theory later found itself under criticism. Smith (1979), as well as Graaff & Venter (2001) argued that the theory was over-pessimistic and paid more attention to external factors as causes of underdevelopment than actual internal factors that could be leading to underdevelopment.

Finally, in the 1990s post-development rose to prominence as the cultural bias of modernisation development theory was increasingly condemned. Its European enlightenment roots and its Eurocentricism, a term coined by Samir Amin, were regarded as challengeable but only through grass-roots approaches to social change and progress driven by indigenous knowledge (Hopper, 2018). At the centre of this post-development turn are debates around decolonising theories of development. These debates foreground the need to understand how the hegemony of a European world order shapes narratives of development (Patel, 2020). This raise methodological questions about how theories of development are established. To make one example, decolonial development theorists argue that there is a need for conceptual approaches to development that are people-centred (Morimina & Istratii, 2021). This sits in stark contrast to approaches that centre capital (wealth) accumulation as development. In section 3.3 of this chapter I outline one of the main people-centred approaches to development theory. While it cannot necessarily be categorised as a 'decolonial development theory', it does do the work of problematising the neglect of issues related to justice in mainstream development theories.

I now move on to a discussion of the labels used to denote development and the historical and contemporary power relations embedded in these labels.

3.1.3 What's in a Name? The West and 'the rest'

The cultural origins of the labels for different stages of development have played a significant role in shaping development theory, policy and practice. Development theories, policies and practices have been taken by the developed West to the 'rest'. What exactly does this mean? Well, Soares & Quintella (2008) argue that development as a 'problematic' is a Western imaginary that distinguishes Western culture from all others. Muller et al. (2017) cite a similar criticism by Castells. According to Muller et al. (2017), Castells points out that, before the labels 'developed', 'developing', and 'underdeveloped', there was the 'developed', meaning Western, and 'underdeveloped', meaning the rest (Muller et al., 2017). This has created a persisting binary. It has also created an obsession with the geographies of late, new, and early developers.

Geographical location has influenced the way categories are defined for different stages of development. For nearly a century now, distinctions have been made between rich and poor nations. As seen previously, the different terminology based on geography has included: 'core', 'periphery', and 'semi-periphery'; 'developed' and 'under-developed'; 'and finally, North' and 'South' (Eckl & Weber, 2007; McCord & McCord, 1996; Tickner, 2013). Consider the last category: the North-South binary. This categorisation has had an homogenising effect that is firstly, deterministic and secondly, pessimistic. This categorisation treats some countries that are geographically positioned in the South (with the exception of countries such as Austrialia)[3] as afflicted by the same problems, one of which is their climate. According to theorists who use this categorisation to explain late-development, climatic factors have prevented late-developers from developing like their early-developer counterparts (Harman, 2008). In addition to the homogenising effect, the North-South binary also erases the Global East (Muller, 2018).

The literature on development theory states that each set of labels has perpetuated the hegemony of Europe and America. These regions, according to this literature, have had a

3 Such exceptions exist because of the complex ways in which economic and political factors that shape the way that countries at different stages of development are categorised. This may be for reasons to do with its formative history, which is tied significantly to Europe, the United States, Canada and New Zealand. In addition, Austrialians describe themselves as culturally similar to nations like the United States.

consistent interest in bringing their former colonies and neo-colonies into the global value chain in ways that largely benefit them (Ndlovu-Gatsheni, 2018). Not only has this been carried out through the extraction of natural resources, but also through the imposition of European culture upon the colonies/neo-colonies. According to Arndt (1981), missionary expansion is notoriously known to have been inspired by the intention to achieve cultural colonisation. Under the guise of the civilising mission, colonial enterprises undertook to plunder the resources of underdeveloped nations (Ndlovu-Gatsheni (2018)). They did so by claiming that such nations were incapable of advancing economically and culturally because of their uncivilised nature; this, the colonial enterprises purported, inhibited their ability to structure their societies in the kind of sophisticated ways required to improve the lives of their people (Matunhu, 2011).

The idea that human beings can improve their lives comes from a long tradition of European thought. The intellectual roots of development theory lie within the European Enlightenment of the eighteenth century (Harman, 2008). The themes during that period—progress, rationalism and modernity—remain deeply entrenched in the way that development is understood today. From the 19th to today's 21st century, conceptions of development have elevated science, capitalism and industrialisation (Hopper, 2018). It goes without saying that these themes, particularly capitalism and industrialisation, are contentious given the environmental destruction associated with them (Avis, 2018). Environmental theorists argue that the planet is as much a victim of power relations as late-developers are; according to this body of literature, the extractive relationship between colonising and colonised nations also holds between the economy and the planet (Shiva, 2001). By the post-colonial years, the role of the West in defining development had come under great scrutiny and has since been shrouded in a thick cloud of suspicion (Reinert, 2006). The legacy of Western defined development continues to remain stubbornly in place.

By not acknowledging institutional complexities, development theories add nothing to the difficulty of conceptualising what Chambers (2004) calls 'good change'. Because so much 'bad change' has been a dominant feature of history—growing global poverty and inequality through trends like growing precarity and weakening social protection (Fine & Saad-Filho,

2016; Standing, 2016; Webster, 2005)—we must probe deeper when grappling with conceptions of development.

So far, what can be taken from this section is the fact that development theories are inherited by late-developer nations through the hegemony of the West—in part through the terminology used to distinguish the rest from the West, and in part through the generalisations across very different national contexts. These trends have directly led to the linear theories of development and neo-colonial relations that continue to subvert late developers.

In short, this section has demonstrated that the notion of development is implicated in centuries of power relations. The next section, section 3.2 remains with the theme of power relations, this time I examine these relations in the intellectual history of development thought.

3.2 The Intellectual History of Development Theory

This section deals with my second argument regarding power relations. I focus on the methodological assumptions underpinning the work of key development theorists. Section 3.2.1 looks at the classical and neoclassical theorists, and their critics. This intellectual history reaches crescendo with the advent of positive economics. I show how the mathematisation of economics quickly turned development theory into a universal science. This made generalised rules that were not necessarily backed up by empirical evidence the cornerstone of development theory. Soon distributionally neutral theories of growth became widely accepted. All of these properties fall into the branch of development theory called neoclassical economics. The literature that I present illustrates one key implication. The implication has been the tendency for neoclassical theorists to prescribe one-size-fits-all development policies for all national contexts. The one-size-fits-all policies that have sprung from neoclassical economic development theories have been spread across the world. I argue that we can draw connections between the method of neoclassical economics, the policy practices prescribed by neoclassical economists and the role these two elements play in the symbolic reproduction[4]

[4] Symbolic boundaries are the boundaries that define some people, groups, and things by including them within a particular category while excluding others (Epstein 1992, 232 in Lamont et al., 2001). These categorisations can be articulated using normative interdictions (taboos), cultural attitudes and

of society. In section 3.2.2 I look at opposing development theories that have challenged neoclassical methods and ways of thinking.

3.2.1 Classical Economists, Neo-classical Economists and their Critics

In this section I proceed by outlining the methodological claims of classical and neoclassical economic theorists. I focus on the emergence of two main assumptions: methodological individualism and rational choice in section 3.2.1.1. These underpin the fundamentals that neoclassical economists famously encourage all countries to get right if they wish to develop. I then look at opposing theories in section 3.2.1.2. I show that these, in contrast, are based on methodological holism.

3.2.1.1 From Classical Political Economy to Positive Economics: Mathematisation, Generalisation and 'Getting the Fundamentals Right'

Under neoclassical economics, growth has been the central focus of economists working within this discipline. According to Fine & Milonakis (2009) their means of predicting growth have mainly been deductive. By this they mean that the emphasis in neoclassical economic methods has been on constructing models to follow mathematical logic, regardless how far from reality that logic is (Fine & Milonakis, 2009). This kind of method is associated with the positivist tradition[5]. Under neoclassical economic theory, economic growth is defined as an increase in per capita income and national product (Gallo, 2002). To increase national product, the volume of investment is required to be larger than the amount required to replace capital that has lost some of its value, i.e. depreciated. Therefore, the amount of savings and investment in a nation plays a strong role in the process of economic growth (Hahn & Matthews, 1964; Tobin, 1955, 1960).

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practices, and patterns of likes and dislikes. These can produce equalities or inequalities between groups.

[5] In the first place we must admit that the concept of positivism is very vague. Perhaps we can argue that in economics it stands for a procedure, whereby one starts with some well-defined premises, assumptions, then constructs a logical-deductive reasoning (preferably mathematical), to arrive finally at a set of operationally-formulated causal laws(Maes & Schokkaert, 1986: 85). These laws make prediction possible (Maes & Schokkaert, 1986: 85).

The argument is that resources are scarce. And because the rate of growth can only be increased by saving (because savings stimulate capital formation), a disproportionate amount of resources should go to individuals who can use them efficiently and productively (Gallo, 2002). In other words, this theory of growth is 'distributionally neutral'. This theory of growth and the distributionally neutral implication is referred to as 'getting the fundamentals right' in neoclassical theories of economics (Gallo, 2002). Neoclassical economists have argued that convergence between countries at unequal stages of development is possible when less developed countries get the fundamentals right (Evans & Karras, 1996; Galor, 1996). These theories validate the argument that inequality is a desirable as well as a necessary condition for growth (Todaro & Smith, 2012). As such the redistribution of income must go towards groups that save and invest, i.e. the rich, so that capital accumulation and growth occur (Gallo, 2002). This gives credence to the claim that within this school of thought simple economic growth is *synonymous* with development. This is the explicit link between the theoretical claims of neoclassical economists and the ideological underpinnings that are postulated for the reproduction of society.

Within development theories there are different roles for the state. Those who are proponents of distributionally neutral growth theories support the idea that the best possible outcomes for society arise when the state does not interfere in the market. Those who argue for a free market with no state intervention usually invoke Adam Smith's theory of the invisible hand. Smith is one of the early fathers of classical economics. In his 1776 publication, *The Wealth of Nations*, Smith described economic markets operating under complete freedom, without any regulation from the state, as efficiency maximising (Cohn, 2003). His most famous idea, the invisible hand, refers to the ability of the perfectly functioning market to allocate scarce resources in the economy to their most efficient use (Smith, 1776). This was the genesis of two of classical economics' most notorious assumptions: methodological individualism and rational choice. The first is the principle that subjective individual motivation explains social phenomena (Elster, 1982). This is in contrast to methodological holism where explanations of social phenomena are based on group and structural dynamics (Milonakis & Fine, 2009). The idea of rational choice, on the other hand, states that individuals make decisions based on their calculations that these decisions will lead to the best possible outcomes (Simon, 1955). Another way in which this idea can be expressed is to refer to individual as selfish or self-

interested (Andreoni & Miller, 2008). Contradicting this is the idea that individuals are not always rational (or self-interested, if rationality implies self-interest) (Andreoni & Miller, 2008). Heterodox economists, among others, argue that these two assumptions—methodological individualism and rational choice— hence make for a reductionist and unrealistic model (Cramer 2002, p. 1850). Based on these assumptions, the full extent of Smith's linear causal model is a free market that operates perfectly competitively as all individuals make decisions for their own benefit. Smith's theory has been the theory most strongly associated with capitalism. Capitalism is a set of social relations based on private ownership of the means of production and their use for profit; its main features are capital accumulation, private property rights and free exchange (Harvey, 2018)

So far, this literature review illustrates how the two main methodological assumptions in classical and neo-classical economics— methodological individualism and rational choice—led to the notion that distributionally neutral economic growth theories are an adequate way of thinking about how to increase the national incomes of countries. These two assumptions underpin the fundamentals that neoclassical economists famously encourage all countries to get right if they wish to develop. Under these theories, inequality is a desirable part of economic and social life.

In the next section I review the literature on theories opposing the idea that the free-market works. I argue that these theories appear to be more holist approaches to thinking about development.

3.2.1.2 Branches of Theory Opposing the Free Market

The main opposing theory to the neoclassical free market theory is Marx's theory of exploitation under capitalism. With this idea, Marx opposed the distributionally neutral types of theories about capitalist economies. The Marxist theory argues that under capitalism, the commodification and exploitation of labour serves the preservation of classism and inequality (Marx, 1867). Because of this the distribution of output or income goes disproportionately to the capitalist class (Marx, 1867). The exploitation of workers is maintained through stagnant wages that are held down by both a surplus army of labour, and the constant effort by

capitalists to displace labour with technological innovations for capital accumulation (Marx, 1867). For Marx, the system collapses because of declining wages and severe poverty, which causes the proletariat to revolt (Harvey, 2018). Therefore, Marx sees this system as unsustainable (Marx, 1867). His methodological holism emphasises the totality of the structure of capitalism[6].

The ideas of Adam Smith and Marx are often juxtaposed. The first underpins the theory of free market capitalism and the second the theory of capitalist accumulation. Many scholars have produced work either responding to or building on the ideas of Smith and Marx. Their responses either adapted these theories, or rejected them completely. Dang & Pheng (2015: 15) refer to the two fathers of economic development theory as the most illustrious among their peers: '… Adam Smith and Karl Marx are the two most famous thinkers for their contributions …'. This dichotomy, capitalism versus socialism, is also a reflection of both a method and content divergence. As stated earlier, the market approach relies on the neoclassical principles of 'getting the fundamentals right'. Though he did not formally construct a socialist theory, Marx's critique of capitalism inspired socialist thinkers to assign the state a highly involved role in distributing 'From each according to his ability, to each according to his needs' (Marx, 1875). The statist approach advocates intervention in order to mitigate the failures of the market (Chang, 2014). In the absence of state intervention, revolution is the means by which the proletariat effect change.

Lying somewhere in between the two poles of this dichotomy is the Keynesian school of economics. In the 1930s, Keynes claimed the need for state intervention to stimulate demand in response to the market disequilibrium arising through market failures (Mann, 2009). According to this theory, low wages and unemployment can be addressed through fiscal and monetary policy (Greenwald & Stiglitz, 1987). These two measures can alleviate unequal income distribution by injecting money into economies that are experiencing low levels of

[6] "Because it provides only the simple determinations, the thin abstractions, methodological individualism cannot provide the sense of radical change which emerges from the full conception of the whole. Indeed, it systematically obfuscates the need for such change. It is only when the abstracted parts are reconstructed back into the whole and the relations between them understood that the need and likelihood for radical change emerges." (Shiell 1987, p. 245).

demand (Mann, 2009). Keynesian economics was used as the main economic model in the developed nations during the latter part of the Great Depression, World War II, and the post-war economic expansion (1945–1973) (Carabelli & Mario, 2014; Coddington, 1976). Note that Keynesian policies are of the capitalist form, only Keynesians accept that the market is imperfect and encourage some state intervention. Next, I look at another development theory that sees the role of state intervention as disciplining the capitalist market, without rejecting capitalism altogether. This theory is called 'developmentalism'.

The concept of developmentalism is ambiguous both in theory as well as in the experiences of different countries. It is a concept with different meanings (Prates et al., 2020). Dirlik (2014) uses the term to refer to the fetishisation of development as the process of overcoming stagnation. By this use of the term 'developmentalism' he is referring to the process of improvement in economic, social and cultural well-being. A word of caution here: I have used development in this study to mean multi-dimensional improvements in social, economic and cultural well-being, and later I add other dimensions to this definition. But it must be noted that this is a broad use of the category 'development'. It can include a variety of development theories, each one advocating for different policy targets and the use of different policy tools to achieve them. 'Developmentalism', the way I use it in this study, is but one *type* of development theory. 'Classical Developmentalism' refers to the notion that industrial transformation—the way Chang (2017) defines it, as changes in industrial capabilities—is the most efficient way to achieve increases in productivity and national income. Due to the dissatisfaction with this neoliberal approach that foregrounds trade and financial liberalisation, and minimises the role for the state, the East Asian example has risen to prominence (Musamba, 2015; UNCTAD & UNIDO, 2011). Now, the use of the term developmental state, refers to the East Asian states' industrial transformation policies that were driven by significant state intervention. Stiglitz (1996) claims that among the ingredients that made the Eastern 'miracle' possible was the state's ownership of certain private businesses. Some of the defining features that entrenched the strength of the East Asian developmental state, as argued by Musamba (2015) include the following: development-oriented political leadership; an autonomous and effective bureaucracy; a production-oriented private sector; and performance-oriented governance. Castells (1992) defines what makes the developmental state in terms of two components: one ideological, the other one structural. It is this ideology–

structure nexus that sets apart developmental states from other sorts of states (Castells, 1992). The East Asian developmentalist tradition emphasises policies that are time and place relevant. 'Yesterday's hi-tech industry (e.g. textiles in the eighteenth century) may be today's dead-end industry, while a policy that is good for an advanced economy (e.g. free trade) may be bad for a less developed country.' (Chang, 2014: 134). The next controversial theory regarding the role of the state (or lack thereof) is the theory of the entrepreneurial state.

The entrepreneurial concept is concerned with the ability of agents or organisations to cope with and overcome uncertainty in a rapidly changing, complex society and economy. At its core is the creation of novel and innovative mixes of 'factors of production' and 'ways of doing things'–at least according to the widely accepted view of Schumpeter (Grahl, 1985; Sledzik, 2013). The Schumpeterian (2000) notion of 'creative destruction', leading to innovation and renewal, is said to manifest itself in such unpredictable and complicated task environments. For Schumpeter, this is the way development takes place. Sledzik (2013: 89-90) summarises that Schumpeter understood discontinuous and "revolutionary" change as the heart of "economic development" which disrupts the economy's current static mode ("circular flow") and leads it on a dynamic path of fits and starts. Schumpeter's innovation theory formally describes development as a historical process of structural changes, primarily bolstered by innovation which was separated by him into four types (Sledzik, 2013): new product launching or the launching of a new species of already known product; application of new processes of production or sales; the carving out of a new market; and the acquisition of new suppliers of input goods. However, Cope (2005) and Mazzucato (2011) warn that although widely used, entrepreneurialism is one of the most poorly understood concepts. It tends to also be associated with an un-interfering state, and yet the facts show that in nations like America, the Entrepreneurial State has played a hands-on role in taking risks in areas of new product development. Where the private sector may have been unwilling to do so, the state played the role of inputting the funds required to initiate and support research and development. Despite these contestations, some scholars are happy to define the Entrepreneurial State as serving the knowledge economy through innovation, where centralised control may come from the state so that private market needs are met by the response of the state to market failures.

Furthermore, much more autonomy exists for agents in this system, leaving some uncertainty in outcomes.

The states described here can be seen as transitional, possibly co-existing at the same time in a single state or maybe even existing in sequence, one following the other–arguably transitioning from developmental to entrepreneurial, and finally or ultimately, turning from these co-ordinated market economies, towards a liberal market economy. Sometimes these two types of states are conflated with one another as they do have features that appear to overlap. Yu (2001) argues that developmental states are, in fact, entrepreneurial too, and that entrepreneurial states can achieve welfare improvements. While both points are correct, it remains the case that the formal tools and targets used in each type of state differ, and those differences significantly affect the final outcomes of these states' policies. The significance of this section is that often the state locates universities in national strategies for development and this shapes the sorts of relationships that universities ultimately have with development.

In sum, I have discussed the literature on classical and neoclassical economic theories and the theories challenging them. The second part of the discussion illustrated the different positions found in the literature regarding the role of the state in development. The next section, section 3.3, discusses my third argument. I introduce the notion of development as human flourishing. I illustrate that this emerged in response to the unhelpful notion of development as distributionally neutral economic growth.

3.3. Human Flourishing as Development

This section discusses development as human flourishing. My focus is on the 'Capabilities Approach'. This is the main approach in development theory that foregrounds human flourishing. In the first part, section 3.3.1, I review the work of economist and philosopher, Amartya Sen. Sen, the originator of this school of thought, proposes this approach which assesses human well-being in a multi-dimensional way. Unlike the theories discussed so far in this chapter, Sen's approach does not reduce development to simple economic growth. I then discuss the contribution of philosopher Martha Nussbaum to Sen's work. She offers a

'Capability Theory of Justice'. Finally, I consider how international development agencies have used the Capability Approach to set up global policies. What I find is that this work has made a strong contribution to development theory and policy. Because of this work, development is no longer regarded as simple economic growth. Rather, development is regarded as the set of life opportunities that individuals have to improve their well-being.

3.3.1 Sen's Capabilities Approach and Nussbaum's Capabilities Approach for Justice

As noted in Section 3.1, development theorists are interested in 'good change'. Increases in the GDP levels of underdeveloped countries have failed to translate into improvements in the material and non-material conditions of these populations. Instead, 'bad change' has intensified as growth has swelled. Such trends have prompted almost universal dissatisfaction with this kind of bad change, even among some neoliberal economists. In his work, Sen attempts to offer a guiding framework on how to establish some shared goals for the kind of good change which enhances human flourishing.

The capability approach is a moral framework developed by Sen. The framework is designed to assesses 'individual well-being and social arrangements' (Robeyns, 2003b: 5). Sen defines the goal of development as enhancing human capabilities in order to allow human flourishing. Capabilities are defined as 'the freedom(s) that a person has in terms of the choice of functionings, given his personal features and his command over commodities' (Sen, 1985: 13). A simple capability is the ability to meet certain basic 'functionings' up to certain levels (Sen, 1980, 1993). Phrased differently, the approach spotlights why means and ends are distinct, and substantive freedoms (capabilities) and outcomes (achieved functionings) are distinct (Sen, 1985). The main idea of the capability approach is its focus on that which people are able to achieve by doing and becoming. This differs from the thinking in neoliberal economics where the focus is on income, expenditure and consumption. His starting point involves a critique of other approaches like income-based theories (Robeyns, 2003b). Specifically, Sen rejects theories that exclude non-utility information from our moral judgements (Sen, 1979).

Building on Sen's work, Nussbaum develops a set of principles that each government should incorporate in its constitution (Nussbaum, 2003). Nussbaum develops a general list of 'central

human capabilities' that should underpin all constitutions (Nussbaum, 2003) . Thus, her work is universalistic: she argues that governments around the world ought to endorse these capabilities. Sen's and Nussbaum's approaches have in common their critique of income-based development theories (Robeyns, 2000, 2003a, 2003b, 2005).

Nussbaum and Sen differ on one key issue. In the main Nussbaum proposes a finite list of capabilities, which is made up of some of the following categories: life; bodily health; senses, imagination and thought; emotions; other species; and control over one's environment (Nussbaum, 2000: 76-78). The list can be and is revised periodically. Nussbaum vehemently argues that if Sen wants his approach to be effective, he should endorse some kind of list of capabilities (Robeyns, 2003b). Sen refuses to commit himself to a finite list. In contrast, Nussbaum is accused of paternalism for committing herself to a specific list for all (Deneulin, 2002).

Despite the tension between Nussbaum and Sen, the capability approach is a theoretical framework for the international development policies of some international agencies (Fukuda-Parr, 2003). The capabilities approach is operationalised in the United Nations' Human Development Index (HDI). The Human development Index (HDI) has been published annually since 1990 by the UNDP (UNDP, 2019). The index is meant as an attempt to give an aggregate metric of different dimensions of development (Dervis & Klugman, 2011; Klugman et al., 2011; Ravallion, 2010). Each of these dimensions is numerically weighted and all the numbers are added to produce a single number that supposedly tells us everything we need to know about a country's level of development. In Chapter Five of this study, I explore some of the problems associated with this kind of weighting approach to assessing outcomes. For now, I look at one of the other criticisms levelled against the Human Development Index (HDI). The Human Development Index (HDI) incorporates life expectancy, education and income (UNDP, 2015), but critics argue that it leaves out other important socio-historical determinants of development, in particular development as a form of socially just social change (Stanton, 2007). The United Nations state explicitly that while the Human Development Index (HDI) may not serve the function of representing comprehensively all the dimensions of development, it is a useful tool for forecasting development (UNA-UK, 2018):

> Though the HDI may not fully capture all the complexity of the 17 SDGs and 169 targets, it is not realistic to expect any index that accommodates the diversity of all countries' development to do so. Rather, the HDI can be used as an easy and more accurate indicator of progress as it considers factors that serve as valuable forecasts of quality of life.

Based on this literature, there is no doubt that the capabilities approach has made a landmark contribution to development theory and policy. The framework has changed the way international development policies are devised.

The next section 3.4 introduces the concepts of the 'public good' and the 'public sphere'. These concepts are increasingly used to connote development. In particular, these concepts allow development theorists to nuance the complexities of development. Not only is development multi-dimensional as stated earlier in this chapter, but its multiple dimensions can be of the intrinsic or instrumental type. The latter can be and usually is strongly influenced by the structure of the public sphere. The debates in terms of these concepts raise key discussions about inequalities.

3.4 The Public Good, the Public Sphere and Inequality

This section, section 3.4, presents the conception of development as the 'public good'. It also looks at the role of the 'public sphere' in shaping and advancing the public good. The concepts of the 'public good' and the 'public sphere' originate from two problematic traditions: economics and political elitism. Both concepts have been plagued by significant analytic limitations. I focus on one overarching limitation: the inequalities of inclusions and exclusions that these concepts conceal. This literature shows that theories of development that use these concepts have the power to either reinforce or rupture the bad change described earlier. They reveal who has access to public goods and who participates in the public sphere, where the distribution of public goods is deliberated. However, the rupture of bad change is only possible if concepts like the public good and the public sphere are contextualised. Through this process of contexualisation, historical and contemporary power relations can be understood. I start section 3.4.1 with the literature on the public good.

3.4.1 Defining 'Public Goods' and 'The Public Good'

In this section I define the public good and highlight the main conceptual debates in this area of the literature. The three debates rotate around the public/private divide, the pure/impure divide, and finally the intrinsic/instrumental divide. I show that these conceptual juxtapositions determine who provides for public goods and how they are distributed. This provision and distribution can have a large impact on inequalities.

The foundations of the concept of the public good are old and straddle several areas of the social sciences. These are philosophy, politics, and economics, to mention but three. These foundations go as far back as Plato and Aristotle, who were concerned with how people could contribute to a better society (Hazelkorn & Gibson, 2017: 4):

> Plato and Aristotle emphasized the importance of ethics, metaphysics and natural philosophy as the means of educating citizens who would become 'good and harmonious member[s] of society'.

Following the abstract theorisation by philosophers, economists turned their gaze towards public goods in the tangible sense. In other words, economists examined two things: the way in which individual actions affect the public; and whether/how one individual's use or consumption of a public unit affects other members of the public (e.g. a public park) (Samuelson, 1954). According to Hazelkorn & Gibson (2017, p. 4), Samuelson first did the work of disentangling democratic politics (public rights) and capitalist markets (private rights). Through this line of analysis, Samuelson arrived at his well-known definition of public goods as non-excludable and non-rivalrous (Stiglitz, 1999). In the first instance, this means that consumer A's consumption cannot exclude consumer B from enjoying the benefits of the public good. Inevitably, however, the result is that there is no incentive for consumer B to cover the costs of the provision of the public good and thus consumer B may engage in a 'free ride' (Buchanan, 1968; McNutt, 1999). In the second instance, providing the good for consumer A means providing the good for consumer B (some examples are lighthouses, national defense, and sanitation). In contrast, only those who can pay the market price can enjoy the benefits of private goods (McNutt, 1999). Soon the dichotomy between public goods and private goods became naturalised. The dichotomy also juxtaposes the individual/business versus society, as well as the state and its functions versus non-state institutions and their functions (Marginson, 2007, 2012, 2020). In this last instance, public goods arise because of 'market failures' where

the state is required to step in and provide what private interests cannot (Marginson, 2012). Stiglitz (2005) further nuances this definition. He states that the nature of some goods that are provided by the state are private goods that are publicly provided, financed, managed, etc.—the example he gives is higher education (Stiglitz, 2005). He also refers to an efficient government as a public good itself (2000, p. 149). The public/private divide can be understood conceptually, empirically or both ways. In the empirical sense, the concept must be understood in terms of the context it is located in (Marginson & Considine, 2000, p. 28). Similar to the point made in section 3.3, Marginson makes the overarching argument that the assumptions and methods used underpin the results of inquiry (2007, 308-309). He further argues that over-emphasising the normative is unhelpful if our interest is explaining the empirical (Marginson, 2007). This leads me into my next point. Because knowledge is an important public good, and because it is also an example of a public good that presents some interesting analytic issues, I look at higher education and knowledge in order to expound on the issues raised here by Marginson.

There are two distinct ways in which the public good discourse is framed in higher education, the first being the instrumental role that higher education can play in society (e.g. developing professionals), and secondly the intrinsic role (e.g. shaping culture) (McMahon, 2018; Oketch et al., 2014; Unterhalter et al., 2017). Critics emphasise that the arguments for the instrumental role of higher education are too utilitarian and economic in nature. This is in contrast to the more cultural or intrinsic contribution of the public good.

To consider knowledge as a public good, I move on to the next conceptual delineation made by economists. Public goods can be categorised as 'pure' or 'impure' (Samuelson, 1954). Pure public goods are entirely non-rivalrous and non-excludable, while impure public goods, such as knowledge, are non-rivalrous but excludable through barriers like paywalls or patents (McNutt, 1999). Echoing Marginson's note on assumptions and method, Hazelkorn & Gibson (2017) caution that we thus need a refined analysis when making decisions on what goods we define as public goods and how we imagine their provision as a function of this definition. Unterhalter et al. (2017, p. 76) stress the need to understand how analyses frame the levels at which public goods are distributed:

> There is an assumption here that higher education is associated in some direct way with shaping research and learning which contributes to what works to ensure development, or national cohesion or economic growth, and that these processes can go on being applied to all situations. The key arguments that underpin this conceptual framing speak to different levels of the public good associated with higher education. Sometimes analysis distinguishes that these public goods are distributed at individual, community, national or international levels, and that non-market or market goods.

How we think about distribution is one of the key ways in which we can also think about inequalities. The next conceptual complexity surrounding public goods (or public bads) is that they may arise unintentionally. The unintentional consequences are formally referred to as 'spillovers', which arise from different types of actions. Take the example of industrial activity as a type of action. An industrial activity may lead to positive or negative spillovers, technological development being of the former type and excessive population growth of the latter (Conrad, 1993; Grupp, 1996; Michel & Rotillon, 1995; Tybout, 1972). The idea of a 'spillover' essentially means that a private action only affects those engaged in it, while a public action affects those not directly involved—the latter are what economists refer to as 'externalities' (Unterhalter et al., 2017). Universities develop knowledge that generates positive externalities in society. When private individuals gain access to the university and successfully complete a degree, the spillover effects are enjoyed by the public. So, while knowledge itself may be an impure public good that excludes many, the spillover effects are shared among the public.

To summarise, the idea of the public good requires several conceptual considerations. Those covered here were the intrinsic/instrumental, public/private, and pure/impure dichotomy. These distinctions shed light on three things: i. the types of development outcomes that can arise from an intervention like higher education, ii. whether individuals or society enjoys the benefits of these outcomes, and iii. how decisions are made on who should pay for such interventions depending on their pure/impure form.

I move on to the literature on public spheres. This literature spotlights the inclusions and exclusions that lead to inequalities in different public spheres. These inclusions and exclusions affect the ways in which the public good arises, how its distributed, and so on.

3.4.2 From the Public Good to the Public Sphere: Understanding Inclusion and Exclusion in the Public Sphere

So far, I have made the point that the public good is a concept used to denote development. However, it bears the analytic layers traced above. Scholars must grapple with these layers in order to understand key questions about inequality. The public sphere is a useful adjacent concept for this end. This is because it offers a contextually relevant way of thinking about what counts as the public good, as well as how the public good can best be advanced in different contexts. The outcomes of this two-forked inquiry are dependent upon who participates in the dialogues in the public sphere. This in turn is determined by the structure of the public sphere. The literature shows that the exchange between people in a certain place and time gives shape to the way the public good is defined in different contexts. Power relations in the public sphere are structured such that whether an action and/or its consequences are deemed desirable or not depends on who is included and excluded in the process of conjecture. To elaborate this point, I also suggest that there is a direct correlation between who is excluded, and which aspects of the public good are foregrounded and backgrounded.

The phrase 'public sphere' is a translation of the German 'Öffentlichkeit' (Susen, 2011b). It translates into 'the public', i.e. the whole of speakers and listeners constitutive of the public sphere (Susen 2011b, p. 44), as well as into 'publicness'/'publicity' i.e. the state of being publicly visible and publicly scrutinisable (Susen 2011b, p. 44). Put differently, the public sphere is a 'social space' or 'arena' where different ideas are exchanged between members of the public. Like those working with the concept of the public good, exponents of the public sphere concept are inclined to present the concept within the boundaries of the traditional ontological dichotomy: public versus private. This analytic distinction, though socio-historically varied, can be understood in terms of three distinct meanings: social versus individual, openness versus closure (i.e. accessibility or lack thereof), and visibility (transparency) versus concealment (Susen, 2011b: 40).

Historically, the concept of the public sphere was contrived in a way that inappropriately suggested that only one public sphere exists at a given time in a given society. In reality, societies are a complex set of multiple, and intersecting, public spheres. Habermas, architect

of the idea of a public sphere, demonstrates the problem with this initially monolithic theoretical construct. Habermas defined the public sphere as a shared space between subjects—shared through communicative rationality, critical discourse, or argumentation (Habermas, 1989). He distinguished between the *polis* and the *oikos* (1962 and 1989: 3): the former describes open interactions between free citizens in the political realm, and the latter a designated domestic realm for hidden interactions between free individuals. The Habermasian analysis intensely focused on the bourgeois public sphere of the 18th and 19th centuries (Habermas, 1989). The main objections against his formulation of the public sphere spotlight the hegemony of his public sphere. Critics such as Susen (2011a) argue that Habermas over-states the vanguard role of the bourgeois, rendering the alternative public spheres invisible in his analysis of liberal public discourse. In his earliest work, his exaggeration of the emancipatory power of liberal discourse fails to take into account the impacts of the discrimination resulting from a public sphere excluding all but a tiny sliver of elites (Susen, 2011a). This elitist democracy, as Benson calls (2009), fails to appreciate the need to incorporate pluralistic and diverse discursive styles that are not limited to the rational argument of the bourgeois sphere. In Habermas' defense, he is not the only theorist to have conceptualised a public that excludes members of other public spheres. Making a similar point regarding Marx, Calhoun (2002, p. 167) reminds us that Marx's theory excluded those without private property, as well as women. I move onto critical feminist theory to make the point that the public sphere has excluded some in the past.

In light of the limitations present in Habermas' public sphere, critical feminist theory broadens the scope of problems that the theory engages with. My focus is on feminist theorists[7] because they have been pioneers in illuminating the relationship between power and the real-world. Fraser (1990: p. 65) describes the public sphere as having 'many publics'; some more powerful than others. Not only does this plurality mean that there are multiple public spheres, it also means that the relationality between these need to be understood in terms of their complexities. The main complexity highlighted in this literature is that public spheres can be understood hierarchically. The less powerful are what Nancy Fraser refers to as 'subaltern

[7] These theorists describe and explain how gender systems are structured and how they affect all social life. They consider ethical and normative issues. Alice Walker.

counter-publics' who are excluded on the basis of race, gender, etc., but these should not, however, be viewed as distinctly separate publics (Fraser, 1990, 1992). Although they should not be viewed as separate, they do organize in 'parallel discursive arenas' where they arm themselves with a 'language' that recasts the needs of women, lesbians, workers, and people of colour (Fraser 1992, p. 67). Not only can these less powerful groups organise along the margins, the history of the proletariat public sphere shows that the subaltern counter-publics have tried, through revolution, to claim the dominant public sphere (Downey & Fenton, 2003). Thus the role of collective actors, some of whom may be acting on behalf of others, some of whom may be armed with language or arms, is a force that is constantly contesting and constructing publicness and the multiple public spheres (Barnett, 2014; UNIDO, 2008).

I now move my discussion to Fraser's position in response to Habermas. She leads into critical debates within feminist economics. These debates deal cogently with the ramifications of the exclusion of subaltern publics from the public sphere and public discourse. Let us take the example of women's marginality in the public sphere and the Habermasian privatisation of domestic affairs. The exclusion of women from the discourse that determines what is public and what is not, has meant that the household is defined as private (Fraser, 1990). For feminist economists, the problem arises that only public work is regarded as 'productive' work that should be paid. This boundary excludes the private work that occurs in the household, which is disproportionately carried out by women. Feminist economists point out that any work that is not value creating in the (public) way defined by neoclassical economics is excluded from notions of what is valuable (Waring, 1988). This is despite the fact that household work serves the function of propping up capitalism (Holmstrom, 1981: 188):

> Some feminists argue that…the absence of a wage hides the real economic position of the house wife in capitalist society. In fact, they argue, ". . .domestic work not only produces use values but is an essential function in the production of surplus value…" This because on a daily and a generational basis, the labor of housewives "serves the reproduction of labour-power," the commodity whose use produces surplus value.

Of course, today, women work in the economy and do household work, too. They arguably therefore suffer double alienation, at least to the extent that some forms of formal work are also characterised by feminisation—the association of a certain kind of work with women and their caring nature, which leads to the under-valuing of this kind of work. Put differently,

feminisation does not only remain a problem related to housework, it is increasingly a problem related to women's work in the labour market. How patriarchy and capitalism work together to perpetuate the oppression of women spills-over from the so-called private sphere, the household, to the workplace. The problem of feminisation arises in forms of work that were previously non-feminised, too. Through an increase in the proportion of female representation, these forms of work have turned into wage-inequality traps for women and men (but more the women) (Murphy and Oesch 2015). The feminisation of nursing, as one case, has been associated with a decline in wages earned in the profession. In part, this arises because once work is associated with women and the female duty of caring, tasks and responsibilities associated with caring are deemed unworthy of remuneration. In response to such thinking, bringing women into the public sphere is increasingly in focus. International development plans state that it is important to equalise all members of society in order to achieve development (and the public good) (UN, 2010).

I have so far discussed the role that power relations play in the public sphere. I have illustrated, using feminist thought, that the marginalisation of certain subaltern publics has harmful effects on the public good and on development. I made the claim that through this marginality, the work that members of these publics do is discounted or treated as 'unproductive'. The main effect is wage depression or complete unremuneration for certain types of work. I will draw on this idea in Chapter Nine to make a key argument in this study. For now, the point I make is that the institutional arrangements that shape conceptions of development—what is counted as the public good, and for who—are affected by the continuities between historical and contemporary power relations. In the following section I pick up this problematic in the African context.

3.5 Considerations for Contemporary Development in Africa

The theoretical terrain covered so far in this chapter is vast. Yet, it barely begins to explore the conditions that shape conceptions of development in the African context. The aim of this section is to flag these conditions. I focus on two main ideas. The first is the developmental states literature which challenges the 'Impossibility Theorem'. I argue that the political settlements literature implicitly challenges this theorem, too. This literature highlights that the

nature of pre-capitalist institutional arrangements like neopatrimonialism may not necessarily impede development. However, I counter that when neopatrimonialism turns the political into the personal, it can be to the detriment of the public. While not directly related to the previous debate on public spheres, this literature does add to the important discussion about inclusions and exclusions for this study.

3.5.1 The African Development Context

It goes without saying that the African context is highly heterogenous. The differences lie both between and within African countries. This review cannot and does not try to fully represent this heterogeneity. I only shed light on broad themes that characterise the African context. It must be noted that many of the problems that we associate with the under-developed regions of today featured in pre-industrial Europe, too. So, to quote Cramer et al. (2020: 14), this aspect of the literature review is not intended as 'descriptive exoticism'.

One problem often raised in discussions about current African states and how to strengthen them is the need to overcome corruption. Some, like Warf, (2017), call corruption an entrenched part of African culture. In terms of the state's predatory taste, those who insist that African states cannot successfully develop assert that this is because African states are captured by rent seekers, and so strongly characterised by appetites for corruption that they are referred to sometimes as economies of corruption (Mkandawire, 2001). Furthermore, African economies are presented as inherently incapable of having the institutional capabilities required for development. In the developmental state literature this is known as 'The Impossibility Theorem' (Musamba, 2015). The capabilities required in order for states to develop successfully are usually described as political leadership, an autonomous and effective bureaucracy and the kind of production-oriented private sector that featured in the East Asian developmental states (Musamba, 2015). The impossibility theorem describes these capabilities as impossible in the African context because it is so hard to replicate the conditions that enabled these sorts of states to emerge in cases like the East Asian cases (Musamba, 2015).

Gray & Whitfield (2014), however, argue that while it is true that African states have problems relating to capabilities and to corruption, this feature does not mean that they cannot achieve development. Gray & Whitfield (2014) suggest that the current state of institutional

arrangements in Africa can and has led to development in Western contexts. Specifically, they show that neopatrimonialism in Western states did not inhibit development per se (Gray & Whitfield, 2014). That said, however, Gray & Whitfield (2014: 5) also highlight that the neopatrimonialism that characterises Africa states differs slightly from that which characterised Western states:

> The concept of neopatrimonialism was created to describe the exercise of authority in newly independent states that had formal institutions created on models from the modern Western countries, which approximated Weber's type of rational-legal form of domination…From its early usage, the emphasis was on personal rule: personal power that was not traditional nor charismatic. While in modern Western states patrimonial power was acknowledged to exist, it existed alongside a strong institutionalization of power and a distinction between the private and the public. In the newly independent states, patrimonialism resulted in the privatization of the public, which further undermined the institutionalization of power and prevented the emergence of a modern state. Furthermore, politics became a kind of business, because political resources gave access to economic resources.

The point of this quote is to highlight that neopatrimonialism in the African context, unlike the West, does seem based on traditional authority. This is a critical point in relation to the state on the African continent, and the state in relation to the public and private spheres. Where the political should be public, it seems sometimes that it is privatised or personalised. This is usually on the basis not just of traditional authority, but also traditional morality. Muchiri (2011) argues that African leadership styles seemingly appear to be based on the Ubuntu moral code. In the African context, traditional authority seems to have been most emphasised in post-conflict resolution, or reconciliation. The traditional principles of Ubuntu seem to have been most promulgated by key political figures in key political moments according to Muchiri (2011). 'Ubuntu' is a Nguni term which refers to the humanist understanding that individuals derive their personhood from inter-relations with members of their group; it is associated with the old African adage 'I am because you are' (Metz, 2007). Ubuntu has been evoked because of its meaning as a philosophy that can bridge gaps between members of a society who are in conflict with one another. Akinola (2018) argues that there has been much difficulty in states' attempts, however, at institutionalising the principles of Ubuntu for the goals of the state. In a similar example, Metz (2011) tries to show why this problem arises by explaining that it is not clear what Ubuntu means for law-making. More specifically, he says that if we define it as the will of the majority, it cannot be guaranteed that the majority makes legally sound choices. Despite this problem, Ubuntu is also at the heart of some social movements, especially in South

Africa. In South Africa's most recent example, former President Jacob Zuma was sentenced to jail for being in contempt of court after refusing to testify at the 'State Capture Commission', a commission into large-scale corruption across state entities of the South Africa government (BBC, 2021). Supporters of the president were called upon to take to the streets and protest violently, while looting stores and bringing large segments of the economy to a grinding halt (BBC, 2021). It was understood by his supporters that the former president, being not only a political figure, but a father, was beyond reproach and had suffered the worst kind of disrespect from the state by being jailed. In previous incidents, the president's supporters had offered to kill on his behalf or be arrested on his behalf, according to them '…based on the Ubuntu principle that a person who is not well cannot be arrested' (Sidimba, 2020). Another example is the South African Fees Must Fall movement, where students protested for free higher education as well as decolonisation of institutions of higher education, both of which are attainable through an Ubuntu oriented agenda for change, according to (Tavernaro-Haidarian, 2018). In broader relation to the university sector, the Ubuntu philosophy is valued for its supposed emphasis on care for others—mainly the communities surrounding universities (Gessler, 2007).

In sum, this section has shown that the problems seen in today's African context are not peculiar to African countries. Using the literature here, I demonstrated that neopatrimonialism has shaped development in Western contexts. The same is true in African societies. The point here was to offer a nuanced understanding of it for African contexts. Later, I show the implications for the higher education sector.

Conclusion

In this chapter I showed the ambiguity around the concept of development. I followed that section by covering the issues that arise in contemporary definitions of development. Following this, I highlighted the different labels that have been applied in frameworks that categorise different parts of the world according to the supposed extent of their development. There I also showed that these labels are steeped in historical power relations. Then I moved on to discuss that previously, development was simply understood as distributionally neutral growth. However, some theories have challenged this by arguing for state intervention in order

to steer different sorts of processes that lead either to better distributional outcomes, or improvements in production capabilities among other things. But important frameworks like the capabilities approach and concepts like the public good as well as the public sphere have altered conceptions of development by doing two very important things. In the first instance, the capabilities approach foregrounds human flourishing as a key means of defining the different aspects of development. Those different aspects include specifically human functionings and capabilities. These are the sets of life opportunities that individuals have to live meaningful, fulfilling lives. In the second instance, the public good and the public sphere help us to think about the instrumental and intrinsic aspects of development, as well as how inequalities can be ruptured when the public sphere is inclusive. Finally, I drew the chapter to a close by flagging just how little justice this chapter can do to the literature on African development. Its primary aim has been to prepare the ground for the analysis to follow in Chapters Eight and Nine. In Chapter Four, I turn to the university, to show that it is also a contested term. Given this contestation, how can we observe, understand and measure what the university contributes to society and the economy, if we cannot agree on what it is?

Chapter Four

Contestations Around the Concept of Universities

Overview

As explained in the problem statement of this thesis, the relationship between universities, society and the economy is not entirely well understood. This may be because of the limited attention paid to the dynamics within and between the complex set of institutional arrangements in different universities, in different countries. In order to give attention to these institutional arrangements, researchers and policy-makers must first confront the contestations surrounding the notion of the university. The university is a product of socio-historical processes. Only by studying this process can we learn some lessons relating to its arcane genealogy. I say 'some lessons' because what we find are partial answers. These partial answers reveal that the questions we are asking—What makes any university a university? What are the things that universities do to earn them this title?—are incredibly difficult to answer. The literature presented in the first half of this chapter does not manage to fully answer this question. But it does show that universities have had different features, in different places, at different times. Some scholars argue that the ancient learning centres were universities because they taught certain subjects and conferred degrees. Others argue that these institutions were not universities because they taught more cultural knowledge than scientific knowledge. The differences between medieval universities are that some were faculty led, while others were student led. Some of these institutions were more autonomous, while others had a strong influence from the church or the state. Universities are also strongly associated with research, but some universities conduct no research at all. Despite these contestations, scholars agree on one fundamental issue: that universities develop scientific knowledge and are hence ideal-type scientific knowledge communities. This is an important take-away point from the literature for the extended analytic framework in this study. The second half of this chapter explores what this means for the features of universities, and how they enable them to serve the functions they do in different societies.

4.1 From the Past to the Present: Islamic, African and European Centres of Higher Learning

Universities are but one type of higher education institution. It is far from easy to define higher education. Higher education, sometimes referred to as tertiary education, is defined as organised tertiary learning and training activities. It includes post-secondary institutions like polytechnics, colleges, and *grandes écoles* (Assié-Lumuba, 2006: 9). The first type of institution offers applied learning courses preparing students for occupational fields in the industrial arts, technical domains or applied sciences (Mohamedbahi, 2016; OECD, 1999). They offer pre-degree or diploma programmes that may lead to a bachelor of technology degree later (Kraak, 2018). Colleges, quite similarly, offer a variety of certificates, diplomas and sometimes bachelors' degrees (OECD, 1999). Finally, the *grande école* is the French model that offers five-year undergraduate study (Perkin, 2007).

Universities are described by UNESCO (1993) as institutions that offer courses in the critical fields of theoretical knowledge. Universities are undergraduate, Masters and Doctorate degree awarding institutions with arts, humanities, and science faculties (UNESCO, 1993). That said, some are more specialised universities in science, technology, engineering and agriculture. Because they are so differentiated, it is hard to define institutions of higher learning and universities (Assié-Lumuba, 2006). A historical tracing of ancient centres of higher learning and medieval universities shows the origins of this differentiation. The aim of this section is to argue that there is historicity to the concept of a university. The differentiated patterns of its emergence make the concept of a university inherently ambiguous and contestable.

I start in section 4.1.1 by presenting a literature review of the history of ancient learning centres. Historians and sociologists of higher education seem to have different stances on which of history's ancient learning centres qualifies as the first university. Some scholars have argued that the conferring of doctoral degrees is what made some of these institutions university-like. Other scholars disagree and argue that the knowledge that they developed and taught was seemingly more cultural and less scientific (although they did make some critical scientific contributions to knowledge), which means that they could not have been universities.

The key take-away point from this literature is that historically the notion of what kind of institution a university is, and what its key features are, has shifted.

I then look at the rise of the medieval European corporate/guild universities and their patterns of emergence in section 4.1.2. Some were entirely separate from church-and-state, while others remained strongly tied to one, the other, or both. These relations determined the activities carried out in these universities, and how they were carried out. My main argument is that this literature shows that historically the notion of what kind of institution a university is, and what its key features are, has differed in different contexts.

4.1.1 Were the Ancient Centres of Higher Learning Universities or Not?

de Ridder-Symoens and Rüegg (2003: 35) argue strongly that researchers only refer to the ancient learning centres as universities as a matter of convenience:

> No one today would dispute the fact that universities, in the sense in which the term is now generally understood, were a creation of the Middle Ages, appearing for the first time between the twelfth and thirteenth centuries. It is no doubt true that other civilizations, prior to, or wholly alien to, the medieval West, such as the Roman Empire, Byzantium, Islam, or China, were familiar with forms of higher education which a number of historians, for the sake of convenience, have sometimes described as universities.

This may be true, but the seemingly harsh statement neglects to foreground one important historical fact. The ancient centres of higher learning that came before the European form of the university were largely destroyed. This destruction has left significant gaps in the history of higher education. What we do know is that the very earliest higher learning centres were located in the ancient civilisations of Egypt, Babylonia, and Persia. Two examples are the Tablet House of Sumer in prehistorical Mesopotamia (in the period 3000 BCE) and the House of Books in prehistoric Kemet (Egypt – in the period 2000 BCE) (Chambers, 2017). During this time, the function of higher learning was to remodel agricultural systems, taking them from subsistence, to mass farming (Chambers 2017, p. 199). Later, an eastern society established one of the better-known institutions of its time: Taxila, also known as Takshashila (Goody, 2006). In the last two or three centuries BCE and the first century CE the Alexandria and monastic models developed in Egypt (Assie-Lumumba, 2006; Goody, 2006). Alexandria was the first Christian centre for higher learning, where biblical interpretation was taught (Denman & Namgyel,

2008). Through the monastic model nuns and monks encouraged learning for inner enlightenment and religious edification (Denman & Namgyel, 2008). The main method of learning was passive/receptive, and involved memorising, contemplation and exposition (Denman & Namgyel, 2008). According to Ajayi et al. (1996), the Ptolemies of Alexandria built the famous museum and library with the aim of creating one centre which they filled with manuscripts of the complete works of contemporary knowledge. The body of literature that I have presented so far captures the mix of social, religious and economic scholarship that was conducted in the ancient learning centres. It also highlights the cultivation of arts and culture that was undertaken in them.

Despite these features, in Perkin's (1991) view, the lack of free inquiry in these ancient learning centres excludes them from the category of learning centres that can bear the title of a university. Teachers of unpopular ideas were sometimes removed from the town, and dissident students could suffer varying forms of punishment (Perkin, 2007). For this reason, Chambers (2017) suggest that scholars in this area generally agree that the first university in history was instead established by the philosopher Plato in 387 BCE in Athens, Greece.[8] This academy foregrounded free enquiry because of its corporate form. When universities become corporate bodies, they have the right to decide their mission and vision, as well as the relations between themselves and other stakeholders (Gray, 2017). In contrast to the monastic schools, here the aim of higher learning was human development through secular and scientific schools of thought (Perkin, 2007). Curiosity was encouraged through rational and creative knowledge acquisition. The main Western educational techniques were critical scrutiny, and experimentation (Perkin, 2007).

The first non-European institution regarded as a university[9] was Nalanda University (McCowan, 2019). This institution was located in the ancient kingdom of Magadha (modern-day Bihar,

[8] Chambers (2017, p. 197) maps out the agreeing and disagreeing groups of scholars in debates about the first university: 'While Perkin suggests that Salerno may be the oldest university, Haskins discounts that claim by asserting that Salerno lacked multiple advanced faculties and an early charter which he (Haskins, along with Rashdall) claim are necessary ingredients of 'legitimate' universities.'

India) and it was created by Buddhist Monks in 400 CE; Nalanda possessed a campus with residence halls that could house 10,000 students, together with libraries, meditation and lecture halls, and recreational grounds (Chambers, 2017). Students arrived from the east, China, Malaysia, and India among other places, giving Nalanda an international profile (Pinkney, 2015). There, the sciences, literature, fine arts, medicine, and astrology were taught (Goodchild, 1997; Gul & Khan, 2008). To this extent, Nalanda University may arguably have been more of a university than Salerno, Bologna, and Paris, according to Chambers (2017: 201). I discuss these institutions later. Chambers' (2017) statement posits something entirely different from Perkins' argument, namely that what makes a university is its corporate form. In refutation, she seems to argue that the provision of extensive coursework is what made Nalanda a university (Chambers, 2017). Nalanda was later destroyed. McCowan (2019: 3) chronicles its demise in the 13th Century, when the army of Bakhtiyar Khalji set it alight:

> On the day that the army of Bakhtiyar Khalji arrived, Nalanda University was by far the largest in the world... Posing a threat to the occupying force, the university was ransacked and the vast library burnt. It was reported that the books were so numerous that the bonfire stayed alight for three months.

This is more or less where our knowledge ends. An essential question within this literature is how the different ancient societies interacted and influenced one another.

Moving on, the University of Al Karaouine (or Al Qayrawaniyan or Al Quara-ouiyine) was established in Fes, Morocco in 859 CE and is recognised by UNESCO as the world's oldest continuously operating university (Lulat, 2005). Scholars debate whether the form of Al Karaouine was a result of organic developments, or whether it was influenced by the institution's interactions with Europeans (Makdisi, 1970). Makdisi (1970) suggests that the madrasa model is distinct from the university model. He argues that the source of the doctoral degree awarded in the madrasa was the individual scholar, whereas the European doctorate is awarded by a group of scholars. However, Aslan (2009: 220-221) disagrees and insists that there was notable symbiosis between European and Islamic higher education forms, a cultural interaction achieved through the proximity of Morocco to Europe and through historical trade. For him this played a strong role in the shape that Al Karouine took. Furthermore, Lulat (2005) argues that African higher education influenced European higher education as much as European education influenced African education. Lulat (2005) states that higher education in

Africa included the belief that the pursuit of knowledge for its own sake was a worthy endeavor that any society would want to encourage before Europeans arrived. In this vein, Lulat (2005) pushes against the notion that European incursion marks the beginning of autonomous higher education globally. Considering that Western Europe was still emerging from the Dark Ages when Al Karouine was founded, Chambers (2017) argues that further investigation into the evolution of both European and African Islamic universities is warranted: What was the nature of exchanges between European and Islamic scholars at Al Karaouine? Did Europe give the world the first universities? Or could they have come from ancient societies?

4.1.2 The Universities of Medieval Europe

This brings me to the history of medieval European universities. In medieval Europe, as early as the 6th century, universities emerged within the Christian medieval context (Perkin, 1991). Northern and southern universities developed differently. I make examples using the Italian, French, English and German universities. For centuries higher education in Europe was based in cathedral and monastic schools in which nuns and monks taught (Altbach & Peterson, 1999). Later, monarchies founded universities, too. One example is Charles university in Prague (Perkin, 2007). Because it was unlike these preceding institutions, the University of Bologna in Italy often claims to be the first university in Europe. Bologna, initially a law school, arose from a loose grouping of legal scholars (Altbach & Peterson, 1999). The scholars in the institution opposed the hegemony of the church and empire over incipient nations (Altbach & Peterson, 1999). This institution awarded degrees and conducted its teaching without compliance to any king or religious authority's endorsement. Thus, it is the oldest university independent of kings or religious authority (Pryds, 2000). While Bologna is located in northern Italy, the south looked somewhat different. Some universities in the south of Italy emerged through royal or imperial charters for the service of the state (Pryds, 2000).

The single university that seems to have been able to compete with Bologna's title as oldest medieval European university was the University of Paris. These two institutions are regarded as Europe's first universities with a corporate/guild structure (Pryds, 2000). This means that it was a community of masters and scholars who looked over the practice of their own craft/trade in a specific discipline. In stark contrast to Bologna, however, Paris began first as a

cathedral school (Pryds, 2000). Unlike Bologna, its inception can be linked back to a cathedral school established on the Île de la Cité during the 10th century (Enders, 2007). Thus, the key distinction between the universities founded in Paris and Bologna was their corporate control (Enders, 2007). Because it was founded by leaders of church schools, the University of Paris was primarily faculty-led (Dmitrishin, 2013). Moving from these two examples, I now turn to European universities and their emergence in relation to the public. The first English-speaking university, the University of Oxford (1167 AD), arose when Henry II banned foreign students from enrolling at the University of Paris (Dmitrishin, 2013). The University of Cambridge (1209 AD) was created after the students from Oxford left because of tension between themselves and the townsfolk (Dmitrishin, 2013). Witte argues a 'chaotic path dependency' in the way universities emerged in Europe (Witte, 2006): in each of these instances, either in response to clashes with the church or clashes with townsfolk, some scholars were either driven out, while others fled. Put differently, they emerged through structural continuities that are the result of action in an anarchic field (Witte, 2006). So far, the history that I have traced has also shown that universities until this point focused mainly on teaching. While there are debates about the autonomy of universities embedded in this literature, in all of the scholarly perspectives presented here there is agreement that universities serve a teaching function in society.

The converse are critical junctures that disrupt continuities in existing institutional patterns. Critical junctures or events triggered the emergence of entirely new paths, despite some inertia (Witte, 2013). Witte (2013) argues that moments in history become formative because they occur with specific timing, in a specific sequence. The rapid spread of universities in Europe meant that by the 18th century, universities had spread across Italy and France, and Germany and Spain. I consider the German case first. After Napoleon's win at Jena in 1806, it was declared in Prussia that the government had the desire to replace what it had lost materially using the available stock of knowledge in society. The Prussian administrators undertook social and political reforms, because the bourgeoisies were socially and politically weak, and thus disorganised (Gellert, 1993). To rebuild, stimulate industrialisation and overcome slow economic growth, the administration of Prussia believed it needed strong leadership to turn the country around not just in economic ways, but also culturally.

Wilhelm von Humboldt was appointed to transform the Prussian education system and founded the University of Berlin (1810) (Mohrman et al., 2008). Humboldt took his influence from the idealist tradition, where absolute or universal knowledge was seen as key to understanding reality (Kortti, 2014). He was of the position that rational, knowledgeable citizens were needed to transform the society and economy (Kortti, 2014). To this end, the university needed to prepare students to become civil servants, teachers, and doctors, however the training would follow the model of knowledge for its own sake (Clark, 1993). The scientific community was defined as a rational society of, and hence an ideal-type group of free thinkers (Clark, 1993). Unlike the eighteenth-century academies, the new notion of the university was given the room to decide its relations with the state and society of its own accord (Clark, 1993). In other words, to obtain the most robust knowledge (*Wissenschaft*), freedom of academic inquiry (*Lernfreiheit*) was a necessary condition (Harte, 1986; Nyborg, 2003). Today, bringing together research with teaching and learning is a fundamental characteristic of higher education. Since the basic transformation of the German university in the early nineteenth century, scholars in several nations have taken up research as the foremost activity (Clark, 1993). Their heightened inquiry has led disciplines and specialties to expand and multiply (Clark, 1993).

In sum, this section has demonstrated the historicity of universities and how they emerged. I have shown that scholars have argued that both in the ancient societies and in medieval Europe contingent events shaped the patterns of this emergence. Two main reasons arise for some scholars to reject the idea that the ancient learning centres were universities. The first is that they taught culturally and religiously oriented scholarship. The second is that they lacked freedom of inquiry. Yet, these ancient learning centres did produce the sort of knowledge that led to significant social and economic advancements in their societies. Defenders of the idea that the ancient learning centres shaped universities in medieval European argue that the Islamic and African form influenced the form of the European university. I then moved on to show the differentiated nature of medieval European universities. In Bologna students led the organisation of the university. In Paris faculty were the key actors. Finally, in Germany the state's administration led the most significant cultural turn in the organisation of universities. While the European corporate/guild form of universities is lauded for the characteristic that it allowed free inquiry, the relationships of some of these universities with the church or other

parts of society led to instances where scholars were run out of the university town. This literature demonstrates the contestations around the main features of universities, because they emerged in such differentiated ways, in societies that interacted with and influenced one another. The main take away point from this literature is that universities are institutions that teach. In the next section, section 3.1.2, I look at how the European form of the university travelled, through imperialism, to the rest of the world. This led to the intensification of the research function in the Humboldtian sense.

4.2 The Role of Colonial Empires in Expanding the European Form of the University

The expansion of the Western empires played a pivotal role in the way universities emerged in the colonies. In this section I look at how universities in the colonies were established with the primary intention to have them support the needs and/or desires of the colonial administration. Usually these needs/desires revolved around giving religious or moral education and socialisation. I look at the examples of the Spanish, French and British empires. I then turn my attention to the special case of American universities. Although the British were the ones to put universities on American soil, the changing industrial needs of America led to a growing desire among the Americans for universities that could support economic aspirations. As described in the previous section, industrial transformation in post-Napoleonic war Germany gave the world its first research university. This historical contingency has had a landmark influence on the American type of universities and their features. It in turn has shaped notions of what flagship universities are, and what features they have.

4.2.1 From Europe to the United States: Teaching and Research

As the first European power to secure some world dominance, Spain undertook to use its dominance to export education to its colonies from the inception of its imperialist endeavors. In contrast to the English, French, and Dutch in North America, the Spanish did not attempt to rid the colonies of the native people, but opted to have them adopt Christianity and European culture themselves (Altbach, 2014: 189-191). Following their settlement in the Americas, in 1538 the Spanish set up universities in Santo Domingo as well as in a few other places (Altbach, 2014). Other than the Jesuit college at Laval (1635), Quebec, the French did not set up

universities in their colonies until a single one emerged in Algiers in 1879 (Forest & Altbach, 2007). The British were quicker to take higher education to their North American colonies in the 1600 and 1700s (Rothblatt, 1997). They followed the Oxford and Cambridge models, emphasising general education (Perkin, 2007). Harvard was established in 1636 under the direction of local clergymen, in 1754 King's College opened under Anglican auspices, and Dartmouth in 1768 (Perkin, 2007).

By the 19th century, American industrialisation led to the rise of the state university. This was the beginning of less emphasis on religious or moral university education, and more on the state-building role that universities could play in American society. The first state universities were the Universities of North Carolina and Georgia, which opened in 1795 and 1801, respectively, and were secular institutions with significant public funding (P. G. Altbach, 2001). The German influence also took hold and emphasised the Humboldtian mode of organising teaching and research (Altbach, 2001). The German influence on the American system has been notable. Part of this influence meant that American universities were willing to be flexible and apply resources to support new economic ventures (a culture adopted in the aftermath of the War of Independence between 1775-1783) (Guri-Rosenbilt & Teichler, 2007). This is a critical juncture in the history of universities. In the past, as the literature in this chapter has shown, universities focused solely on teaching for the preparation of professional fields (Altbach, 2011: 14). But as knowledge grew in importance, laws were enacted to facilitate the role of American universities in turning the wheels of the economy.

With the Morrill Act of 1862 came the land-grant colleges. Of the very first were Ezra Cornell's college at Ithaca New York (1869), where agriculture and engineering studies became prominent (Altbach & Gumport, 2011; Geiger, 2015; McDowell, 2003). Although this Act enabled the federal government to donate federal land to the states where they could build public universities, it had almost no steering function in higher education until halfway through the 20th century, when World War II made federal funding for scientific research at colleges and universities necessary in order to strengthen U.S. military capacity (Altbach & Gumport, 2011).

The Americans have developed the most pluralistic system in the world to meet their social and economic needs, according to Guri-Rosenbilt & Teichler (2007: 11). The land-grant model has existed alongside the corporate universities and the community-colleges (Guri-Rosenbilt & Teichler, 2007). Historically, American higher education is characterised by the proliferation of multi-purpose institutions which keep adding new functions without discarding previous commitments, according to Rothblatt (1997). With this has come the 'multi-versity'. Kerr (1963) called this type of institution a 'multi-versity' because it is no longer just a space where students receive instruction from scholars, but it is a research institution, a consultancy, a place of spin-off businesses, and community service. Not only is the system highly pluralistic, today the leading research universities in the world can be found in America (P. G. Altbach, 2018; Guri-Rosenbilt & Teichler, 2007).

Clark (1993: xv) marvels at the prestigious status enjoyed by research universities in America today:

> Marrying science to higher education, academic research has brought prestige to universities and has enabled scholars to be something more than teachers and examiners. In various fields of study, professors assume they should produce knowledge and use the latest research results in their teaching. They should train students to conduct research, even directly involve them in research. Internationally, research is nearly everywhere at the center of the rewards of academic life and the status of academic enterprises. "Research university," a term now applied to the top one hundred American universities, is an appropriate label for the leading universities in most countries. It is arguably the case that the better the university, the more it engages in research; the higher the degree level within the university, the more it will have research foundations.

The American research university has shaped notions of university excellence in other parts of the world, as this quote implies. America's research universities are admired for their strong ability to prepare graduates to found and lead industries made possible by innovative scientific change (Altbach et al., 2011). Internationally, research universities seem to have become the most prestigious, for the reasons given by Clark (1993) above. Research universities are central to the 21st-century global knowledge economy (Altbach, 2011). The British, Canadian, German and other governments are competing to attract the best foreign researchers across the world in a range of fields (Redden, 2017). This is in order to mimic American research excellence. Research universities are usually public institutions (P. Altbach, 2011: 13). The emphasis on

research in these universities has led to the rise of a for-profit, private segment of universities that focus on teaching, filling the niche that research universities cannot (Altbach, 2011: 13).

I will briefly recap the history presented so far in this chapter. The spread of universities under colonisation led to the importation of universities in America. It seems that the economic needs of American society led to a critical juncture: the rise of a university system that was responsive to the needs of society. The German influence on the American university system played a specifically big role. The main take away point from this literature review is to show that the emergence of universities cannot be understood in a de-historicised manner. The research function, which most scholars accept is one of the main things that makes a university, is a socio-historical German and American invention. Through this complicated history, we are led to the present-day debates about what makes any institution that we call a university, a university. Part of these debates stems from the last point made in this section: the purpose of knowledge and hence the teaching-research divide.

4.2.2 What is a University Today? And What is University Knowledge For?

Defining the university is both a descriptive and normative venture. The previous section was a descriptive mapping of the socio-historical processes that have shaped universities. Although it still leaves many questions unanswered, some generic definitions of the university have been derived from such descriptions. Birtwistle (2003: 229) cites the Oxford English dictionary and gives a general definition for any institution that holds the title 'university':

> …the whole body of teachers and scholars engaged, in a particular place, in giving and receiving instruction in the higher branches of learning; such persons associated together as a society or corporate body, with definite organisation and acknowledged powers and privileges (especially that of conferring degrees), and forming an institution for the promotion of education in the higher or more important branches of learning…

Similarly, Altbach (2006: 104) states that higher learning institutions provide education through teaching, research, and public services.

This section is an introduction to two debates that are both definitional and normative. These two debates also seem directly inherited from the historical patterns described so far in this chapter. The first is the 'useful' versus 'useless' knowledge debate. Some scholars take the

position that a university ought to pursue knowledge for its own sake (Newman, 1852), while others believe that it ought to develop science to better humanity (Bacon, 1884). The second debate is that some define a university as an institution that both develops and teaches knowledge (Birtwistle, 2003). The question is the extent to which it ought to divide its time between each activity.

With regard to the first debate, the collision of values surrounding what knowledge is for is most famously illustrated by the arguments of Newman (1852) and (Bacon, 1620). The core tension lies in whether knowledge is defined as either 'intrinsically' valuable, or 'functional'/'instrumental' and hence serving some kind of useful purpose. The pressure for universities to make the case for their value and importance goes as far back as the 17th century, when Francis Bacon (1884) insisted that knowledge should be useful. Later, 19th century scholar, John Cardinal Newman (1852), argued differently, that knowledge with a purpose is a 'deal of trash' – applying the 'liberating' theme to the university. By this, Newman meant that knowledge for its own sake is an end in itself. While the purpose of the pre-modern Western university of the 16th to 19th century was to transfer 'doctrinal truth' (Witte, 2006), over the course of this period Bacon criticised scholars for 'tumbling up and down in their own conceits' (Kerr, 1963: 2), sitting in their ivory towers idly pursuing knowledge and truth. Newman's (1852) reply very generously defended liberal knowledge, arguing that knowledge for its own end was consistent with the enquiring nature of the human mind, and as such should serve nothing other than the mind's curiousity. As shown in the previous section, by the 19th century, the modern university had been brought squarely into the centre of society and the inter-relationships between scholarship, culture, economy and politics.

Nations today concern themselves with their scientific capabilities and their ability to recruit research talent (Clark, 1993; Redden, 2017). Because science and technology have become far more linked to economic growth and overall welfare, governments are eager to improve their research systems (Clark, 1993). They also seek to combine the knowledge developed in universities with man-power that can use it in society and the economy. This brings me to the second debate: the extent to which research and teaching should be done, respectively. Depending on their position with respect to the purpose-of-knowledge debate, researchers and policy-makers may reply differently. The debate regarding the balance between teaching

and research has been fraught with disagreement. In 1971) Taylor showed concern around the shrinking role of teaching in the university, saying that this indicates that universities have abandoned what is essential to being a university. Miller (1891) takes a more extreme position. He quarrels that a university should essentially be a training school (Miller, 1891). Conversely, (Boulton, 2009) argues that both teaching-only or research-only universities undermine the rationale for university research. For him, the rationale is that teaching and research ought to work hand in hand. He reasons that the teaching depends on a culture of curiosity, scepticism and creativity, which he implies arise through research. He accentuates the point that the combination of the two is crucial to the teaching-learning process (Boulton, 2009).

To summarise, I have argued that the socio-historical process through which universities have emerged has led to the contestations presented so far in this chapter. Institutions referred to as universities have been characterised by different features in different places at different times. Some institutions have taught more cultural knowledge than scientific knowledge. Some were faculty led while others were student led. Some of these institutions were autonomous, while others had a strong influence from the church or the state. Since the German and American models, universities are also strongly associated with the conducting of research. Then there are debates about what the right balance between teaching and research is. Finally, definitional and normative debates about what the purpose of knowledge is also show just how contentious the subject of universities is. Despite these contestations, scholars agree on one fundamental issue: that universities develop scientific knowledge and are hence scientific knowledge communities. Scholars agree that the extent to which universities do so means that universities direct significant amounts of their resources towards developing scientific knowledge. In terms of this view, the ancient learning centres that I presented in the opening of this chapter arguably could not have been universities. This could be because, as some scholars argue, it is not clear that they privileged scientific knowledge over cultural knowledge. In the next section, I define scientific knowledge communities and their features using the sociology of scientific knowledge literature.

4.3 The Scientific Community

In this section I argue that universities are scientific communities, so I turn to the literature on the sociology of scientific knowledge. Note that universities are not the only kinds of scientific communities, but they are key ones. I draw mainly from sociologists Merton (1942a, 1942a, 1957b, 1973b) and Collins (1983a), who provide theories of science as a social institution. Their theories state that scholars working in scientific communities are essentially scientists. Their theories systematically classify the unique and characterising features of all scientific communities. These theories are based on historical facts. However, they only include those facts that are not arbitrary, but are instead the main features of scientific communities. Their theories thus allow researchers to abstract beyond the historical shifts spotlighted in the previous chapter.

From this literature, I work with the definition that a scientific community is a network of scientists that develop and exchange scientific knowledge. To build up to this claim, I start by looking at the distinction between 'knowledge', and 'scientific knowledge' in section 3.1.1. In section 3.1.2 I demonstrate that the scientific community is distinguishable from other knowledge communities because it develops scientific knowledge.

4.3.1 What is Scientific Knowledge

The origins of the theory of the scientific community are found in the literature on the sociology of scientific knowledge. This area is one that Robert Merton is most famous for (Calhoun, 2010). His interest began with distinguishing between scientific knowledge and knowledge more generally (Merton, 1973b).

First, what is knowledge? This is a complex question because every day experiences mould the ways in which people make conceptual meaning of the world. How this occurs is not readily knowable to us. How people make sense of the discrepancies between what they know and their experiences is even harder to understand (Collins, 1983b; Collins & Restivo, 2016). At first the sociology of knowledge was narrowly focused on establishing the extent to which people's knowledge is influenced by their interests and their experiences. This changed when Merton demarcated 'knowledge' from 'scientific knowledge'. In other words, Merton (1973a) drew a

line between people's simple interest/experience and what can be understood as justified true belief (Chisholm, 1989). Under this conceptual distinction, the former (knowledge) is more inclusive than the latter (scientific knowledge), which is more specialised (Merton, 1973b). In other words, the term 'knowledge' must be understood as including a range of cultural items (ideologies, beliefs, and scientific notions among others), while 'scientific knowledge' is concerned with the establishment of theories obtained through technical scientific methods (Merton, 1973). Scientific knowledge is, hence, true belief based on rational processes that enable scientists to categorise groups of facts or laws into theories (Barnes, 2007). That said, both philosophers and sociologists appreciate the opaque-ness of truth (Barnes, 2007).

4.3.2 The Social Formation of the Scientific Community

The question that follows is how is scientific knowledge developed and acquired? At least according to Merton and his proponents—Conant and Needham (Turner 2007, p. 11)— it seems to be developed and acquired primarily within scientific communities (Turner 2007, p. 11). The scientific community is a diverse network of interacting scientists (Mulkay, 1975). It includes many sub-communities working on particular scientific fields to codify scientific bodies of knowledge (Mulkay, 1975). Like Weber's account of social formations, this community and the sub-communities within it demarcates insiders from outsiders (Collins, 2001; Weber, 1978).

This section has presented two main positions from the literature on the sociology of science. The first defines scientific knowledge as justified true belief. The second defines the social formation of the scientific community. The scientific community arises as a group of interacting scientists who codify and develop new scientific bodies of knowledge. The main point is that together these features make up the core of the scientific community. This core is the development and acquisition of scientific bodies of knowledge.

The next three sections that follow deepen this line of discussion. In them I consider the main features of the scientific community. I also consider the role that each feature plays in reproducing and maintaining the scientific community. These features are: the goal of scientific

communities, the norms of scientific communities and the form of scientific communities. I start with the goal of scientific communities below

Universities are not the only type of scientific community.

4.4 The Goal of The Scientific Community

Still working primarily with Merton's formulation of the scientific community, I look at the next aspect of his work that explores the reasons for which such a community exists. Merton's (1973b: 226) main hypothesis is that the goal of science is: i. to increase the stock of scientific knowledge on an ongoing basis, by ii. applying rigorous technical methods. Said differently, this feature – the act of increasing the stock of knowledge and the use of technical methods to do so – serves the function of reproducing and maintaining the core of the scientific community. Recall from the previous section that this core is: the development and acquisition of scientific knowledge. In section 3.3.1 I discuss the extension of scientific knowledge as a central activity in increasing the stock of scientific knowledge. In section 3.3.2 I look at the role technical norms of logical consistency and autonomy play in facilitating this extension of certified knowledge.

4.4.1 The Extension of Certified Scientific Knowledge

The purpose of the scientific community is fundamentally concerned with discounting unfounded beliefs and idea-systems (Merton, 1973b). By re-evaluating them in a conceptual context that gives them meaning, statements, beliefs and idea-systems become theories (Merton, 1973b). Merton also defined scientific knowledge as placing an institutional emphasis on the originality of scientific knowledge (Merton, 1957a; Sztompka, 1986, 2007). Only through originality does extension become possible. Merton's attempt at 'codification' was an attempt to determine the social structures that allow an institutional set of arrangements for scientific knowledge development and acquisition (Merton, 1973b). The full structure of technical methods implements this final objective.

4.4.2 The Technical Norms of Logical Consistency and Autonomy

Two main technical norms facilitate this objective. Of these, the first technical norm is that of adequate and reliable empirical evidence (Stehr, 1978). This is a prerequisite for ongoing,

original, true prediction (Stehr, 1978). The second is the technical norm of logical consistency (Stehr, 1978). This is a prerequisite for systematic and valid prediction (Stehr, 1978). The matter of originality has remained a scientific imperative, and is a part of the emphasis placed on the autonomy enjoyed by members of the scientific community—without the autonomy of free inquiry, the opportunities for original scientific knowledge are compromised (Hellqvist, 2010; Small, 2004; Tsui, 2009). As to what exactly constitutes originality is debatable, given that new ideas stand on the shoulders of old ideas (Dirk, 1999).

The methods of science are underpinned by a methodological rationale, but they are binding because the scientific community believes that they are morally right, not just efficient (Anderson et al., 2010; Stehr, 1978). By upholding these values, the scientific community preserves what Merton calls the 'ethos of science'.

Next, I consider the role of scientific norms in Merton's (1942) scientific ethos. These norms are the next main feature of all scientific communities. This feature serves the function of maintaining and reproducing the technical methods that allow the extension of original, certified, scientific knowledge.

4.5 The Role of Scientific Norms

This section elaborates Merton's four key norms of the scientific community. I show that these norms serve the function of making the goal of science possible. These norms arise from two pre-conditions: the first is collective recognition, and the second is democracy. He argues that there are four sets of norms that comprise of the ethos of modern science: universalism, communism, disinterestedness, and organised scepticism (Merton, 1973: 270). I also discuss critiques of the four Mertonian norms.

4.5.1 Collective Recognition and the Four Norms of Science

Although the scientific community is a collective, it is made up of individuals, much like any other collective (Burke & Young, 2011). How the norms within any community emerge is through the mental states of agents, and through the collective intentionality of agents (Burazin et al., 2018b). Weber (1978) spotlights two universal features of such groups that are

relevant here: first, members enjoy special recognition, and secondly (as already stated), members exclude outsiders. Members coordinate their actions for the collective good of the group (Weber, 1978). The basic idea is that group members collectively recognise that a community exists. This is one of the three pillars of institutions, and is sometimes referred to as 'sense-making' (Scott, 1987). This recognition constitutes a social norm too (Scott, 1995). On the basis of this, members of the relevant group make it the case that there exists the institutional standing of a scientific community, and members of the relevant group also attach corresponding ethical obligations or duties to those in the community (Mangiardi & Pellegrino, 1992).

Collective recognition can go all the way from enthusiastic endorsement to grudging acknowledgment (Laitinen, 2011). Using the case of legal communities as an example, collective recognition according to Burazin et al. (2018a) does not necessarily imply moral approval. It might consist only in a 'technical approval,' or even only 'going along with the structure' (Burazin et al., 2018b). This also means that collective recognition can be constrained. Constraints can be physical, cultural or take several other forms (Laitinen, 2011). Such constraints may arise because, for example, collective recognition is open to interpretation among those who form part of the collective.

I can now turn to Merton's four collectively recognised norms. Merton (1973b) defines the 'scientific ethos' as a complex set of norms which the scientific man follows. Merton (1973b: 269) states that this scientific ethos does not express, but serves its ideals:

> The norms are expressed in the form of prescriptions, proscriptions, preferences, and permissions. They are legitimatized in terms of institutional values. These imperatives, transmitted by precept and example and reinforced by sanctions are in varying degrees internalized by the scientist, thus fashioning his scientific conscience or, if one prefers the latter-day phrase, his super-ego... [This scientific ethos] can be inferred from the moral consensus of scientists as expressed in use and wont, in countless writings on the scientific spirit and in moral indignation directed toward contraventions of the ethos.

There is the general assumption within this literature that science develops under democracy, which is built into the ethos of science (Merton, 1942b; Wang, 1999). This is not to say that science only arises in democracies. However, Merton (1942b) argues that conflict over ideas is only resolved in a context where ideas are openly debated and either accepted or rejected by

the community. Merton sought to determine the sorts of social structures that provide an institutional context for the best measure of scientific knowledge acquisition and development (Merton, 1973b). So, far the literature presented argues that these social structures are the technical methods necessary for the expansion of original scientific knowledge. These social structures now also include collective recognition and democracy. From these social structures, the four norms that constitute the ethos of science arise. I describe these norms below.

The four Mertonian (1973b) norms (abbreviated as the CUDO-norms) can be summarised as follows: 1) communism, meaning that all scientists should have common ownership of scientific goods to promote collective collaboration; 2) universalism, meaning that scientific validity is independent of the socio-political status/personal attributes of its participants; 3) disinterestedness, meaning that scientific institutions act for the benefit of a common scientific enterprise, rather than for the personal gain; and 4) organised scepticism, meaning that scientific claims should be exposed to scrutiny (both in methodology and institutional codes of conduct).

It is useful here to introduce a distinction between different types of norms by which a group of people collectively imposes a certain institutional status. The distinction can be drawn between 'codified' or 'explicit' and 'uncodified' or 'implicit' norms of recognition, and between 'general' and 'individual' norms of recognition (Burazin et al., 2018c). Codified or explicit norms of recognition are those norms that are explicitly posited and formulated by some human authority, while uncodified or implicit norms of recognition are those norms that are constituted by the social practice of collective recognition (Burazin et al., 2018c). The scientific community is characterised by both types of norms. According to Collins (1968, p. 124), the social norms of scientific knowledge development are closely related to the social control of the scientific community: processes characteristic of all social phenomena, such as socialisation, stratification, and the control of deviance, exist in science as in any other social institution (Collins, 1968).

The norms within the scientific community must constantly undergo reinforcement so that they remain entrenched (Collins, 1968 125):

> …norms must be continually reinforced to survive; that control by the scientific group is necessary if scientists are to resist the influence of non-scientists: that scientific methods and concerns change, hence a continuing direction, rather than a single, initial internalization of norms is needed to maintain consensus; and that scientists who are isolated from communication with other scientists are generally unproductive. Since scientific norms do survive, scientists do pay more attention to each other than to non-scientist, do maintain consensus despite changing methods and theories, and since most scientists are productive.

Finally, the norms of the scientific community may be inconsistent with those of broader society. Scientists may imitate caste-standards and close ranks against those regarded not good enough (Calhoun, 2010). 'Caste-inferiors' must be shown to be incapable of scientific work (Calhoun, 2010). Section 3.5 elaborates this subject.

From the above quote, it seems that the norms within the scientific community play a fundamental role in making the goal of science possible. However, other communities, like religious communities for example, can be organised along similar sets of norms. One critique of Merton's work has been its lack of clear distinction between the scientific community and other communities, for example the Protestant community (Merton, 1973a). Rotich (2014) argues that it is true that the four norms serve the function of making the goal of science possible, but he further states that there might have been less controversy if Merton had highlighted the parallels between these norms and, for instance, components of the 17th century Protestant ethic. The norm of disinterestedness, for example, could arguably be described as similar to the idea of stewardship in terms of the Protestant ethic, according to Rotich (2014).

Another objection to Merton is that there is no empirical evidence to substantiate his work; in other words Merton's approach is considered too abstract by some, according to (Radder, (2010). In order to build on Merton's work, the contemporary issues of the day must be brought into his theory of the scientific community. For example, the communist norm is undermined by the reality that patenting in the marketised context of higher education today means that initial ownership of knowledge is assigned to an inventor or a funder (Rotich, 2014).

This section has looked at the third feature in Merton's theory of the scientific community. That is, the norms in the scientific community. From this theory I found that the four norms of

science are: universalism, communism, disinterestedness, and organised scepticism. These, according to Merton, play an important function in maintaining and reproducing the goal of the scientific community. These norms can be understood as underpinning the institutional culture. The final section below turns to the fourth feature required for any institution to have the status of a scientific community. This feature is its form: the form of an 'abstract network of ideas'.

4.6 The Abstract Intellectual Network

In this section, I work with Collins' (1998) argument that the scientific community takes the form of an 'abstract network of ideas'. This fourth feature is constituted by a circuit of reciprocal intellectual relationships between the originators of ideas, their proponents and their opponents. As demonstrated in this chapter, throughout his work Merton is essentially describing a network of individuals when he describes the scientific community. Thus, Collins' (1998) analysis is significantly underpinned by his predecessor Merton's contribution to the field.

Both Mertons' (1942b, p. 194, 1957a, 1973b) and Collins' (1998) networks include regulations and rewards that maintain and reproduce part of the institutional culture in the scientific community. The regulations and rewards not only shape the abstract form of the network of ideas, but they also shape its physical form. By the latter I am referring to the way in which research, teaching and other activities are structured in the physical institution. Note that research and teaching are the end of the re-generative cycle in the scientific community, as well as its re-beginning. Put differently, the iterative process of the development and acquisition of scientific knowledge ends and begins again at this point.

4.6.1 The Abstract Intellectual Network of Ideas

As stated throughout this chapter, the core of the scientific community is the development and acquisition of scientific knowledge. It is concerned with the social production of ideas, to put it in Collins' (1998) words. But how are these ideas developed exactly? This section shows that the source of these ideas is group formation. It also shows that the network of ideas

transcends place or time as groups of ideas can move across place and time, even if the originators of these ideas are no longer there.

The earlier discussion of group formation was with a view to introduce the process of scientific knowledge development. Here I discuss group formation with a view to analyse the emergence of an abstract network of ideas, and the emergence of theories within the network of ideas. Collins (1998) calls the sum of the ideas in the scientific community an intellectual network that is not so much about the people that make it (although, of course they are critical in order for ideas to be thought, developed, shared, and revised). Collins (1998) argues that the content of scientific knowledge lies in these ideas, and that through group formation over the course of many generations, ideas are socially produced. He notes that this social production of ideas occurred similarly in different parts of the world (Collins, 1998: 5):

> This kind of group formation occurred in Greece: between Socrates, Plato, etc. Many parallels can be cited in China. I will mention just one: the Neo-Confucians of the Sung dynasty, the most important development of Chinese philosophy since the early Warring States. Like the German Idealists, the Neo-Confucians burst on the scene in two overlapping generations, in this case active around 1040 to 1100 via a group linked by personal ties…
>
> …In Europe, such groups have structured the main intellectual movements from the 1600s to the present. The correspondence network, formed by Marin Mersenne in Paris in the 1620s, and extended to England by Henry Oldenburg, was the organizing basis of what eventually became the French Académie des Sciences and the English Royal Academy in the 1660s. In a larger sense, the "invisible college" continued for more than 60 years, providing an organizational core for the founding generations of modern Western philosophy. Growth in the sheer size of the surrounding population or expansion in the total numbers of educated intellectuals does not outdate these concentrated groups who dominate attention at the innovative core. In our own times, we find again two close-knit groups with major intellectual impact: the Vienna Circle of the 1920s and 1930s, whose subsequently scattered followers (and visitors, such as Ayer and Quine) dominated Anglophone philosophy through midcentury; and the Paris existentialists of the 1930s and 1940s, whose aftermath includes most of the famous names of the 1960s and 1970s.

The main take away point from Collins' argument here is to highlight that the visible aspects of the intellectual network are not necessarily the substance of its form. Rather, the abstract network of ideas that occurs through the intellectual creativity imbued in academic work is the actual substance of the form. Intellectual creativity in Collins' theory is consistent with Merton's idea that originality is central to scientific knowledge extension.

Specific tools are needed to make this extension of knowledge in the abstract network of ideas possible. These tools are critical to academic work. To define academic work, Tancred-Sheriff (1985: 370) emphasises the constant need to evaluate existing knowledge, as well as the ability of existing tools to enable the development and acquisition of new knowledge:

> Ravetz (1971) … underlines the need for constant judgement, based on experience, in the scientific undertaking. For example, scientists must constantly evaluate when instruments are working "well enough" or when the existing body of knowledge has been explored sufficiently … As to the instruments utilized, the technology available influences but does not determine the direction of research, for the scientist must constantly assess tools and the value of the directions in which they lead. In general, the scientist, like the craftsperson, develops a personal "style" which marks the way in which she or he carries out the work activity …

The notion of instruments and tools is relevant for the process of codifying objective scientific knowledge. During the process of codifying knowledge, knowledge is tested or scrutinised through the objective process. Objectivity in the development of scientific knowledge is meant as rationality, emotional neutrality and, impartiality (Mulkay, (1976). Proposals are built up into theories. The process works in the following way: members in the network of ideas attempt to solve problems, or to make sense of the world by generating different solutions; the sum of these solutions allows them to establish a coherent intellectual identity per discipline (Bennett, 1998; Palfreyman & Tapper, 2002; Tapper & Palfreyman, 2010). Intellectual identities can be understood as theories or groups of theories. These are the connected strands of ideas that sit in relation to one another in the network of ideas. Thus, scientific research consists of producing proposals that account for observations and processes for supporting or refuting theories. Three types of positions can be occupied in relation to a theory (Kornfield & Hewitt, 1981): the position of the proposer, the proponent, or the sceptic. Proposers offer entirely new theories, proponents attempt to substantiate these, and sceptics attempt to disprove them (Kornfield & Hewitt, 1981). Scientific method is established and validated through peer review, peer recognition by citation, discussion and debate within journals and in conference settings, all of which assist in supporting or refuting a theory and maintaining research quality and methodology, and the valid interpretation of results (Anderson et al., 2010; Kornfield & Hewitt, 1981; Small, 2004).

Occasionally the wrong explanation or theory may gain popularity, but it is the tolerance of diversity and the appreciation for contestations within the community that makes the scientific knowledge process what it is (Tapper & Palfreyman, 2010). The most accurate explanations

are considered the best, but this not based on (simple) consensus (Barnes, 2007: 179). Power relations may come into play, steering the discourse in a particular discipline in favour of those with power. The presence of contestations becomes more pronounced at the level of governance. Describing the collegial scientific communities of the Oxbridge model, (Halsey, (1982) makes the example that the tendency of professors to dominate the Senate can stifle what, in theory, should be a bottom-up, democratic community that jointly decides things like the broader missions of departments (Tapper & Palfreyman, 2010).

Reading Merton on science it becomes increasingly clear that scientists make up a status group, where they work as peers able to act for the good of science, and for the greater good as specialised creators of knowledge (Waters, 1989). The goal for the community may be the extension of reliable, scientific knowledge, but individual scientists may be more interested in personal reputation, or getting promoted (Mulkay 1975, p. 509). Or, members can act collectively to monopolise the creation and supply of some goods, sometimes using the monopoly for simple exploitation, in some instances using this monopoloy with the support of the wider society to protect the quality of the goods developed (Mulkay 1975, p. 509).

Collins (2002) highlights that intellectuals are distinctive, because they have a different way of carrying out conflicts than do other groups, and we need a distinctive theory to make sense of that difference. He finishes by stating that the most severe intellectual acrimony occurs where the arguments on intellectual terrain are enmeshed with political and religious battles (Collins, 2002). This community is idealised, because it is believed that within it only the best theories survive in the abstract network of ideas, or that power relations are fairly flat. The other way in which this community is idealised is through the belief that the material world plays a minimal role (in fact, almost none) in contaminating the purity of the scientific knowledge-making exercise (Bloor, 1996). In addition to the use of scientific method, these two factors are viewed as necessary in order to maintain the objectivity of scientific knowledge highlighted earlier in this chapter.

Some decolonial and post-modernist theorists problematise the power relations underpinning the notion of objectivity. Consider the idea that the material world only minimally contaminates scientific knowledge. Some of those problematising this position disparage the

'geo- and body-politics of knowledge', cautioning that 'The disembodied and unlocated neutrality and objectivity of the geo-politics of knowledge is a Western myth.' (Grosfoguel 2007, p. 214). Some challenge what they call the Western myth by arguing for two related elements: i. 'other way(s) of thinking, needed to access and develop ii. other 'worlds of 'knowledges' (Escobar 2007, p. 179).

I now turn to the regulations and rewards that serve as part of the form of the abstract network of ideas. These rewards and regulations occur through social control (Collins, 1968).

4.6.2 Regulations and Rewards as Part of Social Control and Social Formation in the Abstract Network of Ideas

Through the system of control and competition regulations and rewards arise, evolve, and are entrenched over time. The source of regulation and reward is social control: the latter can be summarised as socialisation, stratification, and the control of deviance (Collins, 1968). The norms of science play a role in shaping the regulation and reward framework. Through social control, the group or community of scientists' behaviour is determined by the standards of their colleagues. I will present one example of each kind of control, starting first with rewards as a means of control. Validation is one example of the sorts of rewards sought after by members of the scientific community. These rewards are honour from the public and patronage, but today they are increasingly more material[10] (Collins, 1968). Collins (1968, p. 130) implies that the recognition or validation from the peers of the scientist distances her from the (literate) public. She becomes entirely dependent on the group's acknowledgement of her contribution to the field. The need to have their work validated is a form of social control over scientists (Collins, 1968). On the other hand, the regulations for procedure are derived from the four norms. For instance the recognition of achievement is a corollary of universalism (R. Collins, 1968). The rewards and regulations described here generate much of the structures in the scientific community. For example, these structures are things like academic positions; such positions are hierarchical and hence are accompanied by claim-rights, powers, duties, immunities, liabilities and liberties, etc.

[10] For example, groups of scientists organised in universities allocate one another teaching posts, salaries, among other rewards (Collins 1968, p. 131).

Scientific communities have heterogeneous resources which may or may not be immediately mobile between scientific communities; these are resources, capabilities and routines that are used to create knowledge and cannot immediately be imitated by other scientific communities because of isolating mechanisms. The changing nature of academic work and the resources employed in scientific communities are studied in a number of ways from scholarship on transitions from collegiality to professionalism and managerialism, to the proletarianisation of academic labour (Dearlove, 1997; Smyth, 1995; Tancred-Sheriff, 1985; Wilson, 1991). This indicates that while academic work emerges in the way described here, it is not fixed. It can change over time (or take on a slightly varying form) in different scientific communities. These differences also serve the function of reproducing each type of scientific community, the type of scientific knowledge each foregrounds, and the norms thus established in order for each scientific community to work.

We will see these differences in the ideal-types of the Entrepreneurial University and the Developmental University that I develop in Chapter Six. What does not change is the fact that the abstract form of the scientific community—an intellectual network of ideas—prevails. In sum, the regulations and rewards in the scientific community serve the function of enabling members of the scientific community to make evaluations or assessments that allow them to develop and acquire scientific knowledge.

To close this discussion, the four features of the scientific community discussed are all necessary in order for the social system to exist and to function in the way that it does. Therefore, the functions that each of the features of the scientific community serve work in a way that ultimately leads to feedback loops that facilitate an ongoing regenerative cycle within the scientific community. The system manifests in the form of an abstract network of ideas, the source of which is the set of regulations and rewards in the system. These sustain the norms in the system, which in turn facilitate the goal of increasing the stock of scientific knowledge. Finally, the increasing stock of scientific knowledge aids and perpetuates the ongoing development and acquisition of knowledge. Without settling on the debates among historians or sociologists about what a university is or what the first university was, the concept

of a scientific community helps us to make some basic sense of institutions that are called universities and their main differences.

Conclusion

The literature presented in this chapter shows the different functions that universities have served in different places at different moments. It has also shown that that some scholars argue that the ancient learning centres were universities because they taught certain subjects and conferred degrees. Others argue that these institutions were not universities because they taught more cultural knowledge than scientific knowledge. The differences between medieval universities are that some were faculty led, while others were student led. Some of these institutions were more autonomous, while others had a strong influence from the church or the state. Many other debates were covered in this chapter and they showed that universities have carried out different activities at different times in different places. In the second half of this chapter, based on the premise that universities are ideal-type scientific knowledge communities, I turned to the literature on the sociology of scientific knowledge. I did so in order to explore what being a scientific knowledge community means regarding the features of universities. This was an important conceptual step in this study, because in order to analyse the dynamics between South African universities and development, I must first decide on the essential features of universities. Using these features, I will analyse the relationships between universities and development by deconstructing their dynamics. Drawing heavily on Merton and Collins, I found that if universities are ideal-type scientific knowledge communities, then they have: a core, which is the development and acquisition of scientific knowledge; a purpose, which is to increase the stock of scientific knowledge; a set of norms, which are communism, disinterestedness, universalism and organised scepticism; and finally, they have a form, they are scientific knowledge communities that take the form of an abstract network of ideas. These concepts, the features of scientific knowledge communities, are also key concepts in my extended analytic framework.

Chapter Five

Theories and Measures of the Relationship between Universities and Development

Overview

The aim of this chapter is to map out the main ways in which the relationships between universities and development are understood. I show that how these relationships are understood and theorised determines how they are measured. I start by looking at the most widely accepted theory about universities and development. This theory states that universities mainly contribute to development through increased productivity, increased earnings, and hence increased economic growth. Then I look at theories of how universities contribute to wider social development. I show that the ideological dominance of economic ways of thinking has strongly influenced the measures that have become the most prominent when researchers or policy-makers analyse relationships between universities and development. This in turn has shaped the global higher education landscape. Using this literature on theories and measures of the relationships between universities and development, this chapter contributes to the extended analytic framework underpinning this study. It does so by surfacing the five main pathways of change used to theorise and empirically observe this relationship. Those five pathways are: economic growth (increased earnings and increased productivity), technology transfer, improved individual capabilities and improved institutional capabilities. This literature also reveals that two main theories of development are used to explore the relationship between universities and development: entrepreneurial theory and developmental theory. I first introduced these two theories in Chapter Three. Here I will use them as a key part of my extended analytic framework.

5.1 How the Relationship between Higher Education and Development is Understood

As stated in Chapter Three, the concept of development is ambiguous, and so is the concept of a university. Notwithstanding, research has been conducted into the relationships between these two variables. A large body of literature has grown, strongly advocating a positive correlation between more and better higher education and development. Because of the ambiguity of the concepts of development and universities, however, problems arise with the way in which this correlational and/or causal relationship is theorised and measured.

In this section I look at the main ways in which the relationships between higher education and development are understood. I consider the way researchers and policy-makers articulate the relationships between universities and economic development in section 5.1.1. I argue that much emphasis has been placed on the economic outcomes of more higher education. In particular, emphasis is placed on the teaching function of universities because this function prepares graduates to work in the economy. I look at the dominance of neoclassical economics and how, according to some researchers, it has led to the common-sense assertion that more education leads to more productivity among graduates, and hence more income growth. These mechanisms, the increase in education that leads to an increase in productivity and in earnings, are believed to drive economic growth. The underlying ideas are associated with a theory known as Human Capital Theory. Neoclassical economists have analysed these mechanisms, increased productivity and increased earnings, using rates of return models. These models are based on the assumptions introduced in Chapter Three: methodological individualism and rational choice. I show the historical trends that have led researchers and policymakers to believe, uncritically, in these ideas for so many years. In section 5.1.2 I argue that the wider social benefits of higher education have been under-investigated. I discuss the ways in which researchers and policy-makers who work in this seemingly neglected area articulate the relationships between universities and wider social-development.

5.1.1 Higher Education's Contribution to Economic Growth in Developed and Developing Countries

A jarring feature of the last century has been the expansion in university education. In 1900, of a hundred young people in the world only one was enrolled in a university (Schofer and Meyer, 2005). Over the twentieth century, this increased to one in five (Schofer and Meyer, 2005). The question is: why has this expansion taken place? Between 1965 and 1995, a significant upward association occurred between participation rates in higher education and national income per capita in middle and high-income countries (CHET, 2006). Rates of return studies played a big role as a methodology that gave credence to the idea that more education leads to more economic growth (Carnoy, 2019). Rates of return studies continue to do so, because they categorise education spending as an investment (Borland *et al.*, 2000). Rates of return studies emerged from the Chicago school of economists who defined education as a form of capital that individuals can invest in to improve their labour market outcomes (Carnoy, 2019). The idea that education is a form of capital is known as 'Human Capital theory' (Brown et al., 2020).

To elaborate, Human Capital Theory is the theory that more investment in higher education leads to more economic productivity gains, and yields a private return to the individual through improved employment prospects and higher earnings (Brown et al., 2020). Using a production function or a regression equation, data like the gross enrolment ratio (GER) and higher educational attainment (HEA) are observed (Pillay, 2010). Research has shown that these key variables can be expected to have a positive effect on the level of economic development (as measured by GDP per capita) (Pillay, 2010). These can also be regarded as market returns. Market type private returns to higher education are measured as the returns gained after tax, minus the cost paid by the individual for higher education (Brown, Lauder and Cheung, 2020)[11]. Private rates of return are used to explain the demand for education from students (Schultz, 1961; Becker, 1965). According to Human Capital Theory, these individuals are rational and therefore utility maximising in pursuit of their self-interest (Becker, 1965). The theory of

[11] In most cases it is measured as increased earnings, in comparison to a control group of secondary school leavers who undertake tertiary education (Dziechciarz, 2011).

Human Capital also suggests that the rewards that individuals acquire from the labour market are proportional to the improved productivity that they are capable of as a result of their longer stay in education (Schultz, 1961). The assessment of the lifelong benefits from the investment has since been backed up with empirical evidence from advanced industrial countries like America (Psacharopoulos, 1972: 54):

> Causal observation and statistical data indicate that people with more education earn higher wages relative to people with less education. For example, the average earnings of a male college graduate in the United States in 1959 was $9,255 and the corresponding earnings of a high school graduate $6,132.

Among this group of theorists, the social returns were defined as the increases in social advancement and individual upward social mobility that individuals enjoy (Schultz, 1961; Becker, 1965)[12]. However, because of this lens, the neoclassical emphasis on the individual largely backgrounds social benefits—although the earlier theorists like Schultz took an explicit interest in national wealth, he did not foreground other social benefits too much. Rather, an emphasis was placed on merit, and on the ability of the perfectly competitive market to reward supposedly hard-working, educated members of the labour force (Bills, 2003). This reasoning justifies why some people get ahead and others do not: according to Human Capital Theory the job market rewards those with education and punishes those without (Marsh, 2011).

The increasing association between education and economic growth has led researchers in the early 21st century to conduct more research validating this conclusion: that a well-functioning higher education system is a necessary condition for development. By 1973, significant work had been done by human capital theorists estimating the private and social returns to higher education, according to Psacharopoulos & Patrinos (2018)). At this point, the rates of return literature had culminated with the first comparative study of 53 rates of return case studies across 32 countries (Psacharopoulos, 1981). The returns to higher education have since been largely studied in terms of quantifiable returns (Anne and Fleming, 2006; OECD, 2007; Poteliene and Tamasuskiene, 2015; Belfield *et al.*, 2018; Blagg and Blom, 2018). The ability of higher education to enable individuals to climb their way up the income ladder and out of

poverty was and remains emphasised most by Human Capital Theorists, according to UNU, (2019).

That being said, major criticisms of the theory pick apart the unrealistic assumptions underpinning it. One of these assumptions is that all economic agents in all economies behave in exactly the same way. The theory ignores the role that institutional arrangements play in the ability of individuals to make decisions (Carnoy, 2019). In other words, the linear relation between education and productivity/earnings assumed by Human Capital Theorists is of limited use for understanding the real world. To make one example, the large presence of an informal economy in African contexts means that only labour that is productively employed in the formal sector can enjoy the rewards predicted by human capital theorists like Schultz (1961) and Becker (1965). Furthermore, the theory dismisses the role that socio-economic class plays in the education outcomes of learners or students (Bowles, 1997). In another paper, Hanushek and Woessmann, (2008) express another objection by stating that it is not the years spent in education, but the quality of education, that improves learners' stock of knowledge or skills. Finally, Human Capital Theory minimises the intrinsic benefits of more education, which I discuss later in this chapter. In defense of the theory and the rates of return studies conducted in support of it, Psacharopoulos (1972) claims that rates of return studies do not dismiss the social and cultural benefits of education, but they complement them.

While Human Capital Theory may have several problems, governments are under pressure to spend their limited financial resources on interventions that are the most rewarding. Not only is there empirical evidence for the relationship between higher education and productivity/earnings, there is also evidence for a relationship between higher education and innovation. This is a second reason for which governments are keen to direct financial resources towards higher education institutions. The United Nations Development Programme's (UNDP) work has shown that the degree of technological intensity is dependent upon the level of higher education in an economy (UN, 2018). Technological innovation is regarded as critical for industrial development. This is the case because higher education is believed to stimulate invention and technological change through the research process that academics undertake (Marginson and Considine, 2000). Academics are viewed in part as

economic agents, who practice Schumpeter's (2000) 'creative destruction' in their work as they contest one another's scientific ideas. Put differently, they are regarded as entrepreneurial agents.

The three 'successful' international systems highlighted as advanced industrial models to emulate are: Finland, South Korea and the United States (North Carolina) (Cloete *et al.*, 2011). These had enrollment rates of 90%, 96% and 88% respectively in 2018 (World Bank, 2020). The World Economic Forum ranks the United States 2nd, Finland 11th and South Korea 13th in terms of how knowledge driven these economies are (WEF, 2019). These are some of the main cases cited as evidence for the positive relationship between university knowledge, a strong national innovation system, and economic growth.

Related to the point regarding entrepreneurship and innovation systems are the benefits that enterprises enjoy from taking on university graduates. O'Brien and Clark (1997) argue that the benefits from university knowledge are gained by enterprises, because this kind of education minimises the need for retraining when the latest technologies are introduced. In addition, it is argued that the higher productivity of more educated people spills over to other workers, having a notable effect on the productivity of the wider firm (O'Brien and Clark, 1997). Empirical studies in this area look at graduate capabilities like lifelong learning and preparation for knowledge work (Tremblay, Lalancette and Roseveare, 2012; Sawano, 2015; Walters, 2015). The studies carried out are not limited to advanced economies. Data from 49 countries of the Asia Pacific region demonstrates the strong effect of higher education on the technological advancement and economic growth of nations (Tilak, 2003). Even newly industrialised economies with a medium level of enrolment—around 54% in Hong Kong, China, whereas the figure is 79% for OECD countries and 87% for North America (World Bank, 2020)—are now described as 'potential leaders' in technology due to the higher education participation rates in these countries (Tilak, 2003).

The next section continues with the literature on the relationship between higher education and development. My focus is on the limited research available on the relationship between higher education and wider social development.

5.1.2 Higher Education and Wider Social Development

Measurement is not possible without agreement on conceptual and methodological issues. The literature on universities and economic development presents the main rates of return concepts as given (Cohn & Geske, 1992; Villa, 2000). Yet these concepts limit these studies, usually only covering the monetary rewards accruing from labour market participation. Thus, they ignore all non-monetary effects of higher education on people's wellbeing (Bynner *et al.*, 2003; Feinstein and Hammond, 2004; Vila, 2005; O'Carroll, Farrell and Colm, 2006; Dziechciarz, 2011). The emphasis on the economic or monetary benefits of higher education has meant that the wider social benefits of higher education have been neglected. The wider social benefits are calculated as the costs minus the benefits that are realised by the state and society as a whole (Psacharopoulos and Mattson, 1998; Psacharopoulos, 2009). They include, among other things, the increase in tax revenue generated from the increased income earned by graduates (McMahon, 2008). I elaborate on the other social benefits from higher education later in this section.

In response to the narrow focus on economic parameters, some economists began arguing that the relationship between higher education and development had been under-estimated. This under-estimation has been the case because of the difficulty of measuring such returns (McMahon, 1982, 2008, 2018). The studies that attempt to capture these wider social benefits have found that graduates are not only more employable and better earning because of their higher education, but they also enjoy several cultural benefits (McMahon, 1982, 2008, 2018). These benefits are: higher social status and better opportunities for leisure (McMahon, 2008).

The key social benefits found in the literature are: improvements in graduate capabilities and improvements in institutions; better health outcomes; gender equality; democratisation; and improvements in sustainable activities and environmental outcomes (Oketch et al., 2014). In addition to the neglect of the social outcomes, the overlaps between private and social benefits has been overlooked. Feinstein and Hammond (2004), Holbrook *et al.* (2008) and the OECD (2017) list numerous overlapping benefits that are enjoyed by individuals and society, such as: the ability to assess values and attitudes; be solution orientated; be self-motivated;

better social integration through personal networks; more civic participation and social cohesion; and more material security. McMahon (1982, 2008), one of the main economists, has conducted highly influential research, influential enough to nudge the World Bank and UNESCO in a more holistic research direction. The two agencies later produced a report by the Task Force on Higher Education and Society called 'Higher Education in Developing Countries: Peril and Promise in the year 2000' (McCowan, 2019). This was followed by Bloom *et al.*'s (2006) study which also made the case that the contributions of higher education on the African continent are under-estimated.

In sum, much emphasis is on the role of higher education on economic growth. Some researchers spotlight the neglect on non-monetary wider social benefits. Despite the recent acknowledgement that the non-monetary, social benefits of higher education are 1. sizeable, and 2. an important outcome that warrants researching and understanding, not enough of this kind of work is being undertaken. Rather, economic ways of thinking about higher education continue to proliferate. The activities that universities undertake are monitored and evaluated in terms of these ways of thinking more than ever before. I expand on this below.

5.2 Measuring the Performance of Universities

In this section I look at how the performance of universities is understood and measured. It is generally accepted that in order for universities to contribute to development, they must meet certain performance standards. Quality is the main concept that researchers and policy-makers work with in this area when monitoring and evaluating the performance of universities.

Quality assurance in higher education has expanded significantly. It affects all levels of the sector according to Williams and Harvey (2015). Williams and Harvey (2015) produced an important review that looked at critical research themes published in the *Journal of Quality in Higher Education*. Based on their review, the existing research can be grouped into two main camps: the external quality monitoring processes, and internal mechanisms to assure and improve quality. I begin with the internal mechanisms for quality assurance in section 5.2.1. This literature illustrates that economic thinking backgrounds the public good role of universities. In section 5.2.2 I look at the external quality monitoring processes. In that section

I focus on rankings. I show that the economic way of thinking means that rankings measure that which is most readily measurable.

5.2.1 Internal Mechanisms of Quality Assurance

Saarinen (2010, 55 in Williams and Harvey, 2015) observes that 'quality has turned from a debatable and controversial concept to an everyday issue in higher education' that is now a professionalised and internationally networked activity. As globalisation and marketisation have intensified, the increased attention paid towards quality monitoring and evaluation has been called the quality revolution (Newton, 2010). I begin this section by looking at the three aspects of quality assurance: evaluation, accreditation and auditing.

University performance monitoring and evaluation occurs across the following areas (Anninos, 2014): Typical evaluation, accreditation, and auditing. Typical evaluation focuses on: a. the quality of a subject or the study programme, b. the quality of an institution in terms of its each operations (educational or administrative), and c. the quality of a particular practice within higher education. With accreditation, a private or a state actor assesses the quality of an institution or a study programme (Dill and Massy, 1996). This is done to determine whether it can receive certification that it meets pre-set standards; then status is awarded through a license or other form of recognition, allowing the institution to operate for a certain period of time, its main objective being to uphold and improve quality institutions, programmes or courses (Dill and Massy, 1996). Auditing examines the university for the mechanisms and procedures that maintain quality within the component or unit under evaluation, so that it operates properly and is effective (Woodhouse, 1998). It is concerned with accountability and scrutinises whether the stipulated goals are being met (Woodhouse, 1998).

After the 1980s, performance indicator use expanded across OECD nations: the UK, France, Canada, the Netherlands, Scandinavia, Australia, and New Zealand have used performance indicators to monitor higher education targets (OCUFA, 2006). Nations in the Mediterranean as well as central and eastern Europe began following the trend thereafter (OCUFA, 2006). By the late-90s the revolution was in full swing and international agencies were collectively

formulating coherent strategies for indicator development that matched the objectives of member states (UNESCO, 2001: 9):

> In order to assist Member States to obtain quantifiable and comparable measures on the successful attainment of actions in the World Declaration, it will be necessary to rely on the latest available indicators or statistics produced by agencies such as OECD, UNESCO, UNDP, ILO and The World Bank.

The general focus on numerical indicators, according to Barnett (1988: 101), means that: "The actual value of institutions—as educational institutions—is all too frequently bypassed. It is bypassed, not as a result of some conspiracy, but as part of the logic of this kind of thinking." The rise and dominance of neoliberalism seems to be the reason for the overemphasis on the functional outputs of the university. As a result, the public service ethic based on the norms and values associated with the 'public good', 'common good' or 'public interest' is replaced with a new set of norms focused on efficiency (Olssen and Peters, 2005). (Signh, 2012) argues that what should be a holistic idea of social responsiveness in the discourse on higher education and the public good has been reduced to economic terms of labour market responsiveness. Put differently, rather than education being valued for the critical role it plays in social and cultural development, and in overcoming inequalities, it is viewed and treated as an instrumental economic playing-chip (Signh, 2012).

One of the points highlighted in relation to performance measurement is the comparability of institutions. This is an issue of particular relevance in today's globalised and internationalised context. This brings me to the external quality measuring processes. I look at global university rankings in the next section.

5.2.2 External Quality Measuring Processes: Rankings and Benchmarking

Global or international university rankings have grown in popularity. Particularly given the rise of internationalisation, the need for institutions across the world to compete has grown significantly. Definitions of internationalisations differ by country, but one definition used widely enough is the idea that it is the process of integrating an international culture into the functions of higher education institutions (Teichler 2017). One significant problem, however, is the way that internationalisation is conceptualised. Maringe (2009) argues that it has been defined in ways that reduce it to human (i.e. student and staff) exchanges rather than

substantive changes in institutional culture. Rankings judge and compare higher education institutions through a variety of different indicators (e.g. entry standards, student satisfaction, etc.). To each one a score is assigned (ARWU, 2019; THE, 2019; QS, 2020). A statistical tool referred to as the z-transformation is operationalised for each measure in order to develop scores for each. These scores are then aggregated into a single digit (as a proxy) for the overall quality of each institution using 'University League Tables' (THE, 2019). League tables and the choice of indicators are based upon the judgment of each ranking organisation; thus there is no single objective ranking (Hazelkorn, 2007; Hazelkorn, 2011, 2015; Okebukola, 2013; Downing and Ganotice, 2017; Teferra, 2017; Unterhalter, 2018). There is also no consensus on what educational quality is or how to measure it.

The three most influential and widely observed university ranking measures are: The Times Higher Education (THE) Ranking, the Quacquarelli Symonds (QS) Ranking and the Academic Ranking of World Universities (ARWU)/ Shanghai Rankings (Robertson and Olds, 2017). Rankings are established using data from Clarivate Analytics/ISI World of Science or Scopus bibliometric databases (Amsler and Bolsmann, 2012)—formerly the database was managed by Thomson Reuters. Others, like University Rankings by Academic Performance (URAP), use Google (Hazelkorn, 2013). Bio- and medical sciences research data are the most reliable (Marope and Wells, 2013). Research data is used to evaluate academic quality, while student entry levels are used to determine how selective institutions are; the faculty/student ratio is a proxy for educational quality; and the quality of infrastructure is judged on the basis of the budget that the institution has set aside for this, e.g. the buildings and laboratories (Marope et al., 2013). Some rankings, like the THE and the QS ranking, operationalise questionnaires to establish institutional reputation allocating a significant percentage of the score, 34.5 % and 50 %, respectively, from these questionnaire tools (THE, 2019; QS, 2020).

Those in favour of university ranking systems, according to Marope et al. (2013), note that rankings provide a common yard stick to compare universities, the same way that we compare economies. Rankings, in this view, facilitate international university comparisons by encouraging international definitions of those elements on which data is collected (Amsler and

Bolsmann, 2012). Rankings therefore simplify otherwise complex realities. The result, among others, is that this helps students choose an appropriate university for their educational needs.

Criticisms of the rankings system strongly argue that the benefits are diluted by the problems that arise in the use of rankings. Rankings are criticised primarily because they seek to measure or compare whole institutions, from around the world, using the same set of indicators. They hence disregard the complexity of higher education institutions – which provide education from undergraduate-degree to PhD, and are set in different social contexts, etc. (Woodhouse, 2008; Bowman and Bastedo, 2011; Kehm, 2016). Their indicators of success can be misleading due to their disproportionate emphasis on research (Auranen, 2014). This is particularly problematic given that strong research universities are largely absent in developing countries (Altbach, 2013). As a result, universities in these countries fair the worst on international university rankings. The over-emphasis of research activities as a marker of good quality higher education marginalises universities that predominantly, or only, carry out teaching activities. It also backgrounds the role that they play in the critical work of preparing students to participate in society and the economy. In response, alternative ranking tools like the Teaching Excellence Framework (TEF) have been developed. The tool was introduced in England in 2016 (although some universities in Scotland and Wales also participate in the assessment) (McKie, 2018). This ranking tool captures aspects of teaching that include: teaching quality, learning environment and educational and professional outcomes (Gunn, 2018). Though it presents with many problems[13], I do not elaborate them here. In addition to the neglect of teaching, scant attention goes towards data on regional or civic engagement when ranking universities. This is worrisome, as this is a key policy objective for several states and higher education institutions (Auranen, 2014). One claim is therefore that rankings measure what can be measured. Furthermore, those arguing this contend that ranking systems which emphasise countable research output, rather than contributions to social development, create an

[13] For instance, the notion of teaching excellence is contested. Specifically, "…the difference between assessing 'teaching' in a university and the "teaching mission" of the university—a sibling to the "research" and "third" missions. The former is largely concerned with pedagogy, while the latter is a much broader entity, incorporating the inputs, processes, outputs and outcomes stages of the whole student lifecycle. " (Gunn, 2018).

additional dimension of perverse incentives (Unterhalter, 2014). Thus, a framework to measure whether higher education systems increase equity, access, quality, relevance, and promote local economic and social development, is required.

To summarise, the economic way of thinking has proliferated quality metrics. As such, higher education systems and institutions are seen as a part of a market. They are hence monitored and evaluated using numerical indicators that count outputs. The next section shows that in addition to the problem that indicators largely measure what is measurable, power relations have shaped the choice for metrics for global development agencies.

5.3 Higher Education and the Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) on education are intended to be a blueprint for global focus on the relationship between education and development. In section 5.3.1 I look at the problems with the indicators that make up the Sustainable Development Goals (SDGs) targets for education specifically. I find that they are largely similar to the problems I have described for some of the metrics mentioned above: namely, that economic thinking backgrounds inequalities and leads to measures of what is readily measurable. In addition to that, however, there is also the problem that power relations have played a role in the choice of indicators that are stipulated for each of the targets.

5.3.1 The trouble with Numerical Indicators in the Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs)

I start this section by looking at the Millennium Development Goals (MDGs). I describe the problems with the initial targets set up under this international framework for development. I also show that there has been a continuity in these problems with the transition from (MDGs) to the Sustainable Development Goals (SDGs). These problems are: definitional difficulties, the statistical criteria that determine which indictors are selected for each of the targets, and finally over-simplification. I expand on these issues below.

The Millennium Development Goals were established with a single focus on universal primary education. (MDG) 2 committed to achieving universal primary education with the target: "Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling" (UN Statistics Division, 2020). The indicators for (MDG) 2 were: (i) Net enrolment ratio in primary education; (ii) Proportion of pupils begining Grade 1 who complete primary school; and (iii) Literacy rate of 15-year-old to 24-year-old women and men (Unterhalter, 2014). The Sustainable Development Goals (SDGs) are a continuation and an improvement of the Millennium Development Goals. With respect to (SDGs), Target 4.3 is meant to be assessed on the basis of three indicators which now include: segments of education beyond primary education (UNESCO, 2020): 4.3.1; the rate of participation, by gender, of the youth and adults in formal and non-formal education and training in the last year; 4.3.2. gross enrolment ratio for tertiary education by sex; and 4.3.3. the rate of participation, by gender, in technical-vocational programmes (15–24 years old).

As with the development indicators in the previous section, there seems to be a lack of consensus on some of the key concepts being measured in (SDGs). For example, the indicators suggest that the expansion of enrolment is the most necessary development to capture Target 4.3 (UNESCO, 2018). But many elements of the focus of the target – on inclusion, affordability, and quality – are missed. For instance, none of the three indicators deals with quality (Allais *et al.*, 2020). Furthermore, one criticism of the Gross Enrolment Rate (GER) for tertiary education is that does not respond to the different ages of students participating in higher education. Rather, it focuses on numbers participating within the post-secondary school age cohort of learners in the population (Allais *et al.*, 2020). So, this metric does not adequately shed light on the role that access to university education plays for various age groups. This is an area which is linked to inequalities. Put differently, this metric does not measure the ways in which inequalities intersect, or the types of intervention necessary to secure equity.

The second problem is related to statistical criteria. It seems that the available data determines the content of the indicators. The indicators selected under the Millennium Development Goals were largely determined by the capacity of the UNESCO Institute of Statistics to evaluate net enrolment rates based on the available data (Unterhalter, 2014). In other words, they measure, again, that which is measurable.

Finally, the third problem is the problem of over-simplification. According to Unterhalter (2014) the (MDGs) set the bar too low on education. They gave states inadequate incentives for growing good quality secondary, technical, or higher education as they ignored the links between these different levels of education. It would seem the same is true for the Sustainable Development Goals. The links between targets in the (SDGs) are not well enough expressed. This could be because linking these inevitably leads to more statistical complexity than simply treating them as separate. Target 5.5 sets out to achieve and measure improvements in the political participation of women. Yet, this target is not linked to the key conditions required to achieve this, one of them being that the education targets for girls and women must be met (Esquivel, 2016). Put differently, girls and women must be given access to resources, like education, that can facilitate their participation in political institutions and processes.

Finally, the power relations underpinning the process of target setting and indicator selection also seems problematic. Describing the process by which the United Nations came to establish the (MDGs), Fehling et al. (2013) stress the relevance of the parties who pinpointed the goals and targets, the reasons for which and processes by which certain goals were chosen, and what political agendas shaped the (MDGs). According to Fehling, Nelson and Venkatapuram (2013), the overall creation process of the (MDGs) framework was driven by the United States, Europe and Japan (Fehling, Nelson and Venkatapuram, 2013). Some broad targets were proposed by gender specialists. In the end the targets were confined to parity in education, because the Japanese representative would not agree to the broader gender related target, according to Fehling, Nelson and Venkatapuram (2013). The outcome was that certain targets were sidelined because those with an interest in such targets were not represented (Clemens and Moss, 2005; Fukudar-Parr, Yamin and Greenstein, 2014). While indicators clarify key political objectives and how they are understood, they can also clarify the lack thereof. For example, the Agenda 2030 policy framework, which outlines the (SDG) targets and the scope of the interventions necessary to reach them, states that countries' require contextualised policies (Esquivel, 2016). However, it also states that countries must set up policies within the bounds of international conventions, which tend to uphold the status quo of inequalities between North and South (Esquivel, 2016: 12). According to (Esquivel, 2016), "Power relations are the big elephant in the room".

Before moving on, I want to highlight that the literature described in this section and in section 5.1.2, where I looked at the wider social benefits of higher education, is consistent with a second development theory, developmental theory. Recall that this theory was introduced in Chapter Three. Like entrepreneurial theory, developmental theory seems to feature prominently in theories of the relationship between universities and development. Developmental theory resonates significantly with the ideal vision of higher education in the Sustainable Development Goals (SDGs). It also corresponds to most articulations of higher education as a policy intervention for both economic growth through industrial transformation, and the overall improvements in the human condition that arise. I give more detail on this theory in Chapter Seven. These two theories are of such significance that in his book McCowan (2019) develops four models of universities and their relationships to development, and of these, two are the Entrepreneurial University and the Developmental University.

So far, this chapter has covered the literature on theories and measures of the relationship between universities and development internationally. It also looked at the role that economic thinking plays in performance monitoring and evaluation. In the main, economic thinking leads to measures of that which is measurable. It also backgrounds inequalities. Finally, it showed the ways in which political power relations shape the metrics used in analyses of the relationship between universities and development. In the next section I turn to the literature on universities and development in low and lower-middle income countries.

5.4. Literature Review on Universities' Contribution to Development in Low and Lower-Middle Income Countries

In the literature that focuses on low and lower-middle income (LLMIC) countries, one main limitation is jarringly evident. This is the insufficient emphasis placed on the institutional arrangements and the conditions in these contexts. I argue in section 5.4.1 that these conditions mediate the contribution that universities in these contexts make towards development. In section 5.4.2 I show that there is literature that takes the contexts of low and lower-middle income (LLMIC) into account. That literature, foregrounding context, defines five

main pathways through which universities contribute to development in low and lower-middle income countries. The five pathways are: increased earnings, increased productivity, technology transfer, improved individual capabilities and improved institutional capabilities. While these pathways do not immediately differ when compared to upper-middle and high-income countries, the framework embeds these pathways in the contexts of low and lower-middle income countries.

5.4.1 Institutional Arrangements and Conditions Shaping Context, and hence Shaping the Relationship between Universities and Development

The stage of development of a country can have a strong impact on the university system of that country. In their study, Cloete et al. (2011) attempt to address the gaps that have been highlighted in existing studies. Their work highlights the institutional arrangements that need considering in developing contexts. They focus on the following three inter-related factors: 1. the kind of pact between universities, political authorities, and society; 2. the nature, size, quality, and continuity of the university's academic core; and 3. the level of co-ordination of knowledge driven interventions between actors in the higher education sector, how well implemented they are, and the degree to which they are connected to the larger policy context of universities (Cloete *et al.*, 2011). They point out that these factors arise as the result of local conditions (which may include traditions and culture) (Cloete *et al.*, 2011).

The study looks at a sample of eight African countries and the relationships between universities and development in those countries (Cloete *et al.*, 2011). The eight countries were: Uganda, Botswana, Ghana, Kenya, Mauritius, South Africa, Mozambique and Tanzania (Cloete *et al.*, 2011). The countries included in their study were selected on the basis of World Economic Forum's (WEF) knowledge economy rating. The rating classifies countries according to their position in the knowledge economy (WEF, 2020). The WEF's rating classifies the eight African countries and three international countries in the study based on their 'stage of development' (WEF, 2020). They are classified as either at the factor-, efficiency- or innovation-driven stage of development (Cloete *et al.*, 2011). The World Economic Forum (WEF) defines these three stages of development as follows: in the initial stage of development, the 'factor-driven' economies in different countries compete using their factor endowments (i.e. unskilled

labour and natural resources); once wages rise as development takes place, countries transition into the second 'efficiency-driven' stage of development, wherein they begin to establish more efficiencies in their production processes and improve the quality of their products; by this stage competitiveness is largely led by higher education and training (among some other crucial factors) (WEF, 2020). Lastly, once in the third 'innovation-driven' stage, countries compete by producing new and differentiated goods using mixes of sophisticated production processes that require research (WEF, 2020). It follows that this also means, as Cloete et al. (2011) put it, that a country's stage of development determines the relationship between universities and development. Adding to this position, Pillay (2010) contends that one of the key findings in his study on universities and economic development in Africa was that no one strategy of university engagement is the silver bullet for facilitating economic growth everywhere. Rather, different contexts determine what strategies ought to be implemented. What works is contingent upon the stage of development (or level of industrialisation), and the type of industrial transformation that a country is pursuing, according to Pillay (2010).

Pillay (2010) defines the role of the university at each stage of industrial transformation. He postulates that when a new industry is created, the main activities relating to university engagement are aimed at supporting different parts of new business transformation (Pillay, 2010). Here the university acts as an intermediary between the university's researchers and local entrepreneurs (Pillay, 2010). In the case of the second stage where the economy features transplanted industries, or in the third stage where the economy is going through the diversification of existing firms, the university can serve as a link with firms (Pillay, 2010). This allows firms to consider how university research and technology can be used within their businesses (Pillay, 2010). Finally, when local firms are trying to improve the sets of technology they rely on, universities can play the role of offering consulting and contract research opportunities (Pillay, 2010). Therefore, the role of the university is dynamic and not static.

Of course, the above way of thinking maintains a linear theory of universities and development. I showed that a theory of development that is linear is problematic in Chapter Two. To further support this, Arora (2010) notes that stages of development can exist simultaneously. In South Africa's case, it is far from clear-cut where on the linear spectrum the economy lies. South

Africa possesses a comparative advantage in agricultural products and mining (Mohamed, 2009, 2019). The economy has transitioned from a primary and secondary sector economy in the mid-twentieth century (Fine, 2008), to an economy that relies on the tertiary sector today (the tertiary sector accounts for roughly 65% of GDP in South Africa) (Tregenna, 2008). The point here is to note the complexity of development. It is also to understand that universities find themselves operating in these complex contexts.

5.4.2 Pathways of Change in Low and Lower-Middle Income (LLMIC) Countries

In a literature review focusing on the role of tertiary education[14], not just universities, in low and lower-middle income countries, Oketch et al. (2014) argue that little attention is given to the contextual conditions underlying this relationship. In their view, there is also a dearth of research specifically within the African context (Oketch et al., 2014). They state that little research has considered the characteristics and dynamics of the relationship between tertiary education and development, and on the contextual and institutional factors which facilitate or impede these relationships in low and lower-middle income countries (Oketch et al., 2014). They also argue that since most literature focuses on upper-middle and high-income countries, there is a need for a framework that articulates how universities contribute to development in low and lower-middle income countries (Oketch et al., 2014). Oketch, McCowan and Schendel (2014) set out to develop this kind of framework.

Although there are many inputs that go into tertiary institutions, four internal inputs were selected as critical in their framework: students, faculty, funding and policies (Oketch et al., 2014). The model also assumes that policies have the ability to directly affect the way in which the sector works through funding and access policies (Oketch et al., 2014). These can be understood as external inputs in their model (Oketch et al., 2014). They assume that students, faculty, funding, and policies are all internal and external inputs that play a role in how institutions work (Oketch et al., 2014).

[14] The term 'tertiary education' refers to formal educational institutions that provide education that follows secondary education; these institutions include universities, polytechnics and technical colleges, teacher colleges as well as further education institutions (UNESCO, 2011).

Their framework outlines three main activities through which tertiary education impacts development: teaching; research and innovation; and service (Oketch et al., 2014). These three pathways are concerned with the three central activities or 'pillars' of universities. The last concerns the engagement between universities and the local community, as well as broader society (Oketch et al., 2014). It involves the dissemination and distribution of knowledge, as well as its exchange (Knight, 2002). Institutions may focus on one, two or all three. In their framework, Oketch et al. (2014) also assume that a differentiated system arises in most contexts (Oketch et al., 2014). This kind of system involves a variety of institutions, some focusing one of the three pillars of tertiary education in particular. However, teaching is given extra weight in their framework, given that many institutions in low and lower-middle income countries are not research-intensive institutions (Oketch et al., 2014). In so doing, they contextualise the framework so that it is appropriate for these contexts. They also define five main pathways of change that enable universities to contribute to development (Oketch et al., 2014). The five pathways are: increased earnings, increased productivity and efficiency, increased technology transfer, improved capabilities and improved institutions (Oketch et al., 2014).

While some of the pathways presented in the framework may shape only one aspect of development, like economic growth through increased GDP, others may have a multi-dimensional impact on a variety of components of development (Oketch et al., 2014). To make one example, improvements in institutions may both have an effect on economic growth, and on components of development such as health or civic participation (Oketch et al., 2014). They suggest, hence, that the impact on development outcomes of tertiary education is best analysed by looking at the contributions of tertiary education to a broad variety of interrelated development objectives (Oketch et al., 2014).

To summarise, the way in which the relationship between universities and development is understood must take the contexts of different countries into account. The institutional arrangements and the conditions in these contexts must be considered, because they mediate the contribution that universities in these contexts make towards development. Next, I showed

that the study by Oketch et al. (2014) which foregrounds the contexts of low and lower-middle income countries defines five main pathways through which universities contribute to development. The five pathways are: earnings, productivity and efficiency, technology transfer, individual capabilities and institutional capabilities. I adopt this framework from their study.

Conclusion

This chapter has looked at the correlation and/or causal relationship between universities and development. I mapped out the main ways in which the relationship between universities and development is understood. I found that the theories and measures that have become the most prominent have played a dominant role in shaping the global higher education landscape. They have determined the indicators used to monitor and evaluate national systems. They have also determined the targets used by international agencies to monitor and evaluate the contribution towards development. This literature further surfaced the role power relations play in determining the choice of indicators for specific targets. Using this literature on theories and measures of the relationships between universities and development, this chapter contributes to the extended analytic framework underpinning this study. I use the three main activities–teaching, research and service/community engagement–that universities carry out according to this literature, in order to define the form feature of each ideal-type university that I develop. The activities that make up this form feature take on different shapes, depending on the type of university that they are located in. The shape that the form feature in each type of university takes determines the nature and extent of the contributions that universities can make to development through the five main pathways of change used to theorise and empirically observe these relationships. Recall that those five pathways are: increased earnings, increased productivity and efficiency, technology transfer, improved individual capabilities and improved institutional capabilities. I operationalise these pathways in the extended analytic framework that I develop in Chapter Seven. Based on this chapter, I also argued that two main theories of development are used to explore the relationship between universities and development; these are: entrepreneurial theory and developmental theory. These two theories are important as they are key in my extended analytic framework. As part of my extended analytic framework I use these two theories to develop two of my three

ideal-type universities. Each one has the four main features that all universities have (if universities are ideal-type scientific communities).

This chapter brings the first part of this thesis, the literature review, to a close. The next part of the thesis, Part Two, presents my extended analytic framework and methodology.

Chapter Six

The Abstract, Entrepreneurial and Developmental Functionalist Ideal-Type Universities

Overview

This chapter begins Part Two of my study. In this chapter I present the first prong of my methodology: the extended analytic framework component. I construct three ideal-type universities: the Abstract, Entrepreneurial, and Developmental Universities. Drawing on key concepts from the literature on development and on universities (specifically using the sociology of scientific knowledge) I use functionalist theory to define the features of the three ideal-type universities. Then I explain how these features maintain and reproduce each ideal-type. The four features of each type of university are: the core, purpose, norms, and form of each scientific community. These ideal-types bring some conceptual clarity to researching the role of universities in development, because they show a relationship between the different internal dynamics of universities, and how universities interact with society and the economy. As explained in the previous chapter, ideal-types are a heuristic device and do not represent actual institutions. In reality a single university can exhibit features from one, two, or all of the ideal-types that I construct here. The value of the ideal-types is to explore different roles in development, and their implications for the form which universities take.

6.1 Recap of Literature and Introduction to the Extended Analytic Framework Methodology

This study of universities and their relationship to the development of society is of necessity multi-disciplinary. Different bodies of literature from different disciplines were covered in the chapters leading to this point. So far, I have explored the following main bodies of literature: the literature on the relationships between South African universities and the development of South Africa's society and economy in Chapter Two, ambiguity around the concept of development in Chapter Three, contestations around the concept of universities as well as the

sociology of scientific knowledge and scientific communities in Chapter Four, and the international literature on theories that explain the relationships between universities and development and the measures used to analyse these relationships in Chapter Five.

My literature review does three things in this study. First, it introduces the main debates around the concepts of development and universities (in Chapters Three and Four). The second thing it does is allow me to settle on the four main features of all institutions that we call universities (in Chapter Four). Chapter Four hence implies that every university is an ideal-type scientific community with four main features. Those four main features are: a core which is the development and acquisition of scientific knowledge, a purpose which is to increase the stock of scientific knowledge, a set of norms which allows the ideal-type scientific community to increase the stock of knowledge and develop and acquire more scientific knowledge, and finally a form which is the scientific community form. The literature in Chapter Four also implies that these features serve functions that maintain and reproduce every ideal-type scientific community. The third thing that my literature review does is present key ideas in the literature for understanding the relationships between universities and development both in South Africa (in Chapter Two), and internationally (in Chapter Five). These ideas include concepts that include among others innovation, technology transfer, and socialisation, and so on.

Thus, this literature review has provided me with the following main concepts to work with:

- development as multi-dimensional well-being, i.e. improvements in the economic, cultural and social states of people in terms of both intrinsic and instrumental dimensions;
- development as either perpetuating or rupturing inequalities/development as either 'good change' or 'bad change,' depending on the inclusive-ness or exclusiveness of the public sphere;
- universities as an ambiguous and contested social phenomenon, and universities as institutions that confer degrees and teach certain subjects which may be more or less independent from the societies they are located in;

- universities as ideal-type scientific communities with four essential features—a core, a purpose, a set of norms and a form—that serve the function of maintaining and reproducing universities;

the relationship between universities and development as:

- theorised mainly in terms of entrepreneurial theory and developmental theory;
- and as occurring through three main activities: teaching, research and service/community-engagement, and as occurring through five main pathways: increased income, increased productivity, technology transfer, improved individual capabilities and improved institutional capabilities.

Together, Chapters Five and Six imply different types of relationships between different types of universities and development both internationally and in South Africa.

I use these concepts to develop the extended analytic framework in this chapter. I bring together the key notions from my literature review about: the essential features of universities, and about the relationship between universities and development in South Africa. I draw on the literature to do this conceptual work so that it considers the ways in which key development theories influence how researchers and policy-makers understand the relationship between different types of universities, and different types of development within the South African system.

In the next section I define the two theoretical approaches underpinning my extended analytic framework: the ideal-types approach and the functionalist approach. Bringing these together with the theories of entrepreneurialism and developmentalism briefly introduced in the previous chapter, I construct three comprehensive ideal-types. I start by showing the different modes of knowledge underpinning entrepreneurial and developmental relationships between universities and development. I use the literature on entrepreneurialism and developmentalism to expand on how and why the features of all of my ideal-types are conceptualised the way they are; for example, I show how different work structures occur in universities that are either entrepreneurial or developmental.

6.2 Entrepreneurial and Developmental Universities

In this section I present the literature on the entrepreneurial and developmental contributions that universities can make to society and the economy. I section 6.2.1 I introduce entrepreneurial universities, and the different concepts from the literature on these universities. I look at the components that the literature argues entrepreneurial universities are made up of, and I look at how the mode of knowledge in entrepreneurial universities differs from the mode of knowledge in traditional universities (or the scientific communities that I described in Chapter Four). I also look at the different actors that entrepreneurial universities work with to make the contributions they make to the development of society and the economy. This literature shows that these contributions are, in the main, university research to support institutions that can commercialise innovation. This innovation can then be sold for profit on the market. In section 6.2.2 I look at the concepts in the literature on developmental universities, and what this literature argues are the different aspects that make up developmental universities. I look at how the mode of knowledge in developmental universities differs from the mode of knowledge in traditional universities (or the scientific communities that I described in Chapter Four). This literature shows that these contributions are, in the main, university research to support institutions that can advance industrial transformation. Through this industrial transformation social transformation can be achieved.

6.2.1 The Universities and their Entrepreneurial Contributions to Development

The literature in Chapters Three and Five introduced the notions of entrepreneurship and developmentalism, and pointed out that they are contested concepts. In this section I do not restate these disagreements. Rather, I set them aside and show how these concepts are used as some of the dominant ideas in explanations of how universities contribute to development. I start by looking at what are referred to in the literature as 'entrepreneurial universities' and the entrepreneurial contributions that they make to development. Various approaches have been taken to establish an extended analytic framework for universities that make entrepreneurial contributions to development. Again, this is because like the other concepts and theories treated in this thesis thus far, there is no agreed upon position about what this type of university looks like, or does exactly.

To start with, Meisenhelder (1997) argues for a few key components of entrepreneurial universities. The first of these is a strong central steering core, followed by an expanded periphery with a focus on business culture (Meisenhelder, 1997). The next components are diversity in the funding base, relationships with industry and government as some of these sources, and a commitment to solving problems and achieving change; this qualifies as an entrepreneurial culture (Meisenhelder, 1997). Other scholars also mention the importance of the capitalisation of knowledge, an indication of activities related to entrepreneurship (for example, the creation of spin-offs or consulting firms), hybrid forms to balance independence and interdependence, and ensuring the ongoing regeneration of internal structures (Etzkowitz, 2001, 2004; Peris-Ortiz et al., 2017). Each of these components influences how teaching, research and service/community-engagement take place in entrepreneurial universities.

Through this set of components, the entrepreneurial university can develop knowledge that can be sold on the market. The entrepreneurial university can then 'sell' this knowledge as know-how, and adopt business and other approaches to reach customers. One of the key ways in which it does so is by acting as the inventor, and then licensing the invention to an enterprise that can commercialise it (Etzkowitz, 2013). The university is not always equipped to commercialise research, because commercialisation involves complicated skill-sets. These are identifying customer needs, developing and designing new products and processes, prototyping, and manufacturing (Peris-Ortiz et al., 2017). These are skills which university inventors rarely possess (Peris-Ortiz et al., 2017). Since other organisations are better at the commercialisation of research inventions and innovations, opportunities for gains from trade are created (Pisano & Mang, 1993).

Through this sale of knowledge or know-how on the market, the entrepreneurial university is associated with shifts in the form of knowledge. These shifts differ strongly from the way knowledge looks in the traditional university. Some of the concepts used to define the shifts in types of knowledge are mode 1 knowledge, mode 2 knowledge and mode 3 knowledge. Knowledge in the mode 1 form is the kind of traditional explanatory knowledge that is generated in a disciplinary context, within a singular discipline, and that is accountable to that discipline (Carayannis, 2016). Knowledge of the mode 1 form is also consistent with the linear

model of innovation. The idea is that a university's knowledge will slowly flow out into the rest of society and the economy (Carayannis, 2016).

The mode-1-based notion of knowledge has been confronted by the new mode 2 and mode 3 concepts, challenging the former's status. The notion of a mode 2 of knowledge was introduced by Gibbons et al. (1994: 3-8). Mode 2 emphasises the application of knowledge, as well as problem-solving through this application, where knowledge is produced in ways that are trans-disciplinary and heterogeneous (Gibbons et al., 1994). Mode 2 challenges linear formulations of innovation, simultaneously connecting knowledge production and application (Carayannis & Campbell, 2012). In contrast, a 'mode 3' institution represents a type of organisation that seeks creative ways of combining different principles of knowledge production, and application (for example, both mode 1 and mode 2).

The literature for entrepreneurial universities also highlights the different actors that universities work with to produce these modes of knowledge. The Double-Helix model refers to knowledge transfer that occurs through university-industry relationships. Thus, the actors in this network are actors in universities and in industry. The Triple-Helix innovation model centres around university-industry-government co-ordination (Etzkowitz, 2003). Here, the actors are actors in universities, industry and in government. Both the Double and Triple-Helix models are representations of basic systems for knowledge production and innovation application. The entrepreneurial model tends to be characterised as a Double-Helix model. The Developmental University on the other hand tends to take the Triple-Helix model form. More recent models are the Quadruple Helix and Quintuple Helix innovation models, which are designed for additional complexity in knowledge production and application (innovation) (Carayannis & Campbell, 2012: 14). The Quadruple-Helix, for example, adds a fourth helix which is the media public, civil society and arts-inspired innovation (Carayannis & Campbell, 2012: 14).

Two leading examples of the entrepreneurial university are Stanford and the Massachusetts Institute for Technology (MIT). Stanford is often raised as a leading example of a university that generates innovations from which new technology-based firms arises; it is regarded as synonymous with the birth of Silicon Valley in this regard (Etzkowitz, 2003). For the case of

MIT, not only is the institution itself lauded for the contribution it has made through commercialising technologies, but the graduates too are often described as some of the best examples of entrepreneurship (Mazzucato, 2011). While entrepreneurial theory is associated with free market mechanisms, Slaughter & Rhoades (2004) make the case that entrepreneurial universities must be understood in terms of their reliance on the state, highlighting that these universities, even when they believe that they are entirely independent must be considered in terms of the indirect funding that they receive from the state.

I now turn to universities that make developmental contributions to development.

6.2.2 Universities and their Developmental Contributions to Development

Coleman defined the 'developmental university' as an institution which is wholly concerned with addressing social development challenges (Coleman, 1986). And according to McCowan (2016), this kind of university moves away from the notion of knowledge as intrinsically valuable, and instead works with an entirely instrumental notion. In addition to Humboldt's ideal, the idea of the developmental university can be traced back to three earlier traditions: the USA's land-grant movement of the mid-1860s, during which the university needed to help the reconstruction of society (McDowell, 2003); the Japanese launch into non-Western modernisation, where the university focused on teaching and researching fields deemed important by the state; and lastly the Soviet Union's emphasis on manpower which the university needed to deliver, while also socialising students into the ideology of the regime (Coleman, 1986). From these descriptions, perhaps it can be said that a developmental university is an institution that works within a national policy context that requires it to adjust to and deliver what society requires of it at the time – whether that be facilitating social cohesion, or producing graduates to meet industry's education and skills demands (McCowan, 2016). This makes the concept very context specific. The emergence of the developmental university on the African continent arose after the colonial period when emphasis was placed on the role university knowledge could play in practical ends that could contribute to building post-colonial nations (Yesufu & AAU, 1973). Leaders like Julius Nyerere, the president of Tanzania, famously stated that science and technology needed to be prioritised on the continent, because of the central role that he believed ideology could play in the curriculum—

Nyerere is often quoted as describing education for self-reliance (Nasongo & Musungu, 2009: 111). In terms of his views on the relationship between ideology and curriculum, Nyerere believed that the curricula in science and technology related subjects needed to be underpinned by egalitarian goals and human development goals (Nasongo & Musungu).

Context determines the form a developmental university takes. The developmental university should mirror the internal and external factors that act upon it. However, nuancing the precise nature of this university to capture context is complicated by the variety of factors that affect the differences between communities, a point that Castells (1994) makes:

> Before progressing any further, it is firstly important to acknowledge that universities find themselves in varying contextual conditions that need to be taken into consideration. Universities vary hugely in many ways, for instance in their underlying culture and traditions, the existence or lack of deep and rich scholarship histories, linkages with civil society and industrial enterprises.

Although derived from the developed contexts of Germany and America, today's articulation of the developmental university is most emphasised in the under-developed global South, in a way that stresses welfare outcomes rather than developmental ones (in the sense of industrial transformation or manpower planning through science and technology as described above).

There is the argument that developmental universities must serve place-based needs in South Africa (Bank, 2018). The welfare and social justice-orientated developmental university, according to Nkomo & Sehoole (2007: 237), sees to it that stable economic growth is linked to the eradication of poverty and inequality. This idea is not only present in South Africa, but also in Latin America, where the term 'social developmentalism' is used to refer to it (Bresser-Pereira, 2017; Cardoso, 1973). This definition does not immediately seem to go against the traditional developmental university for industrialisation and modernisation. But a closer look shows that unlike the developmental university that supports innovation for industry, the South African university focuses on supporting local communities in ways that are not necessarily about the latest scientific research, but the most relevant for the context. Similarly, the University of Development Studies in Ghana found that the short-handled hoe for weeding was uncomfortable for the everyday use of farmers (Mohamedbhai, 2014). The university created adaptations to modify the hoe, with the farmers closely involved throughout the

process (Mohamedbhai, 2014). The outcome was an additional rake on the upper side of the long-handled hoe. This brought the university and the community together, each learning from one another: the community acquired technical knowledge, while the universities were exposed to indigenous farming practices (Mohamedbhai, 2014).

However, a problem highlighted by this example is that while engaging with the external community is critical, there is the danger of porosity when we can no longer discern a specific institution. There must be a degree of differentiation between universities and other institutions (McCowan, 2019). A second problem is that some countries are on the extreme end of the spectrum, placing far too much emphasis on the high-tech sorts of innovation that universities are known for, rather than on the needs of the places that they find themselves located in. For instance, some African university systems, like that of Ghana, place more emphasis on STEM than OECD countries: Ghana has a 60:40 rule in terms of the ratio of STEM students to students in other disciplines, whereas the OECD countries only have 27% of their student population in STEM subjects (Gardener, 2017).

The purpose of the Developmental University institution is to advance a national project, part of which includes long-term socio-economic plans like producing values and social legitimation, training the right manpower, producing innovation (Maassen, 2014; Mattes & Luescher-Mamashela, 2012; Tilak, 2003). Some of the literature describing this purpose does not speak explicitly of a 'Developmental University', but makes use of concepts such as 'social contract', which has been associated with universities that are part of the state's attempt to achieve industrial and social transformation (Cloete et al., 2011; Pillay, 2010). This is different from the work of supporting institutions that pursue profit-maximisation in the Entrepreneurial University. While there may arise some form of material production in the Entrepreneurial University, it may not be the kind that leads to national development. For instance, an academic entrepreneur could sell an invention to a transnational corporation. In this case all the benefits and spillovers occur in the home country of the corporation, rather than the home country of the inventor. In the Developmental University policies are set up to mitigate these sorts of spillovers that do not benefit the national context.

In summary, this section has discussed the two most prominent bodies of literature for the ways in which universities are understood by researchers and policymakers to contribute to development. It has looked at the literature for the contributions that entrepreneurial universities make, and the literature for the contributions that developmental universities make to societies and economies. This literature is descriptive and dense. The remainder of this chapter pulls apart this literature to show the different and specific features of universities that make entrepreneurial and developmental contributions to the development of society and the economy. I start by re-stating the literature from Chapter Four on the sociology of scientific communities. I do this to pull out the essential features of all universities, if all universities are ideal-type scientific communities. I call universities that fall under this type: the Abstract University ideal-type. I then construct an Entrepreneurial University ideal-type and a Developmental University ideal-type with the same features. So, consistency means that I am holding together some common institutional features for all three ideal-types of universities. The four features of all ideal-types of universities are: a core, a purpose, a set of norms and a form. The contents of their features differ, however, to capture the patterns of the two types of universities described above. These patterns differ because as shown, the relationships between these universities and development differ from the relationship between the ideal-type scientific communities of Abstract Universities and development. I now turn to the next section where I develop the three ideal-types that make up my extended analytic framework.

6.3 The Abstract University Ideal-Type

In this section I formalise the Abstract University ideal-type. I use the sociology of science literature from Chapter Four to start formalising the Abstract University. I showed in Chapter Four that a university is an ideal-type scientific community. This means that the university is a scientific community which is a network of interacting scientists. These scientists develop and exchange knowledge within this abstract network. Recall that in Chapter Four, Merton (1973) described the scientific community as: i. a status group, ii. which works to explain particular problems, and iii. this is only possible through conflict over which ideas are the best. Thus, the ideal-type scientific community is a distinctive public sphere. From that literature I derive four features: the core, purpose, norms and form that constitute every ideal-type scientific community. I start in section 6.3.1 by formalising the core feature of the Abstract University

ideal-type. In section 6.3.2 I then formalise the purpose feature. Thereafter, in section 6.3.3 I formalise the norms feature. Finally, in section 6.3.4 I formalise the form feature. These features constitute the full set of functional features of the Abstract University ideal-type. These features work together to maintain and reproduce the Abstract University ideal-type.

6.3.1 The First Feature in the Abstract University Ideal-type: The Core

The first step when constructing ideal-types is the conversion of the everyday phenomena into focused concepts for scientific understanding (Gerhardt, 1994). These concepts capture the nature of the ideal-type, which in this case is the scientific community. I call this ideal-type the Abstract University. The concepts that I use to carry out the first step to construct the ideal-type are the notion that the scientific community is a status group, that the group creates scientific knowledge which is different from everyday knowledge, etc. All of these concepts were discussed at length in Chapter Four. The next step is to ensure that the concepts in the ideal-type satisfy two of the three criteria for validity (Gerhardt, 1994): firstly, comprehensive knowledge grounds; given that the concepts arise from the literature in Chapter Four, it can be said that the ideal-type is based on comprehensive knowledge grounds. The second step for validity is the identification of indispensable features in the ideal-type (Gerhardt, 1994); based on the literature in Chapter Four, those four features are those that I have mentioned above. I will discuss these in more detail over the course of this section. Note that the decision on what counts as an indispensable feature here is based on the functional role that these features play in reproducing and maintaining the system. Below I begin to formalise the core feature in the Abstract University ideal-type.

The first feature in the Abstract University ideal-type is the core of the scientific community. Based on the literature from Chapter Four, this core is the development and acquisition of knowledge. The development and acquisition of knowledge occurs through the social production of scientific ideas. This social production occurs through the historical relationality of ideas, and the people constructing them. To analyse the two data sets for this feature I will code the data for data points that correspond to the social production of scientific ideas. Figure 1 below captures this first ideal-type feature.

Figure 1: The Core of the Abstract University

Concept	Definition	Code
Core: Development and acquisition of knowledge	The historical relationality between ideas and the people constructing them.	Social Production of Scientific Ideas (SPI): network of interacting scientists who develop and exchange knowledge

Next, I go on to formalise and tabulate the second essential feature in Abstract University ideal-type: the purpose feature. I also describe the function it has in maintaining and reproducing the Abstract University ideal-type.

6.3.2 The Second Feature in the Abstract University Ideal-type: The Purpose

The next claim made in Chapter Four was that the second feature in the scientific community is its purpose. I define the purpose as increasing the stock of scientific knowledge. Without ongoing scientific inquiry, and an increase in the stock of knowledge, the development and acquisition of knowledge is not possible, according to the sociology of science literature. How this works is that the development and acquisition of scientific knowledge implies an improvement or progression in the scientific stock of knowledge that the scientific community possesses. This is because the ideas that cannot hold are replaced by those that can. It also means that scientific ideas that fall short, but can be strengthened, are supported or corroborated by the addition of new scientific ideas. This is the process of recontexualisation and rediscovery (Abott, 2001). The idea is that scientific progress for its own sake drives recontexualisation and rediscovery. The function of this process is to ensure that the core feature, the development and acquisition of knowledge, is maintained and reproduced.

To analyse the two data sets for this feature I will code the data for all data points that correspond to increasing the stock of scientific knowledge through recontexualisation and rediscovery. Figure 2 below captures this second ideal-type feature. This is captured in Figure 2 below.

Figure 2: The Purpose of the Abstract University

Concept	Definition	Code
Purpose: Increasing the stock of knowledge	Increasing the stock of knowledge	Recontextualisation and rediscovery to increase the stock of scientific knowledge

Next, I formalise the purpose feature in the Abstract University ideal-type. I also describe the function it has in maintaining and reproducing the Abstract University ideal-type.

6.3.3 The Third Feature in the Abstract University Ideal-type: The Norms

The purpose feature is only possible through very specific sets of norms. These norms are the third feature in the Abstract University ideal-type. They serve the function of facilitating the purpose of the scientific community. In Chapter Four, I agreed with Merton's claim that the main sets of norms in the ideal-type scientific community are: universalism (the idea that knowledge transcends context, place, and time), communism or collective ownership (the idea that there is a public nature to knowledge), disinterestedness (the science-for-sciences'-sake nature of academic work) and organised scepticism (that scientific work is aimed at establishing rigorous knowledge by challenging and eliminating weak theories and methods) (Merton, 1973). This set of norms arises from the mental states of agents. This set of norms also shapes the method and techniques that are valued in the Abstract University. Put differently, this set of norms serves the function of maintaining and reproducing the purpose of the Abstract University. That purpose is increasing the stock of scientific knowledge through these methods and techniques. To analyse the two data sets for this feature I will code the data for all data points that correspond to the tendency in this scientific community to value rigorous knowledge, and the methods and techniques necessary for it.

Figure 3 below, is a tabulation of the third feature, the norms.

Figure 3: The Norms of the Abstract University

Concept	Definition	Code
Norms: Universalism, collective ownership, disinterestedness and organised scepticism.	Mental states of agents and their recognition that a scientific community exists	The methodological ways and techniques of constructing rigorous knowledge (MT)

I now turn to the norm feature in this type of university. I also describe the function it has in maintaining and reproducing the Abstract University ideal-type.

6.3.4 The Fourth Feature in the Abstract University Ideal-type: The Form

The fourth feature is the form the Abstract University takes. This form is that of an abstract network of ideas. However, its form will display physical characteristics, too. This is because in reality the form includes visible processes and objects that make up the university. There are also hierarchies in the form of the Abstract University. The academic work process is hence vertically oriented in governance, with horizontality in terms of the development of scientific ideas. The form feature serves the function of maintaining and reproducing the sets of norms, like scepticism (which remains in place through the horizontality of the way in which scientific ideas develop), that are necessary in the system. To analyse the two data sets for this feature I will code all the data points that correspond to this vertical governance and horizontal academic work process. This means that the overall environment may be co-operative, but not necessarily democratic.

Figure 4 below, is a tabulation of the fourth feature, the form.

Figure 4: The Form of the Abstract University

Concept	Definition	Code
Form: Scientific Community	Abstract network of ideas	The Academic Work Process for Science Making (AWS): It is co-operative, but not necessarily democratic. Mainly vertical authority with some horizontality.

Because of the functionalist approach they are located in, the features are inter-related. They work together in constant functional exchange—where the core is maintained and reproduced by the purpose, the purpose by the norms, and the norms by the form. Together all the features work to produce and maintain a system.

In sum, in this section I have constructed the features of the Abstract University ideal-type and shown how they are inter-related in terms of the functions they serve in the system. By way of this I have shown the contents and inner workings of the Abstract University. In the remainder of this chapter I develop the Entrepreneurial and Developmental University ideal-types similarly.

6.4 The Entrepreneurial and Developmental Universities

In section 6.4.1. I begin the task of formalising the Entrepreneurial and Developmental University ideal-types. I do this by bringing together the key concepts from the literature in the sociology of scientific knowledge and the entrepreneurial universities and developmental universities literature presented in the first part of this chapter. In that section I also introduce the first feature in each type of university: the core. In section 6.4.2 I present the second feature in each of these ideal-type universities: the purpose. In sections 6.4.3 and 6.4.4 respectively, I present the third and fourth features of each ideal-type university. These are: the norms and the form features respectively. I demonstrate how each ideal-type feature has a functional role in each ideal-type university.

6.4.1 The Core of the Entrepreneurial and Developmental universities

To begin working on these two other ideal-type universities, my first step is to employ the same approach I employed with the Abstract University ideal-type. The difference is that here I bring the sociology of science literature together with the entrepreneurial universities and developmental universities literature. I do this in order to look at the differences between the features of these two ideal-types of universities, and the Abstract University ideal-type. I begin with the core features in each of these two ideal-types of universities.

As with the Abstract University ideal-type, the first step when constructing ideal-types is the conversion of the everyday phenomena into focused concepts for scientific understanding (Gerhardt, 1994). As stated earlier, recall this from Chapter Six, these concepts capture the natures of the ideal-types, which in this case are the Entrepreneurial and Developmental Universities. The concepts that I use are drawn from the literature on these two universities presented in section 6.2. They are the ideas that university knowledge can serve entrepreneurial ends, if it is used to develop innovation that is sold on the market for profit; or the idea that university knowledge can serve developmental ends, if it is used towards industrial transformation, among the other concepts presented earlier. The next step, as stated in Chapter Six, is to ensure that the concepts in the ideal-types satisfy the two of the three criteria for validity (Gerhardt, 1994): firstly, comprehensive knowledge grounds; again, because the concepts arise from the literature presented in section 6.2, it can be said that the ideal-types are indeed based on comprehensive knowledge grounds. The second criterion is the identification of indispensable features (Gerhardt, 1994); based on the sociology of scientific knowledge literature in Chapter Four, those four features are: the core, the purpose, the norms and the form. As previously, the decision on what counts as an indispensable feature is based on the functional role that these features play in reproducing and maintaining the system. Below I begin to formalise and tabulate the core features in the Entrepreneurial and Developmental University ideal-types.

In the Entrepreneurial University, supporting institutions that can maximise the profits generated from knowledge lies at the core of the goals of this institution. This is despite the fact that it is first and foremost an institution for science-making. Knowledge for application is created and then made available on the free market for industry; industry then exploit it for

profit creation (Clark, 1998, 2004; Etzkowitz, 2003, 2013; Foss, 2017; Powers & McDougall, 2005). In contrast, in the Developmental University ideal-type, the aim is to support institutions that advance industrial and social transformation, which is co-ordinated by the state (Castells, 1994; Cloete et al., 2011; Coleman, 1986; Grobbelaar & de Wet, 2016). The implication is that within the former, the Entrepreneurial University, the distribution of resources is meritocratic or based on the equity principle—people get rewards they have worked for (Slaughter & Leslie, 1997). In contrast, in the developmental variety the state picks winners that it directs resources towards, and the rewards generated are distributed according to the equality rule (Prates et al., 2020). This background sets up the first of the features in each type of university, their cores. While the Entrepreneurial University ideal-type has a core that straddles playing the role of science-making and supporting profit-making institutions in the economy, the Developmental University ideal-type has a core that straddles science-making, and playing the role of supporting institutions that advance the economic and political pursuits of industrial and social transformation. Of importance is to recognise that the fundamental core of the network of scientists cannot and will not be entirely displaced, but it can be confronted by other social phenomena that act upon it, in this case entrepreneurialism and developmentalism. Therefore, the cores of universities are not static, and the Entrepreneurial and Developmental Universities are expressions of exactly the dynamic nature of institutions like universities. Below are figures 5 and 6 which tabulate the first features, the cores, of the Entrepreneurial and Developmental Universities.

In the Entrepreneurial University I describe the core feature as the development and acquisition of applied knowledge. This means that the development and acquisition of applied knowledge is socially produced in the Entrepreneurial University as it was in the Abstract University. This occurs through the relationality of applied scientific ideas and the people constructing them in the Entrepreneurial University. To analyse the two data sets for this feature I will code the data points that correspond to the social production of applied ideas. I will do so by looking at the data for indications of facilitating interactions and exchanges between scientists, and the ways in which these lead to the development and acquisition of applied scientific knowledge.

This is tabulated in Figure 5 below.

Figure 5: The Core of the Entrepreneurial University

Feature	Definition	Code
Core: Development and acquisition of applied knowledge	The relationality between applied ideas and the people constructing them.	Social Production of Applied Scientific Ideas (SPAI): network of interacting scientists who develop and exchange applied scientific knowledge.

For the Developmental University, I describe the core feature as the development and acquisition of applied scientific knowledge. As can be seen, the Entrepreneurial and Developmental Universities are identical in this regard. Unlike them, the Abstract University is different, because it develops and acquires scientific knowledge that need not be applied. To return to the Developmental University, like the Entrepreneurial University, the development and acquisition of applied knowledge is socially produced. This occurs through the relationality of applied scientific ideas and the people constructing them. Again, this is similar to the Entrepreneurial University. To analyse the two data sets for this feature I will code the data points that correspond to the social production of applied scientific ideas. I will do so by looking at the data for indications of facilitating interactions and exchanges between scientists, and the ways in which these lead to the development and acquisition of applied scientific knowledge. This is tabulated in Figure 6 below.

Figure 6: The Core of the Developmental University

Feature	Definition	Code
Core: Development and acquisition of applied knowledge	The relationality between applied ideas and the people constructing them.	Social Production of Applied Scientific Ideas (SPAI): network of interacting scientists who develop and exchange applied scientific knowledge.

Let us now turn to the functional relationality between the cores of the Entrepreneurial and Developmental Universities and their second features: their norms.

6.4.2 The Purpose of the Entrepreneurial and Developmental universities

Here I bring the sociology of science literature together with the development theories literature on entrepreneurial universities and developmental universities in order to take a look at the differences between the purposes in the Abstract University, and the purposes in these two other ideal-types of universities. In the case of the Entrepreneurial University, the purpose is the increase in the stock of applied knowledge in order to support institutions and activities engaged in generating profit. This means that this stock must be increased so that the network of scientists keeps up with the constantly changing needs of the institutions or activities located within commercial markets that need this applied scientific knowledge to generate profit. Without ongoing applied scientific inquiry, and an increase in the stock of applied and profitable scientific knowledge, the development and acquisition of applied scientific knowledge for profit is not possible.

The literature on entrepreneurial universities supports this claim and highlights that the approach emphasises the development and acquisition of scientific knowledge that can be applied, in particular applied in commercial processes (Slaughter & Rhoades, 2010). This is usually high-tech knowledge or innovation that can quickly generate income (D'Este & Perkmann, 2010; Etzkowitz, 2003; Foss, 2017; Roberts & Eesley, 2011). This requires the recontextualisation and rediscovery process described in terms of the Abstract University, except it is oriented towards the needs of the market in the Entrepreneurial University.

Figure 7 below is a tabulation of the second feature, the purpose of the Entrepreneurial University. The table also presents the code that I will use to analyse my two data sets. I will code the data points that correspond to the development and acquisition of applied scientific knowledge to support institutions and activities that employ it for profit, within a knowledge market.

Figure 7: The Purpose of the Entrepreneurial University

Feature	Definition	Code
Purpose: Increasing the stock of applied knowledge for profit	Increasing the stock of knowledge that can be commercialised for profit	Market Value (MV): knowledge for profit-making

I now consider the purpose of the Developmental University. I describe this feature as increasing the stock of applied scientific knowledge for industrial and social transformation. This means that the increase in the stock of applied knowledge occurs in order to change the structure of the economy, and achieve social change. The aim, however, is not only to achieve social change through industrial transformation, but also through socialisation and equity improvements. The stock of applied scientific knowledge must be increased so that the network of scientists keeps up with the constantly changing needs of the structural adjustments to the industries that need this applied scientific knowledge. The output generated is distributed in order to achieve equity. In addition, the applied scientific knowledge produced must be used for social transformation. To restate, both the stock of applied scientific knowledge as well as the profit from it must be used towards industrial transformation and social transformation. Without ongoing applied scientific inquiry, and an increase in the stock of applied knowledge that supports industrial transformation and contributes to broader national needs, the development and acquisition of applied scientific knowledge for industrial and social transformation is not possible.

I have described the core feature in the Developmental University. To analyse the two data sets for this feature I will code the data points that correspond to the social production of applied scientific ideas for industrial and social transformation. I will do so by looking at the data for indications of facilitating interactions and exchanges between scientists, which lead to

the increase in the stock of applied scientific knowledge that leads to industrial and social transformation. Figure 8 below captures this.

Figure 8: The Purpose of the Developmental University

Feature	Definition	Code
Purpose: Increasing the stock of applied knowledge for profit and nation-building	Increasing the stock of knowledge that can be commercialised for profit, however the focus is on distributing the benefits of this profit to achieve equity, socialisation and nation-building.	Political Value (MV): knowledge for industrial and social transformation

Let us turn now to a discussion of the third feature, the norms in the Entrepreneurial and Developmental Universities. I also look at the function they serve in each of these ideal-type universities.

6.4.3 The Norms of the Entrepreneurial and Developmental Universities

In Chapter Four I described the key norms that enable the Abstract University to achieve its purpose. In that chapter I defined these norms as four sets of institutional imperatives taken from Merton's sociology of science. They were: universalism, communism, disinterestedness, organised skepticism (Merton, 1973: 270). These norms are necessary in order to make the purpose of science possible. Again, I bring the sociology of science literature together with the entrepreneurial universities and developmental universities literature to look at the differences between the norms in the Abstract University, and the norms in these two other ideal-types of universities.

I start with the Entrepreneurial University ideal-type. In it the knowledge capitalising and profit-maximisng purpose means that the norms in this type of university emphasise or place value on the individual's freedom to maximise their self-interest/utility. These norms are the third feature in the Entrepreneurial University. I describe these norms as individually oriented. Further the norms in the Entrepreneurial University are the four Mertonian (1973) norms altered under entrepreneurialism. I will elaborate this as I go below.

Taking its identity from the Schumpetarian school introduced in Chapter Three, in the Entrepreneurial University a regulatory framework exists that treats the academic as the 'inventor' of an idea (Schumpeter, 2000; Sledzik, 2013). The inventor works in a 'quasi-firm', where networks and partnerships with the market are strictly defined e.g. clear agreements are signed in order to delineate ownership, sale, etc. of an idea (Foss, 2017; Slaughter & Rhoades, 2010). The academic agent operates within the free-market framework. Thus, the first of Merton's norms, communism, is disrupted allowing individualism through private ownership. The result is a very competitive environment, which is market-oriented. Without these norms, the purpose of profit-making through applied scientific knowledge is not possible. How this works is that the norms supposedly allow for resources to be distributed efficiently, to the scientists that are most efficient and most profit generating.

The public sphere literature introduced in Chapter Three serves to show even further how the norms of the market alter the norms of the scientific public sphere. Asen (2017) critiques the free-market public sphere by arguing that it is built around the atomistic individual and guided by the principles of freedom and freedom of competition. Asen (2017) argues that this flattens difference and discounts inequality. In his work he emphasises a dynamic framework of the public good. This public good is possible because it arises from a complex network of also dynamic public spheres. He juxtaposes this to what he suggests is an essentialist and static free-market public sphere/public good theory (Asen, 2017). His point is not so much that the neoliberal public sphere does not have any networks, but rather that this public sphere is homogenising. I will spend time in the next section showing the ways in which developmental theory is situated in a less homogenising networked public sphere. The specific problems that the free-market public sphere raises include the homogenising effect introduced above. It erases the multiplicities that allow for ways to deal with inequality, as described by Asen (2017: 330):

> Engaging difference and attending to inequality, a multiple public sphere facilitates the circulation of a dynamic public good that may articulate mutual standing and relationships among people to enable the construction of a collective "we" for coordinated action. Weakening relationships among people and devaluing coordinated action, neoliberalism envisions a public of atomistic individuals who compete with one another for comparative advantage. Flattening difference and obscuring inequality, a neoliberal public presumes a universal subject that obscures its own particularity and discounts the uneven burdens faced by those who cannot seamlessly identify with its mode of subjectivity. Further, for a neoliberal public,

> inequality serves as the condition and end of competition. Resistance to neoliberalism may arise in the networked locals of a multiple public sphere, as advocates reclaim connections that neoliberalism seeks to deny.

The point regarding inequality serving as a condition and an end to competition is a major difference between the Entrepreneurial University and the Abstract University. Competition in the latter is for the construction of the scientific project, so that the end is consensus and agreed upon scientific knowledge. This knowledge is commonly owned. Here inequality only features between methods and theories that are established. In contrast inequality is an end in the Entrepreneurial University, where the most competitive and inventive scientists earn the most income from the applied scientific knowledge that they developed and acquired. From this difference in public spheres emerges the difference in norms. The second norm, universalism, also breaks down in the Entrepreneurial University. While Merton (1973) described universalism as meaning that whether scientific knowledge is valid is not affected by the socio-political status/personal attributes knowledge makers, in the Entrepreneurial University emphasis is on the most innovative scientists who are able to produce knowledge that is commercially successful. Thus, scientists who develop knowledge that is too 'star-gazing', rather than commercialisable in the given context, do not fare well in this university. The environment is hence highly competitive as scientists compete to be the first to develop the most income-generating research.

Baier (2012) contends, however, that scientists, who are utility-driven, can organise scientific competition to achieve the public good, or science for social outcomes as she refers to it. According to her, the rules of scientific competition seem to reinforce themselves and are seemingly well-structured as they seem to align individual and social ambitions and purposes of science (Baier, 2012). I would counter this by highlighting that this depends on how the 'social purpose' is defined – an issue which is the reason for which I apply ideal-types in this study. Furthermore, in her analysis she does not regard scientists as utility maximisers of neoclassical economics whose reasoning is determined by Bayesian decision theory. Rather, scientists to her aim to satisfice, although it is also true that they are occasionally biased in reasoning (Baier, 2012). She therefore places context at the centre of the agent's bias. To give an example of agent bias, she gives the following illustration which indicates that scientists

sometimes evaluate their colleagues based on things other than academic strength (Baier, 2012: 1):

> Thurner and Hanel (2011) discuss biased behavior of agents in the coordination process of science, in particular how self-interested scientists affect the efficiency of the peer review mechanism. They show that referees who tend to reject better papers than their own and accept worse quality considerably reduce the average quality of accepted papers. This result is con- firmed in a model by Squazzoni and Gandelli (2012). They also examine the effects of institutional factors on the quality and efficiency of peer-review. For instance, they show that increasing competition in a fragmented scientific community tends to foster evaluation bias and inefficiencies in the peer review process.

Here again, Merton's (1973) third norm, disinterested-ness begins to come apart, as scientists make decisions in order to maximise their benefit. The result is that in some instances method and technique for scientific rigour is seemingly backgrounded by competition. This is driven by the need for scientists to out-perform their colleagues in terms of profit. Bringing entrepreneurial theory into the sociology of higher education in its mainstream neoclassical form would have us believe that innovation through the capitalisation of knowledge is based on unbiased competitive behaviour. Here we see that it may not always be.

Because of these forces, Merton's (1973) organised scepticism is also somewhat compromised. Organised scepticism means that scientific claims should be exposed to scrutiny before being accepted, both in methodological terms and institutional codes of conduct. This may not be done deliberately. However, it can be an effect when academics try to keep up with the pace of the market and produce knowledge quickly.

To summarise, the knowledge work that enables an increase in the stock of applied scientific knowledge so that Entrepreneurial Universities can support institutions and activities that engage in profit-maximising requires the individually-oriented norms that enable competition and utility maximisation. Thus, these norms confer a benefit, or serve a function, within the system.

Below is Figure 9 which is a tabulation of the third feature, the norms in the Entrepreneurial University. To analyse the two data sets I will code all data points that correspond to the

unintentional backgrounding of method and techniques to ensure that entrepreneurialism is foregrounded. This backgrounding ensures that individual scientists have the freedom to maximise their utility.

Figure 9: The Norms of the Entrepreneurial University

Concept	Definition	Code
Norms: Individually oriented	Individual freedom and the liberty to compete/maximize utility.	Method and technique (unintentionally) backgrounded for profit-making opportunities (-MT)

Unlike the Entrepreneurial University, the Developmental University is underpinned by an emphasis on collective interests. Again, the difference between the Entrepreneurial and Developmental universities is essentially a difference in forms of capitalism. The former works on the ideological basis of complete reliance on market principles, whereas the latter is built on the ideological basis that markets do not work perfectly and that an economy necessarily needs disciplining and state intervention. Not only this, but disciplining the markets and supporting key sectors by providing them with applied scientific knowledge leads to industrial and social transformation. Therefore, as noted several times now in this chapter, this university also has an emphasis on the use of applied scientific knowledge not just for industrial transformation, but also for social transformation. Thus, I describe the third feature in the Developmental University in terms of the norms in this university. Put differently, this feature is collectively oriented.

The individualism that drives agents to pursue higher incomes within the framework of the Entrepreneurial University is replaced by technical bureaucracy. The state gives direct instructions about its priority economic sectors, and the kinds of activities and outputs it desires. The relationships between individuals in the Developmental University emphasise group interests at the national level, social dependence and compliance with certain rules or norms. There is also an emphasis on similarity between members of the nation and shared national objectives (Earley & Gibson, 1998). Therefore, the communism described by Merton breaks down and is replaced by strong national bonds.

As a result, the nature of the public sphere within this arrangement is far more multi-faceted than that in the free-market public sphere, what Asen (2017: 330) refers to as multiple public spheres. As a result, in the Developmental University universalism may break down, as scientific validity may (unintentionally) be backgrounded for the socio-political status of its participants. One of the points to note about developmental theory was that in the East Asian examples where this theory was practiced in policy, a strong role was assigned to the elites. Therefore, rather than applied scientific knowledge being structured so that it is accessible to all scientific communities, it is structured so that it incorporates the interests of political groups like the elites. This is part of the way in which the socialising role of applied scientific knowledge is possible in this ideal-type university.

In addition, one of the criticisms levelled against the Developmental public sphere in the East Asian states was its authoritarian and state centred nature (whereas usually the public sphere is a space outside of the state, established to critique the state). This may compromise the disinterestedness of members of the scientific community, because of the emphasis placed on knowledge that is relevant for the national aims of the state. By its authority, the state ensures that the university teaches and researches responsive knowledge. It must be remembered, however, that the authoritarianism of the East Asian case need not be reproduced, but it is constructed and hence not determinate.

In the developmental public sphere, the norms are centred around discipline. The notion of a state that interferes works in conjunction with the ideology of developmentalism so that this kind of state not only disciplines industry, the university and all other arms of society, but it also guides, directs, and uses the market for particular national interventions (Meisenhelder, 1997; Sibanda, 1993). Finally, similar to the Entrepreneurial University, the organised scepticism may find itself compromised at least to the extent that the aims of the scientific community are not necessarily to advance the most cutting-edge research, but rather the most relevant for the national project.

Without these norms, the purpose of industrial and social transformation through applied scientific knowledge is not possible. How this works is that the norms allow for resources to be

distributed to scientists whose research will not only support institutions working towards industrial transformation, but also develop the national identity. In other words, the knowledge work that enables an increase in the stock of applied scientific knowledge confers a benefit, or serves a function, within the system.

Below is Figure 10 which is a tabulation of the norms feature in the Developmental University. To analyse the two data sets for this feature I will code the data for all data points that correspond to the emphasis on industrial and social transformation. I will do so by looking at the data for indications that industrial and social transformation are prioritised over method and technique.

Figure 10: The Norms of the Developmental University

Concept	**Definition**	**Code**
Norms: Collectively oriented	National identity and patriotic bonds through discipline.	Method and technique (unintentionally) backgrounded for industrial and social transformation (-MT)

The next section describes the forms that both the Entrepreneurial and Developmental University ideal-types take. These serve the functions of enabling the norms in these respective ideal-types of universities to continue to remain in place.

6.4.4 The Forms of the Entrepreneurial and Developmental Universities

This section outlines the forms of the Entrepreneurial and Developmental University ideal-types. Both tend to be centrally located in innovation systems and so this section brings to light the ways in which each are situated in these systems. I will begin with the form of Entrepreneurial University ideal-type. I make the claim that these forms serve the functions of reproducing and maintaining the norms in each university type. I start with the Entrepreneurial University.

Finally, the fourth feature is the form that the Entrepreneurial University takes. This is fundamentally an abstract network of ideas, but it is also an economic community. This makes it a scientific-economic community. Hence, this form is subsumed in the knowledge market. Like the Abstract University, it is first and foremost a socially produced abstract network of ideas. Therefore, its form is partially abstract. But unlike the Abstract University, many of the physical aspects of its form are more pronounced. The literature below demonstrates that unlike in the Abstract University, the resources required for academic work come from additional actors outside the university. Also, academic work is less co-operative and based mainly on vertical authority. Without this form, the norms—which are individually oriented—are impossible. I detail this form below.

To summarise, without the overlapping nature of this scientific-economic community, it is not possible to maintain the norms in the Entrepreneurial University. The last section shows how the variety of actors involved aids this, while the previous section showed how the ability of the university to support institutions and activities that generate profit enables the maintenance of the norms of competition or utility maximisation. In other words, the knowledge work that enables an increase in the stock of knowledge confers a benefit, or serves a function, within the system.

Below is Figure 11 which tabulates the form feature of the Entrepreneurial University. To analyse the two data sets for this feature I will code the data for all data points that correspond to academic-market work for science making.

Figure 11: The Form of the Entrepreneurial University

Concept	Definition	Code
Form: Overlapping Scientific and Economic Communities	Knowledge market	University functions as though the science sphere is part of the economic sphere. Academic-Market Work for Science Making (AMW): It is less co-operative. Mainly vertical authority with some horizontality.

The fourth feature is the form that the Developmental University takes. This is fundamentally a scientific-economic-political community. Like the Abstract and Entrepreneurial University, I

define it as first and foremost a socially produced abstract network of ideas. Therefore, its form is partially abstract. But unlike the Abstract University, and like the Entrepreneurial University, many of the physical aspects of its form are more pronounced. The literature below demonstrates that like the Entrepreneurial University, the resources required for the academic work come from additional actors outside the university. Also, academic work is more co-operative, although it is based mainly on vertical authority. Without this form, the norms—which are collectively oriented—are impossible.

In sum, the Developmental University takes a largely state driven, instrumental form. In addition, the context of each country frames what is regarded as relevant knowledge work for this university to pursue. Without the overlapping scientific-economic -political community, it is not possible to reproduce and maintain the collectively oriented norms in the Developmental University.

Figure 12 below captures all of this. To analyse the two data sets for this feature I will code the data for all data points that correspond to academic work for scientific, economic and political outcomes. I will do so by looking at the data for indications of primarily vertical authority from the state acting on the university so that it can support other institutions towards industrial and social transformation.

Figure 12: The Form of the Developmental University

Concept	Definition	Code
Form: Overlapping Scientific, Economic and Political Communities	Knowledge market for industrial and social transformation	University functions as though the science sphere is part of the economic and political spheres. Academic-Market Work for Science Making (AMW): It is less co-operative. Mainly vertical authority with some horizontality.

Based on what has been presented in this Chapter thus far, the features in the Abstract University are:

1. The core that is the development and acquisition of scientific knowledge;
2. The purpose that is increasing the stock of scientific knowledge;

3. The norms that are universalism, communism, disinterestedness and scepticism; and
4. The form that is the abstract network of ideas.

In contrast, the features in the Entrepreneurial University ideal-type are:

1. The core that is the development and acquisition of applied scientific knowledge;
2. The purpose of the university that is increasing the stock of applied scientific knowledge to support institutions and activities for profit;
3. The norms that prescribe and regulate a certain set of values. Those values are individually oriented; and
4. The form of the university that is the scientific-economic community that includes both the scientific and economic public spheres.

In contrast, the features in the Developmental University ideal-type are:

1. The core that is the development and acquisition of applied scientific knowledge;
2. The purpose of the university that is increasing the stock of applied scientific knowledge to support institutions that drive industrial and social transformation;
3. The norms that prescribe and regulate a certain set of values. Those values are collectively oriented through the vertical authority of the state; and
4. The form of the university that is the scientific-economic-political community that only includes the scientific public sphere.

The issues raised here reveal a number of problems. Both the Entrepreneurial University and the Developmental Universities are pluralistic institutions, playing many roles that go beyond the single scientific knowledge role that the Abstract University plays. That said, the Developmental University advances wider benefits to society than the Entrepreneurial University, which generates knowledge for markets. By showing these distinctions, the three ideal-types that make up my extended analytic framework are the first knowledge contribution from this study. They do the work of crystalising the nature of different universities due to their different features and how they interact with society and the economy as a result of these features.

As stated in the beginning of this chapter, these three ideal-types emerge from the main ideas in the literature that looks at how universities contribute to development. This, however, does not mean that these types are representative of all of the different ideas and theories that exist in that literature. Therefore, this extended analytic framework does not attempt to represent, and does not represent, an exhaustive set of ideal-type relationships between universities and development.

Below is the complete extended analytic framework with the three ideal-types in Figure 13: Complete Extended Analytic Framework.

Figure 13: Complete Extended Analytic Framework

ABSTRACT UNIVERSITY	ENTREPRENERIAL UNIVESITY	DEVELOPMENTAL UNIVERSITY
Feature 1: Core *The development and acquisition of scientific knowledge*	Feature 1: Core *The development and acquisition of applied scientific knowledge*	Feature 1: Core *The development and acquisition of applied scientific knowledge*
Feature 2: Purpose *Increasing the stock of scientific knowledge for profit*	Feature 2: Purpose *Increasing the stock of applied knowledge for profit*	Feature 2: Purpose *Increasing the stock of applied scientific knowledge for industrial and social transformation*
Feature 3: Set of norms *Universalism, communism, disinterestedness, and organised scepticism*	Feature 3: Set of norms *Universalism, (-communism) individualism, (-disinterestedness) competition, and organised scepticism*	Feature 3: Set of norms *Universalism, hyper communism, (-disinterestedness) co-operation and discipline, and organised scepticism*

Feature 4: The Form *Scientific community constitutive of an abstract network of ideas. Horizontally structured relations between actors (teaching, research, service).*	Feature 4: The Form *Scientific community and economic community. Vertically structured relations between actors (teaching, research, service).*	Feature 4: The Form *Scientific, economic and political community. Vertically structured relations between actors (teaching, research, service).*

Conclusion

In this chapter I presented the first prong of my methodology: the extended analytic framework of my study. I constructed an extended analytic framework of three ideal-types of universities: the Abstract, Entrepreneurial and Developmental Universities. I defined the features in the three functionalist ideal-type universities, and then showed how these features maintain and reproduce each ideal-type university. This chapter serves as the first knowledge contribution from this study, as these ideal-types deconstruct different types of universities to reveal their different internal dynamics. These dynamics affect how different types of universities interact with society and the economy, and thus make contributions to the development of South Africa's society and economy.

Chapter Seven

Methodology

Overview

This chapter presents the next two parts in my research methodology. The first is my evidence review, which is my second prong. Finally, the third prong is an analysis of interview data. However, first I start the chapter by describing my research design and my overall approach. Then I explain how I will use my three ideal-types to review the empirical studies about the relationships between South African universities and development in Chapter Eight. I follow by discussing how I will use the ideal-types to analyse interview data from South African respondents in the university sector. I also discuss how in Chapter Nine I present the respondent perceptions on the relationship between South African universities and development. I present the sampling and process of data collection for both data sets. I also discuss ethics, reliability and validity. Finally, I discuss my reflections on my research journey.

7.1 Research Design

In this section I describe my research design. I start by describing the approach I used in section 7.1.1. In section 7.1.2 I then explain the role that my literature review plays in surfacing the main concepts that I use in the first prong of my methodology: my extended analytic framework.

7.1.1 The Research Approach for this Study

Research design is the research plan and approach adopted to meet research aims (Mouton, 2001). According to Yin (1989) , the choice of a research approach is done by considering three issues: the type of questions, the amount of control the researcher has over actual events and the focus on contemporary phenomena. Being exploratory and explanatory, this study focuses on the 'how' and 'why' questions of universities and development. It investigates the theories in the literature, the analyses conducted in empirical research, and the perceptions of key

informants in South Africa's university sector. I use a multi-method qualitative approach to data collection comprising of an empirical evidence review and analysis, as well as interviews.

Qualitative research is based on the assumption that the social world and reality are constructed by individuals interacting with such a social world, or what Merriam (1998: 6) calls interpretivism. The task of the researcher is to bring to the fore how such reality is perceived, given meaning, and interpreted (Bell, 1987). Patton (quoted in Merriam, 1998: 14) explains qualitative research as attempting to give an in-depth understanding or:

> an effort to understand situations in their uniqueness as part of a particular context .... This understanding is an end in itself, so that it is attempting to understand the nature of that setting — what it means for respondents to be in that setting, what their lives are like, what's going on for them, what their meanings are, what the world looks like in that particular setting — and in the analysis to be able to communicate that faithfully to others who are interested in that setting.

The sections that follow describe the data analysis portion of my methodology.

7.2 First Data Set: Evidence Review

This section discusses the second prong in my methodology which is my evidence review. I use the three ideal-type universities to analyse two sets of data. The first data set is empirical studies on the relationship between South African universities and the development of society and economy. This part of my methodology contributes to answering my first research question: What theories exist about the relationships between universities in South Africa and the development of South Africa's society and economy? By making these theories more explicit, I add to the literature. I start by defining what an evidence review is. Then I discuss my data collection and sampling process. Finally, I describe the approach that I take to analyse the empirical studies.

7.2.1 Evidence Review as a Form of Analysis

An evidence review summarises the evidence existing on a subject, revealing the knowledge available. That knowledge is about the impacts and outcomes of an intervention that has been delivered, or similar interventions (Thompson, 2018). It also tells you about what remains unknown (Thompson, 2018).

Documentary evidence reviews can provide witting or unwitting evidence according to Duffy (1987). Witting evidence refers to what the author had intended to convey, whereas unwitting evidence refers to the other aspects, such as underlying assumptions or issues that can be inferred from the documents. The use of documentary evidence needs equivalent caution applicable to most data sources. The danger is that the researcher may find it difficult to determine the documents' authenticity and accuracy (McMillan & Schumacher, 2006). Thought must therefore be given to problems of document authenticity, inference and interpretation (Yin, 1989).

7.2.1.1 Data Collection and Sampling

Using key words related to the five main pathways from the literature, I searched online databases for studies that were observing and analysing the relationship between South African universities and development. These studies formed the basis of my evidence review.

An evidence review begins with one or more focused questions (Thompson, 2018). In this case, the first sub-research question of this thesis is: What theories exist about the relationships between universities in South Africa and the development of South Africa's society and economy?

Next, the researcher is required to set boundaries and criteria about the sorts of studies included in the sample (Thompson, 2018). In this case:

- The studies were academic, peer reviewed publications, as well as grey literature;
- In terms of the period, I looked at publications from the 1990s to the present, as this period saw significant increases in access to higher education in South Africa;
- The studies included at least one of the four pathways of impact presented in the literature on how South African universities contribute to development: economic growth (i.e. earnings and productivity), technology transfer, graduate capabilities, and institutional capabilities building. These four pathways were the main search keywords that I used to find studies.

Researchers are required to repeat this process several times to ensure they pick up any previous studies that they may have missed before that are significant for their work (Thompson, 2018). I repeated my search several times for this reason (Thompson, 2018).

In total, 26 studies were included in the evidence review. Most empirical studies that were found related to economic outcomes such as earnings or productivity and its effects on output. The studies were primarily econometric in nature. Some looked at technology transfer through case study methodology, or document analysis and interviews. Others are studies focused on graduate perceptions about their employment prospects, or the studies measured their perceptions about what capabilities they believed they had acquired through higher education. There were also studies on employer perceptions on graduate attributes. Institutional capabilities were studied in terms of changes in organisational structures, either within or outside the university, through teaching or research or community engagement. My main interest in these sampled studies was their method and findings.

7.2.1.2 Data Analysis

I then analyse the empirical studies operationalising the three ideal-types that I construct in Chapter Seven. Each study already implies something about the way the relationships between universities and development work in South Africa. Put differently, they either implied an abstract set of relationships, an entrepreneurial one or a developmental one. In many instances there were overlaps in the types of development theories that these studies implicitly worked with. I established this by looking at the main assumptions in each study, whether stated explicitly or implicitly. Thus, I grouped the studies according to each of the sets of relationships to development that they corresponded to. To be clear, I grouped 21 studies under the Abstract University. Then I grouped 8 under the Entrepreneurial University. Lastly, I grouped 7studies under the Developmental University. Finally, I grouped 4 studies under the category of studies that simply treated universities as businesses. Some studies were grouped under two or more ideal-types because in reality universities can have more than one type of set of relationships with the development of society and the economy. Finally, there was one group of studies that were anomalies, because they did not look at universities qua universities. Under each grouping, each study focused on one pathway (i.e. economic growth as increased earnings or increased productivity, technology transfer, individual capabilities or institutional

capabilities). Some studies described the specific activities that were being observed for their contributions towards the various pathways of change. These activities were teaching, research or service/community-engagement. Other studies did not specify what activities were being observed.

In my analysis, I argue that the studies seem to give partial or incomplete assessments of the dynamics underlying the relationships under observation and analysis. In many cases, these assessments also seemed somewhat superficial as a result. I show this for each study by:

1. Looking at the assumptions in the study and determining whether they capture the complex set of dynamics of the relationship in light of the specific development theory framing the study,
2. Looking at whether each study builds these dynamics into the way it defines the features of the university/universities under analysis, as well as their functions.
3. Thereafter, I assess whether these features and how they articulate with the dynamics between universities and development in South Africa are comprehensively accounted for. I do this by analysing whether the activities that fall under the respective feature under study are defined comprehensively enough, given the way that the development theory framing them determines how they articulate with society and the economy.

Put differently, I deconstruct the pathway/(s) of change that each study examines by looking at the features of the university that drive it. I look at these features and how they interface with society and the economy. I consider this given the complex literature exploring the debates around universities and development. Recall that I understand development theory/ideology as the main factor shaping these features, and hence as shaping the activities in different types of universities and the pathways through which they contribute to society and the economy.

This evidence review partially answers the first of my sub-questions: 1. What do existing theories say about the relationships between universities in South Africa and the development

of South Africa's society and economy? Recall that the literature review already partially answered this. The literature review is how I came to the entrepreneurial and developmental theories. The empirical review confirms this finding from the literature. By way of this review, I show in Chapter Eight that the assumptions underpinning these empirical studies are not formulated strongly enough. I say this because based on my 3-step analysis described above, they only partially capture the dynamics of the relationship between universities and development in South Africa. This is the second finding in my study. I argue that this is because of the absence of a strong deconstructed conceptual framework. One of my claims is that the features in the Abstract, Entrepreneurial and Developmental University offer this strong deconstructed conceptual framing.

Following this finding in the empirical studies, I test the three ideal-types on interview data from South African stakeholders in the university sector. I do so in order to demonstrate their usefulness for deconstructing the complex dynamics of the relationship under study. I also do so to establish whether a stronger grasp of these dynamics can surface something new about the relationships between universities and development in South Africa for researchers and policy-makers. I therefore now turn, in section 7.3, to discussing my analysis of the second data set, the interview data. I start by describing the data collection process, including the sampling process and the different types of interviews. Finally, I discuss my analysis of the interview data using my ideal-types.

7.3. Second Data Set: Analysis of Interview Data

My PhD was located in a bigger research project, and it is from interviews conducted for this project that I derive my second set of data. The research project was on Higher Education and the Public Good in Four African Countries: Ghana, Kenya, Nigeria and South Africa (Unterhalter et al., 2019). The project examined the contested notion of higher education and the public good, taking account of contemporary policy changes in these countries and some of the issues these raise (Unterhalter et al., 2019). The project, a collaboration between international scholars from four African countries and from the UK, was funded by the National Research Foundation, Economic and Social Research Council, and the Newton Fund (Unterhalter et al., 2019). The aim was to use the different theories of the public good emerging from the

constituencies in the different countries to develop an indicator for higher education and the public good that could be used comparatively (Unterhalter et al., 2019). The wider aim of the project was also to generate an engagement of ideas on higher education and the public good that goes beyond abstractly normative discussion, to expand the conceptual landscape to include African histories, imaginaries, priorities, and material conditions. The overarching research question was (Unterhalter et al., 2019): How similar and different are the debates and views about higher education and public good in the selected African countries? What theories of the public good can we build across countries from exchanging insights on how meanings are constituted and changed within and between different countries? For this study I only used the South African data.

As part of this project, I participated in conducting 15 interviews; however, my data analysis includes all the interviews conducted, which are 33 in total, discussed in the following section.

7.3.1 Sampling and Data Collection

This description of the South African context highlights the considerations that were necessary in planning the interviews. The interviews were part of a larger project. The data were analysed for this project. I then re-analysed the project data using the extended analytic framework that I have developed in this study. In the section that follows I describe the sampling process.

In the case of South Africa, the respondents who were interviewed were sampled in such a way that the sample was representative of the history of the country. In other words, it was necessary to reach respondents from and associated with universities that reflected the key apartheid historical divides around race. Interviews were conducted with six categories of informants from four different universities, referred to as —Small Town Historically White Universities; Large Urban Historically White Universities; Large Urban Universities of Technology; Rural Historically Black Universities. Across these categories interviews were conducted with 3 Vice-Chancellors and 1 Deputy Vice-Chancellor. Student leaders from these universities were also interviewed, including leaders from 4 student representative councils and an elected leader of the national union of students—the South African Union of Students. 7 interviews with academics were undertaken, one from an academic staff union and the others, from a range of institutions, specialising in researching higher education. This latter

group were referred to as Experts. Two interviews were also conducted with non-academic staff unions. The first was with representatives of the National Education, Health and Allied Workers Union (NEHAWU), a large public sector union that organises many non-academic university workers. The second was with a representative of the Congress of South African Trade Unions (COSATU), one of South Africa's five federations of trade unions, and historically the largest and most influential. In addition, interviews were conducted with representatives of government and regulatory bodies. These were with: the Departments of Higher Education and Training (DHET) and Science and Technology (DST); the National Student Financial Aid Scheme (NSFAS); the Council on Higher Education (CHE); Universities South Africa (USAF) (the Vice-Chancellors' body) and the National Institute for the Humanities and Social Sciences (NIHSS). A range of people from civil society were also interviewed. They were captured as: the Gender Equity Officer; a Save South Africa representative; an Employer Association Representative; one LGBTI and gender activist 1; two LGBTI and gender activist; one Right to Know representative; one Social Justice NGO representative; one University Community Engagement Officer; and finally Accountability International representative.

I will now describe the types of interviews that I conducted. Interviews are crucial because they offer an opportunity 'to get inside the context and understand the subject of investigation from the perspectives of those who are centrally involved' (Sayed, 1995: 147). Interviews can allow a robust form of data collection if they facilitate in-depth insights and subtle nuances from respondents (Mouton, 2001). They have the advantages of being easy to redesign, cheap to conduct, flexible, and easy to engage respondents with and avoid any misunderstandings or misinterpretations by them. The disadvantage of interviews is the subjective relationship between interviewer and respondents. Perceptual data may also lack reliability. Merriam (1998) cautions against exclusive reliance on the interview method as it can lead to distortions. Interview data, also called perceptual data, always carry the risk of disjunction between what is said and what is done, hence the need to complement these data with document analysis and other evaluation or appraisal studies. Data triangulation is then recommended when single sources are recognised as partial accounts, because it assists with verifying the position with alternative data as a check. Merriam (1998) argues that the cross-checking of data collected from different sources is the way to build greater research validity.

Cohen & Manion (1984) identify four types of interviews: structured, unstructured (or open-ended), focused and non-directive. This study relied on a semi-structured, partially focused and partially open-ended interview schedule. I explain the semi-structured approach in the next paragraph. First, I define the focused and open-ended approaches to interviews. Although the focused interviews are still fairly open-ended, questions are more searching as the researcher attempts to corroborate certain established facts (Yin, 1989). Open-ended interviews allow people to offer particular insights into a phenomenon. They can then also suggest further data sources.

I then explain the semi-structured nature of the interviews. First, completely unstructured narrative questions were used to open each interview and get each interviewees' backgrounds. The middle part of each interview was semi-structured to include a list of themes derived from the literature (Polit & Hungler, 1999). The interviews were informed by the following themes and constructs: a definition of the public good generally and the public good for higher education, the distinction between the public and private divides, the intrinsic and instrumental dimensions of the public good, and finally, the challenges in the university sector and thus the conditions of possibility necessary for universities to serve the public good in South Africa. The final part of the interview explored what respondents thought was missing from the relationship between universities and development in South Africa. The interviews were recorded with an audio recorder. They were then transcribed.

I then analysed the interview data the same way I did the empirical studies. Each respondent's perceptions already imply something about the way the relationship between universities and development works in South Africa. Put differently, they either implied an abstract relationship, an entrepreneurial one or a developmental one. I established this by looking at the main ways in which each respondent described this relationship. Like the evidence review data, some descriptions were explicit while others were implicit. By way of this, I then determined which particular development theory/theories each respondent's views corresponded to. Their descriptions referred to one or more pathways of change through which, based on respondents' perceptions, universities in South Africa contribute to development. Their perceptions of these pathways foregrounded one or more particular theories of development. In the same way, the descriptions described the activities related to

the different pathways in ways that foregrounded one or more specific development theories. The specific steps that I follow to code each interview transcript were:

1. I determine what development theory/theories each respondent was implicitly expressing to define how universities contribute to development in South Africa,
2. I look at what the respondents' views elaborated, either implicitly or explicitly, about the complex dynamics of this relationship in light of the specific development theory/theories framing their perceptions,
3. I then deconstruct their views to show the implications for the ways in which they understood the features of the universities in South Africa. I code these views in terms of their implied assumptions about the functions of universities' features. I also look at how they described the features of universities and their functions in relation to the wider social and economic context that universities in South Africa find themselves in.

Thereafter, I assess how these dynamics and contextual factors are comprehensively accounted for in the way the activities that fall under the respective features of universities were described by respondents. I did the same and assessed how the dynamics and contextual factors implied were related to the pathways of change that respondents were describing.

Put differently, I deconstruct the implied pathway/(s) of change that each respondent described. I do so by looking at the things they implied about the features of universities and how these features drive the change. I look at these features and how their interface with society and the economy comes out in respondents' perceptions, depending on the development theory/theories implicitly underpinning their views. Recall that I understand development theory/ideology as the main factor shaping these features, and hence shaping the activities in different types of universities and the pathways through which they contribute to society and the economy. This is my third finding, that the way respondents understand the relationship between South African universities and development diverges from what the empirical studies in the review suggest about how researchers understand this relationship.

The main take away point is that this interview data set is important, because while the empirical studies conducted by researchers may say one thing, the perceptions of those in the university sector may say another. These perceptions are important as they seem to have a bearing on the way that policies change over time. They are hence an important data set that enable a significant research finding.

In the next section I make examples of how I used the features in each of the ideal-types to analyse each of the data sets in this study.

7.4 Operationalising the Ideal-types

In this section I provide one example of each feature in the ideal-type universities that I have constructed and how I use these to analyse my two data sets. Recall that those four features are the core, the purpose, the norms and the form of the university. I alternate between the different ideal-type universities which are the Abstract University, the Entrepreneurial University and the Developmental University, making only one example using each feature in each ideal-type. I show how I use the codes in the ideal-types to analyse the empirical data sets first. Then I do the same thing and show how I use the ideal-type and interview data.

I start with an example of how I use the core feature of the Abstract University ideal-type to analyse one of the empirical studies in Chapter Eight. Below is Figure 14 where I have tabulated the core feature of the Abstract University.

Figure 14: The Core of the Abstract University

Concept	**Definition**	**Code**
Core: Development and acquisition of knowledge	The historical relationality between ideas and the people constructing them	Social Production of Scientific Ideas (SPI): network of interacting scientists who develop and exchange knowledge

In the analysis of the two data sets I use the *concept, definition* and *code* under each feature for each ideal-type to analyse the two data sets. I demonstrate that the literature covered from Chapters Two to Five of this study helps me to show the presence or absence of the respective features for each ideal-type. In the first instance, I show that for the first feature of the Abstract University, the core which is the development and acquisition of knowledge, the South African literature indicates the seeming absence of this feature. For example, I analyse the first empirical study in my data analysis (Winberg et al., 2018), where graduate attributes are assessed. I show that South African graduates are unable to develop graduate attributes in the ways they ought to be able to according to this study. The studies suggest that graduates are autonomous (autonomy refers to the decision-making that graduates have when choosing courses). This is because their socio-economic backgrounds do not allow them to choose from the full range of courses. Thus, they are unable to fully partake in the acquisition of the sorts of ideas (concept) they are interested in, in the ways in which the study says they ought to if they are in fact autonomous. I elaborate this in my analysis in Chapter Eight. Thus, they are unable to fully be a part of the relationality between ideas and the people constructing (definition) and sharing them (as illustrated in the figure above). To be more specific, there is an absence of the Social Production of Scientific Ideas (SPI) (code). This Social Production of Scientific Ideas (SPI) which includes a network of interacting scientists who develop and exchange knowledge requires the participation of students.

Next, I make an example of how I use the purpose feature of the Abstract University ideal-type to analyse one of the empirical studies in Chapter Eight. Below is Figure 15 where I have tabulated the purpose feature of the Abstract University.

Figure 15: The Purpose of the Abstract University

Concept	**Definition**	**Code**
Purpose: Increasing the stock of knowledge	Increasing the stock of knowledge	Recontextualisation and rediscovery to increase the stock of scientific knowledge

In the analysis of the two data sets I use the *concept, definition* and *code* under each feature for each ideal-type to analyse the two data sets. Again, I demonstrate that the literature covered from Chapters Two to Five of this study helps me to show the presence or absence of the respective features for each ideal-type. In the next instance, I show that for the second feature of the Abstract University, the purpose which is increasing the stock of knowledge, the South African literature indicates the seeming absence of this feature. I again analyse the first empirical study in my data analysis (Winberg et al., 2018), where graduate attributes are assessed. There I show that South African graduates are unable to develop graduate attributes in the ways they ought to be able to according to this study. The study states that semantics (which are defined in the study as the knowledge structures that enable or constrain particular kinds of graduate attributes) are an important knowledge principle required for graduates to acquire the attributes they need in order to ensure that an increase in the stock of knowledge is possible (concept). This is because the socio-economic context in South Africa means that most learners go to schools in low-income areas where there are resource constraints. These constraints affect infrastructure, the availability of teaching materials, as well as teaching staff. The constraints in terms of teaching staff are especially harmful towards achieving the principle of semantics. I do not elaborate this example in my analysis in Chapter Eight. The point here, however, is to show that the contextual factors in South Africa do not make increasing the stock of knowledge an easy task (definition) and sharing them (as illustrated in the figure above). To be more specific, there is an absence of recontextualisation and rediscovery to increase the stock of scientific knowledge (code).

Next, I make an example of how I use the norms feature of the Entrepreneurial University ideal-type to analyse one of the interview data in Chapter Nine. Below is Figure 16 where I have tabulated the form feature of the Developmental University

Figure 16: The Norms of the Entrepreneurial University

Concept	**Definition**	**Code**
Norms: Individually oriented.	Individual freedom and the liberty to compete/maximize utility.	Method and technique (unintentionally) backgrounded for profit-making opportunities (-MT)

In the analysis of the two data sets I use the *concept, definition* and *code* under each feature for each ideal-type to analyse the two data sets. I use my interview data to show that for the third feature of the Entrepreneurial University, the norms, which are individually oriented, the South African literature indicates the seeming absence of this feature. For example, I analyse one of the interviews from my data set in Chapter Nine. I show that the data demonstrates the absence of a competitive culture on the basis of individualism. I show that rather, one respondent suggests that entrepreneurialism in South Africa should be steered by collective interests (concept). I elaborate this in my analysis in Chapter Nine. Thus, I show that universities are encouraged to carry out forms of entrepreneurialism that are utility maximizing for the community, however, not on the basis of individual freedom, but on the basis of the collective good (definition). Further, there is a backgrounding of the methods and techniques for knowledge creation in order to achieve this (-MT) (code).

Finally, I make an example of how I use the form feature of the Developmental University ideal-type to analyse one of the interview data in Chapter Nine. Below is Figure 17 where I have tabulated the form feature of the Developmental University.

Figure 17: The Form of the Developmental University

Concept	**Definition**	**Code**
Form: Overlapping Scientific, Economic and Political Community.	Knowledge market as part of the national project.	University functions as though the science sphere is part of the economic and political spheres. The Academic Work for Science Making (AWS) is less co-operative. Mainly vertical authority with some horizontality.

In the analysis of the two data sets I use the *concept, definition* and *code* under each feature for each ideal-type to analyse the two data sets. I use my interview data to show that for the final feature of the Developmental University, the form which is the overlapping scientific, economic, and political community, the South African literature indicates the seeming absence of this feature. For example, I analyse one of the interviews from my data set in Chapter Nine. I show that the data demonstrates the absence of the overlap between scientific community, economic community and political community (concept). I show that this is because the lack of state steering in South Africa leaves South Africa without a social pact to facilitate transformation both in universities and in society. I show that therefore, the form of the university is not a knowledge market that contributes to a national project (definition). I elaborate this in my analysis in Chapter Nine. Thus, I show that universities are unable to fully function as though the science sphere is part of the economic and political spheres. Further, the Academic Work for Science Making (AWS) is vertical based on respondents' views; it only presents with some horizontality, rather than being fully co-operative (code).

The next section looks at a summary of the two data sets that were analysed in this study.

7.5. Summary of the data analysis components of my methodology

Below is Figure 18 that illustrates each of the aspects in the data analysis that I have described so far and the research questions that each answers.

Figure 18: Data Analysis Methodology

	Evidence Review	*Interview Analysis*
Sub-question 1	Researchers in South Africa mainly conduct research that implies an understanding that South African universities contribute to development entrepreneurially or developmentally.	
Sub-question 2		The notions of respondents diverge from the notions in the literature.
Sub-question 3		The notions of respondents suggest mainly a different kind of relationship, underpinned by a different theory of development for the South African context. This seems to be a welfare/Ubuntu-communitarian theory of development.

The next section discusses issues of ethical approval.

7.6 Ethics Approval

This section, section 7.6, explains the process of securing ethical clearance for this study. First it explains the ethics approval needed for the conceptual parts of this study. Then it describes the process of securing interviews. I also discuss the process of ensuring that respondents understood the way in which confidentiality and anonymity were seen to. McMillan and Schumacher (2006, p. 16) describe ethics as fairness, honesty, openness of intent and informed consent of research participants among other things. Educational research deals with both conceptual bodies of work and human beings and, therefore, the rights and welfare of both conceptual bodies and subjects must be protected.

Ethics clearance was obtained from the Department of Education, Practice and Society through University College London (UCL). The full ethical approval number for REC 980: HE, inequality and the public good data protection registration number is: Z6364106/2017/08/106. In the first instance, the first two prongs of the methodology in this thesis are conceptual. Ethical

protocol requires that the concepts underpinning the study have what can be referred to as ethical validity. Ethical validity means that the process of ethics is consistent with research principles. This is crucial for theory building in a study. Theory building bridges the gaps between different theories, disciplines, and broadens our scope of thinking (Jaakkola, 2020: 19).

In terms of the interviews that were conducted, the first step was to draft letters. Letters were drafted and sent via email requesting interviews on a specific day and at a specific time. The letters sought the informed consent of stakeholders to have them participate in the research. The letters explained what the research study was concerned with, how the interview data produced would be useful in order to meet the aims of the research project. The letters further communicated to participants that they were not obliged to participate in the research, or answer any questions they wished not to, and that they could discontinue the interview at any point. All letters distributed were signed and dated in agreement between the researchers on the project and stakeholders or participants. The interview questions were sent out in advance, so that participants saw them beforehand. Stakeholders were assured that the data would only be used for educational purposes. Stakeholders were guaranteed anonymity and confidentiality in terms of protecting the names of institutions and individuals where it was possible. Pseudonyms are used to present the interview data, e.g. 'Student A', 'Institution A', etc. All of these procedures were explained to stakeholders again at the beginning of each interview. Participants' responses to questions were transcribed by a transcriber.

The interview schedule, the letters requesting interviews, the consent forms and the ethical clearance certificate respectively can be seen in Appendices A, B, and C.

The next section looks at issues of validity and reliability.

7.7 Validity and Reliability

In qualitative case study research, research criteria are not often clearly spelt out, bringing to the fore important research issues and concerns of generalisability, reliability and validity which are fundamental to the whole research process (Bell, 1987).

Reliability refers to consistency in both the procedures and findings of the research (Golby, 1994). McMillan & Schumacher (2006: 244) describe reliability as 'the extent to which the results are similar over different forms of the same instrument or occasions of data collection'.

Validity, on the other hand, refers to the research investigating what it sets out and claims to investigate. Are the instruments measuring what is was supposed to be measured? Validity takes different forms, according to Mouton (2001): construct validity (or valid conceptualisation of research issues), operational validity (or valid data collection instruments) and interpretive validity (or valid interpretation of data).

To achieve both operational reliability and validity, multi-dimensional triangulation can be used. By using multiple methods, the same data can be analysed from varying stances (Golby, 1994). Triangulation is applied to different views (Golby, 1994), collecting the views from the literature, which are then triangulated against the evidence review data and interview data. Thus, although the notion of triangulation is itself contested, there will always remain agreement that multiple data sets are required, as well as multiple interpretations and accuracy of interpretation and meaning.

For this study triangulation is defined as the search for alternative interpretations rather than the confirmation of a single interpretation. Triangulation was therefore done through different data sources to show the different vantage points from which to understand theories of South African universities and development (Flick, 2002: 37-38).

The next section looks at the limitations of the study.

7.8 Limitations of the Study

The main limitation is related to the small sample of studies in the empirical review as well as the small number of individuals interviewed for their perceptions of the South African university sector. The other big limitation, already noted earlier, is to do with the difficulty of

bringing together vastly different bodies of literature, with all their respective contestations. This can make for a very complex research methodology.

7.9 Reflections on my Methodology

I came into this study very ambitious, with many misconceptions about how research works.

I started using some of the more contemporary research paradigms that are most commonly referred to when researchers and policy-makers talk about relationships between two variables. To be specific, I worked with the Theory of Change paradigm. I quickly found it hard to use the paradigm to bring together the plethora of debates from the literature into a framework based on Theory of Change. While Theory of Change takes consideration of context and assumptions when looking at relationships, it did not quite help me to make difficult conceptual decisions. For instance, thinking about different types of relationships is a difficult undertaking. Would I work with functional, or other types of relationships? I went with functional relationships, because the literature directed me this way. Functionalism also presented an opportunity to break down these relationships. This was only possible through ideal-typification where again, conceptual decisiveness was required. With so many universities, of different shapes and sizes, I had to set hard boundaries and hope that they would help me firstly to contain the study, and secondly to conduct it.

Because I have chosen to work with 'old' paradigms, I have been cautioned by peers and colleagues. While I took heed of their advice, I also learnt that as much as research approaches change and improve with time, at the same time there is the risk of falling into the trap of using 'fashionable' research tools. I found that the tools that I used in this study, though 'old', were helpful in answering the questions I was interested in. The process that I adopted for this methodology is an eclectic one, but it has nonetheless enabled new insights.

Another important learning experience of this PhD research journey was the realisation that, like the policy process, research is not linear. It does not neatly start with a research question, then literature review, data collection and analysis, and end with the development of a rigorous argument, backed up by strong evidence.

Conclusion of Chapters Six and Seven

The aim of these last two chapters together was to build and present my analytic framework, describe my research methodology, describe my data, and describe how I used my analytic framework in my data analysis. This methodology is thus three pronged. I described my extended analytic framework. Then I followed with a description of my evidence review. Finally, this chapter described the analysis of interview data. I also covered my research design and my overall approach over the course of the chapter. This closes Part Two of the study. Next I move onto Part Three.

Chapter Eight

Reviewing the Evidence for a Causal or Correlational Relationship between Universities and Development in South Africa

Overview

This chapter, Chapter Eight, begins Part Three, the analysis part of this study. I look at empirical studies considering the contributions of universities to development in South Africa. In Chapter Six I constructed the three functionalist ideal-types for this study: the Abstract University, the Entrepreneurial University and the Developmental University. Each ideal-type deconstructs the different features in each type of university. Further, each feature serves a specific function within its respective ideal-type university. Each one also therefore represents a different set of relationships between that type of university, and society and the economy. In this chapter, I use these ideal-types to show that empirical studies that analyse the relationship between South Africa's universities and the development of its society and the economy leave us with partial findings. I find that they do not build up assumptions that deconstruct the different features in the relevant types of universities. They hence also seem to inadequately categorise the many different dynamics and relationships between universities and society and the economy. Therefore, the analyses in these empirical studies have limitations in showing the dynamics of the relationship between a single university/university system and South Africa's society and economy.

I begin by grouping the studies according to the notions of the relations between universities and development that they may imply. Under each grouping I categorise the studies according to the pathways of change they are observing. I analyse the implicit or explicit assumptions framing some of the studies using the ideal-types. I argue that my extended analytic framework allows me to deconstruct the features in each of the three ideal-type universities. In so doing

it allows me to demonstrate why the assumptions defined by the researchers conducting the empirical studies seemingly do not quite hold.

8.1 The Studies in my Evidence Review

The relationship between the university, society and the economy is a complex one. This is because firstly the internal features of different types of universities serve different functions. In turn they allow the university to serve certain functions in society and the economy. In this section I simply list the 26 studies that I analysed. I also tabulate them according to their respective pathways of change.

8.1. The List of Empirical Studies

The literature in Chapter 5 presented five pathways of change: increased earnings, increased productivity, technology transfer, improvements in individual capabilities and improvements in institutional capabilities. However, I only work with four pathways of change. I do this because most of the empirical studies that I have analysed treat increased earnings and increased productivity as a single variable. This variable is captured as economic growth. Hence, the table below provides the pathways of change as they arise in South African studies. Figure 19 below tabulates the studies included in this evidence-review according to the 4 pathways

Figure 19: Empirical Studies Observing the Relationships between South African Universities and Development

Economic Growth (9)*	**Technology Transfer (4)**	**Graduate Capabilities (8)**	**Institutional Capabilities (5)**
Anastassio Pouris & Inglesi-Lotz (2014)	Harsh et al. (2018)	Archer & Chetty (2013)	Lekhanya (2015)
Branson et al. (2013)	Kruss & Gastrow (2017)	Coetzee (2014)	Moiseyenko (2009)
Bhorat et al. (2016)	Pouris & Pouris (2011)	Griesel & Parker (2009)	Morris (2015)
Dyason (2019)	TIA (2019)	Jwara & Hoque (2018)	Mzangwa (2019)
Dyason & Kleynhans (2017)		Metcalfe et al. (2020)	Sayed, Badroodien, and Salmon (2016)
Kleinsmith & Horn (2015)		Nicolaides (2011)	
		Uys et al. (2004)	
		Winberg et al. (2018)	

McGregor, et al. (2019) Morris (2015) Serumaga-Zake & Naude (2010)			

*Number of studies in the category

As can be seen from the figure, the majority of empirical studies were focused on economic growth. There were 9 studies in total that looked at economic growth; these included both gross domestic product (GDP) growth and increases in individuals' earnings (as shown in figure 13).

Some of these studies focused on economic growth as an outcome of increased labour market opportunities and higher earnings. One study by Serumaga-Zake & Naude (2010) shows some interesting and significant findings. The first finding is that the labour market rewards for Africans have gone up (Serumaga-Zake & Naude, 2010). The study states that other studies conducted in the late 1970s and the 1990s showed at the time that because of apartheid and labour market segmentation, white people earned far better labour market rewards than black people in the South African labour market (Serumaga-Zake & Naude, 2010). The other finding that the study finds is a negative correlation between increases in male higher education and earnings (Serumaga-Zake & Naude, 2010: 525). These are both useful and important findings.

In another study on labour market outcomes, Bhorat et al. (2014) found that education is a strong predictor of labour market outcomes. The study argued that graduates from universities contribute to economic growth more than do graduates from Further Education and Training (FET) colleges (Bhorat et al., 2014). They further argued that graduates with degrees are replacing Further Education and Training (FET) graduates because of a skills-bias; in other words because Further Education and Training (FET) graduates are not adequately trained to meet the increasing technological needs of the economy (Bhorat et al., 2014). While Allais

(2017) refutes the validity of a skills-bias in South Africa, the study does demonstrate that education is a strong predictor of labour market outcomes.

Another study observed the overall contribution of the university to national earnings/Gross Domestic Product (GDP) (Pouris & Inglesi-Lotz, 2014). The study found that 23 universities in South Africa at the time contributed to 85% of the country's research outputs and to 2.1% of the country's GDP in 2009 (Pouris & Inglesi-Lotz, 2014). Although the study did not show a direct link between research outputs and economic growth, it did finish by arguing that knowledge production is a crucial way of increasing GDP and should be funded more in South Africa (Pouris & Inglesi-Lotz, 2014).

I now turn to the next step in my analysis of the studies.

8.2 Overview of the studies

In this section I classify the empirical studies that I review in this evidence-review. I do so in section 8.2.1. In section 8.2.2 I then describe the process by which I analyse the empirical studies. This description is a brief recap of the description that I had provided in the methodology chapter of the study.

This step is to consider these studies, and the pathways that they mainly explore, in relation to my ideal-types. This is with a view to explore the extent to which the assumptions in the studies either converge with or diverge from the ideal-types in my extended analytic framework. I do this in order to explore the relationships between different universities in South Africa. The four pathways of change (economic growth, technology transfer, individual capabilities and institutional capabilities) as they are usually analysed suggest that the relationship between universities and development is linear and causal. In contrast, the ideal-types in my extended analytic show that the relationship between universities and development is reciprocal and mutually co-constitutive. What this means is that the nature of the university shifts as the university is required to make certain contributions to development.

I categorise them in the following way: if studies placed an emphasis on no particular mechanism through which universities contribute to development, then I classified them under the abstract ideal-type set of relationships; if studies placed an emphasis on the role of universities in generating commercialisable and profitable products, then I classified them as entrepreneurial; if studies emphasised the role of universities in generating commercialisable and profitable products with a view to achieve industrial transformation and a national political project, then I classified them as developmental. Said differently, I classified each study based on its orientation, as determined by the researcher(s) who conducted the study.

In this paragraph I will make slightly more specific examples. If I classified a study under the abstract set of relationships between universities and development, it was because I could identify features of universities that were consistent with the Abstract University ideal-type. For instance, if I found that the study seemed to suggest that one of the norm features of universities is communism, then I categorised the study using the relevant code. The relevant code refers to: the methodological ways and techniques of constructing rigorous knowledge (MT). If I classified a study under the entrepreneurial set of relationships between universities and development, it was because I could identify features of universities that were consistent with the Entrepreneurial University ideal-type. For instance, if I found that the study seemed to suggest that one of the norm features of universities is competition (which emphasises individualism), then I categorised the study using the relevant code. The relevant code refers to: backgrounding of methods and techniques (even unintentionally) profit-making opportunities (-MT). Finally, if I classified a study under the developmental set of relationships between universities and development, it was because I could identify features of universities that were consistent with the Developmental University ideal-type. This meant that the relevant code refers to: the backgrounding of method and technique (even unintentionally) for industrial and social transformation (-MT)

Below I give an overview of my classification of the set of empirical studies.

8.2.1 Classification of the studies

Based on the process described above, I grouped the studies that I have collected into four groups. The four main groups are: first, the group of empirical studies that seem to mainly focus on the abstract contribution that universities make to development; second, the group of empirical studies that seem to mainly focus on the entrepreneurial contribution that universities make to development; third, the group of empirical studies that seems to mainly focus on the developmental contribution that universities make to development, and finally the fourth group of studies that seems to mainly focus on the contribution that universities make to development as businesses. Note that I added this final group, which is not a part of my set of ideal-types. I do so because it was a very striking occurrence to find that a notable number of the studies only regarded universities mainly as businesses.

Although I have grouped the studies like this, most universities will have the features of all three ideal-types of universities simultaneously.

Universities and their Abstract Contributions (26)*	**Universities and their Entrepreneurial Contributions (9)**	**Universities and their Developmental Contributions (6)**	**Universities as Businesses (4)**
Anastassio Pouris & Inglesi-Lotz (2014)	Anastassio Pouris & Inglesi-Lotz (2014)	Anastassio Pouris & Inglesi-Lotz (2014)	Dyason (2019)
Archer & Chetty (2013)	Bhorat et al. (2016)	Bhorat et al. (2016)	Dyason & Kleynhans (2017)
Bhorat et al. (2016)	Branson et al. (2013)	Harsh et al. (2018)	Kleinsmith and Horn (2015)
Branson et al. (2013)	Dyason (2019)	Kruss & Gastrow (2017)	Pouris & Pouris (2011)
Coetzee (2014)	Dyason & Kleynhans (2017)	Pouris & Pouris (2011)	
Dyason (2019)	Kleinsmith & Horn (2015)	TIA (2019)	
Dyason & Kleynhans (2017)	Morris (2015)		
Griesel & Parker (2009)	Serumaga-Zake & Naude (2010)		
Harsh et al. (2018)	TIA (2019)		
Jwara & Hoque (2018)			
Kleinsmith & Horn (2015)			

Kruss & Gastrow (2017) Marias (1994) **Metcalfe et al. (2020)** **McGregor, et al. (2019)**. Morris (2015) Mzangwa (2019) Naude (2010) Nicolaides (2011) Pouris & Pouris (2011) Rossouw et al. (2012) Sayed, Badroodien, and Salmon (2016) Serumaga-Zake & TIA (2019) Uys et al. (2004) Winberg et al. (2018)			

*Number of studies in the category

After my categorisations the result was that: there were 26 studies (all of them) categorised as implying abstract relationships between universities and development in South Africa; there were 9 studies that were categorised as implying entrepreneurial relationships between universities and development; 6 studies implied that the relationships between South African universities and development are developmental; and finally, 4 studies only considered universities as businesses with transactional relationships to society and the economy.

Next, I describe the process that I used to analyse each empirical study that I analysed in the sections below.

8.2.2 Process of Analysis

As stated in Chapter 6, I follow the following procedure to conduct my analysis of these studies:

I describe some of the implicit assumptions underpinning the studies. I show that these assumptions seem partial or incomplete. I do this by analysing them using the features of the different ideal-types of universities that I have constructed. Therefore, I discuss these studies, and their pathways, in relation to each of my ideal-types.

I then show that my ideal-types enable us to better see the full range of dynamics under each pathway of change through which South African universities do or do not contribute to development. I also argue that we are then required to specify the types of features constitutive of each type of university. We must consider the specific features that are constitutive of different types of universities, and consider how these may drive each pathway of change. Of course, all the features within a certain type of university may work together to drive each pathway of change in reality. However, without delineating the different features in a single type of university and articulating their functions, it is difficult to move forward theoretically.

8.3 Analysis

I now present a comprehensive analysis of the empirical studies that I looked at in this chapter. I start section 8.3.1 by looking at an example of one study that I categorised and analysed under the group of studies that considered the abstract contributions that universities in South Africa make. In section 8.3.2. I look at an example of a study that considers the entrepreneurial contributions that universities make. In section 8.3.3 I look at an example of a study that considers the developmental contributions that universities make. Finally, in section 8.3.4 I look at studies that simply treated universities as businesses.

8.3.1 Universities and their 'Abstract' Contributions to Development

In this section I look at one empirical study that seemingly does not focus on any specific mechanism between universities in South Africa and development. Put differently, in the study the contribution of universities in South Africa to development is understood as abstract. In other words still, the study suggests that simply by being universities, universities in South Africa make some contribution to development. I look at one of the implicit assumptions in

this study and the ways in which my extended analytic framework shows the problems with this assumption.

8.3.1.1 Abstract: Individual Capabilities

Because the empirical study that I begin with here makes no specific assumptions about the type of university or universities that are being analysed, this study treats the university as the traditional type of university that has existed for centuries (although as discussed in Chapter Three, traditional universities have differed across contexts). I use my Abstract University ideal-type construct to analyse this study. I choose this ideal-type because of my three ideal-type constructs, this one is consistent with the traditional university.

In this section I look at the study by Winberg et al. (2018). Winberg et al. (2018) conduct a study that sets out to observe the contribution that universities make to the development of graduate attributes. The study begins by making four main assumptions about the knowledge that is taught in universities (Winberg et al., 2018). The four main assumptions are about the dimensions of knowledge that are in the curriculum that is taught to graduates and how these dimensions shape graduate attributes (Winberg et al., 2018). In the study Winberg et al. (2018) look specifically at the knowledge principles of an ethics module in an accounting diploma. The researchers specified five knowledge principles: autonomy, density, temporality, semantics and specialisation (Winberg et al., 2018).

Autonomy refers to the decision-making that graduates engage in when choosing courses; density refers to the attitudes towards the forms of capital that inform different kinds of graduate attributes—like employability or entrepreneurship; temporality refers to the temporal positions and orientations that influence graduate attributes; semantics refers to the knowledge structures that enable or constrain particular kinds of graduate attributes; and specialisation refers to the orientation towards knowledge fields and/or people and society that particular graduates attributes might require (Winberg et al., 2018).

Given this list of principles, what features of universities are implicitly assumed in this study? The first might be that the core feature in the Abstract University ideal-type exist in reality. In

other words, the study assumes that graduate capabilities are possible because the development and acquisition of knowledge, is possible. Using the core feature in the Abstract University ideal-type construct I show how the South African reality diverges from the ideal-type. This is an important finding because the studies that I have grouped under this category are based on assumptions that imply that the core feature in the ideal-type exists in this way in reality.

Figure 20 below illustrates the core feature in the Abstract University ideal-type. In Chapter Seven I defined this core feature not only as the development and acquisition of knowledge, but I stated that this is possible through the relationality between ideas and the people constructing them. I defined the code for this feature as the social production of ideas, where a network of interacting scientists develop and exchange knowledge. To what extent is this feature present in all universities in the South African context? Given what we know, that the socio-economic backgrounds of students entering their first year determines their academic strength or weakness going forward, can it be said that the knowledge principle of autonomy holds in the South African case? The literature in Chapter Three shows that many students in South Africa seem to come from poor socio-economic backgrounds. As a result, they seem to struggle through primary and secondary school. Thus, very few make it into university. Those who do also have very limited options in terms of course choices. Said differently, most of South Africa's students are from poor or lower-middle class backgrounds and many of these graduates simply select the courses they are eligible for, rather than those they may have liked to enter. I therefore argue that it seems that South African graduates have limited autonomy to choose their degrees and their courses. Therefore, I argue that my extended analytic framework allows me to deconstruct the features in the Abstract University to demonstrate why in reality South African students may not have autonomy, and to assume the knowledge principles assumed in the study by Winberg et al. (2018) seems inappropriate. My extended analytic framework hence also allows me to show how a phenomenon like poverty can affect knowledge principles, and thus affect the ability of students to acquire knowledge. Put differently, poverty can affect the core feature of the Abstract University.

Figure 20: The Core of the Abstract University

Concept	Definition	Code	Finding
Core: Development and acquisition of knowledge	The historical relationality between ideas and the people constructing them.	Social Production of Scientific Ideas (SPI): network of interacting scientists who develop and exchange knowledge	Implicit assumptions in the studies: the study assumes that students are able to acquire knowledge in order to develop the attributes that they need. Gaps in the assumptions that surface from an analysis using the form feature: In reality, students in South Africa mainly come from poor socio-economic backgrounds. Because of this they are under-prepared for university. Many do not make it into the courses they would like to study. Rather, they are forced to enter into the courses they are eligible for. Thus, the gap in the study presented here is the seemingly inappropriate assumption that students can be autonomous in choosing their courses or degrees.

In the next section I look at the empirical studies that looked at the entrepreneurial contributions that universities make to development.

8.3.2 Universities and their entrepreneurial contributions to development

In this section I discuss one example of the studies that I grouped under the group of studies that contribute to development in entrepreneurial ways. I look at studies that look at the

contribution of universities to development through economic growth in section 8.2.2.1. Then I look at studies that look at the contribution of universities to development through labour market outcomes. I analyse one of the implicit assumptions in each of these studies, and I demonstrate the ways in which my extended analytic framework shows the problems with these assumptions.

8.3.2.1 Economic Growth Models

Studies that analyse the economic contribution that universities make to development usually work with the neoclassical knowledge production function. This function describes an economy in which the knowledge outputs produced in the knowledge sector (this sector hosts institutions like universities) go directly into the output sector of the economy where they are sold on the market. The neoclassical knowledge production function is problematic, however, because of its linear nature. What are the features of universities that play the role of enabling the linear link between the output and knowledge sectors? Using the core feature in the Entrepreneurial University in my ideal-type construct, I show how the South African reality diverges from the ideal-type. This is an important finding because the study I analyse under this category works with the assumption that the core feature in the Entrepreneurial University ideal-type exists in reality.

Figure 21 below illustrates the core feature in the Entrepreneurial University ideal-type. In Chapter Six I defined this core feature as the development and acquisition of applied knowledge. I defined this core as existing through the relationality between applied scientific ideas and the people constructing them. The code for the core feature of the Entrepreneurial University as defined in Chapter Six is the social production of scientific ideas through a network of interacting scientists who develop and exchange applied ideas.

The study analysed here, by Kleinsmith & Horn (2015), implicitly assumes that the university/universities under observation have the necessary core to enable the linearity between the knowledge sector in South Africa and the output sector. However, this may not be immediately true. In order for a linear relationship to arise between the knowledge sector and the output sector, universities need to develop exactly the specialised knowledge that is

needed in the output sector. Some researchers point out that South African graduates (who count as outputs from the knowledge sector) are getting higher and higher qualifications in order to keep up with the technological demands of the work in the South African economy's output sectors. This belief among these researchers is consistent with the idea that there is linearity between the knowledge sector and the output sectors in the economy. But one of the studies also shows that a quarter of South Africa's graduates also work in sectors that they did not qualify in. This is according to the literature in Chapter Three. If this is the case, then the specialised knowledge that graduates acquire is not necessarily profitable. What is profitable is simply that their having higher education makes graduates trainable in other areas. Or, what is profitable could be other factors which I explore in later parts of this chapter.

In short, my extended analytic framework allows me to deconstruct the core feature in the Entrepreneurial University to demonstrate why in reality a linear relationship may not exist between the knowledge sector and the output sectors in South Africa. My extended analytic framework also allows me to show how the notion that more higher education graduates are required in the labour markets is affecting the core feature in the Entrepreneurial University. I say this because more and more universities are required to show that the knowledge they are transmitting to graduates helps them to use their knowledge to be responsive in the output sector. Therefore, universities are required to show that they are developing courses or programmes that are close to the needs of society and the economy. This is increasingly necessary in order for universities to secure more funding.

Figure 21: The Core of the Entrepreneurial University

Concept	**Definition**	**Code**	**Finding**
Core: Development and acquisition of applied knowledge	The relationality between applied ideas and the people constructing them.	Social Production of Applied Scientific Ideas (SPAI): network of interacting scientists who develop and exchange applied scientific knowledge.	Implicit assumptions in the studies: The studies assume a linear relationship between the knowledge sector and the output sector. Gaps in the assumptions that surface from analysis

			using the form feature: In reality, it seems that their having higher education makes graduates more trainable in other areas.

Next, I discuss another example of one of the studies that I grouped together with studies that considered the entrepreneurial contribution that universities in South Africa make to development. I look at one of the implicit assumptions in this study and the ways in which my extended analytic framework shows the problems with this assumption.

8.3.2.2 Labour market outcomes

As in the case above, the studies that I have grouped here seem to provide a linear formulation of the relationship between universities and development. These analyses tend to be informed by Human Capital Theory, which I introduced and explained earlier in the study, specifically in Chapter Three. However, using the norms feature of the Entrepreneurial University, I show why this way of analysis can leave gaps and seems to leave gaps in the assumptions of the studies included under this group.

Here I use the Entrepreneurial University ideal-type to analyse the study by Bhorat et al. (2017). Research shows that graduates from certain universities have higher employment rates than others. This was illustrated in Chapter Five. This confirms the theory that labour market rewards may not be allocated on the basis of levels of education and productivity. Rather, credentialism seems to play a role in the way that labour market rewards are allocated to graduates. Using the form feature in the Entrepreneurial University in my ideal-type construct, I show how the South African context divergences from my ideal-type construct. I choose the form feature because in Chapter Six I constructed each ideal-type so that the form feature in each one included the resources and the rewards that for part of the academic work process. Labour market outcomes are the rewards enjoyed by graduates.

Figure 22 below illustrates the form feature in the Entrepreneurial University ideal-type. In Chapter Six I defined this form feature as the overlapping scientific-economic community. I also stated that this means that the Entrepreneurial University functions as part of the scientific sphere and the economic sphere (or the knowledge market). This further means that the way academic work in this type of university is carried out is competitive. However, rather than South African universities simply working as part of the scientific sphere and the economic sphere, access to benefits like labour market rewards are allocated through the assessment of each university's reputation. Universities hence increasingly make reputation building a part of their work. The literature in Chapter Five showed that this occurs not only in South Africa, but across the world. For instance, universities are under pressure to build their reputations in order to compete not just so that their graduates secure employment, but so that they also compete to ensure that their overall reputations are good. This is essential so that they can compete in metrics like global university rankings, in a circular logic.

The main assumption in the Bhorat et al. (2017) study implies that the rewards enjoyed by graduates in labour markets are directly related to the education levels and productivity levels of graduates. However, there are gaps in the assumptions that surface from analysing the study using the form feature in the Entrepreneurial University. Academic work does not simply involve the preparation of graduates for the knowledge market, rather reputation building seems to also be an important part academic work. Thus, seemingly in reality human capital theory does not hold as much as some researchers believe it does. Rather, theories like credentialism seem to better explain labour market outcomes in the South African context.

Thus, my extended analytic framework allows me to deconstruct the features in the Entrepreneurial University to demonstrate why human capital theory does not hold as much as some researchers believe it does. My extended analytic framework also allows me to show how a phenomenon like credentialism affects the form feature of the Entrepreneurial University. Figure 22 below shows the form feature of the entrepreneurial university and the finding that I derive from analysing the study using this form feature.

Figure 22: The Entrepreneurial University Form

Concept	Definition	Code	Finding
Form: Overlapping Scientific and Economic Communities	University functions as part of the scientific sphere and the economic sphere i.e. knowledge market.	Academic Work for Science Making for the Knowledge Market (AMW): More competitive. Mainly vertical authority with some horizontality.	Implicit assumptions in the studies: The rewards enjoyed by graduates in the labour markets are directly related to the education levels and productivity levels of graduates. Gaps in the assumptions that surface from analysis using the form feature: Academic work does not simply involve the preparation of graduates for the knowledge market, rather reputation building is an important part academic work. Thus, seemingly in reality human capital theory does not hold as much as some researchers believe it does. Rather, theories like credentialism seem to better explain labour market outcomes in the South African context.

Next, I discuss a study that looked at the technology transfer pathway. I discuss one of the implicit assumptions in this study and the ways in which my extended analytic framework shows the problems with one of its assumptions.

8.3.2.3 Technology Transfer

In this section I look at a study that I categorise under the entrepreneurial contribution that universities make through technology transfer.

Using the purpose feature in the Entrepreneurial University ideal-type, I analyse the assumptions implied in one of the empirical studies that I have grouped here to show the problem with one of the study's assumptions. I choose the Entrepreneurial University ideal-type, because notions of technology transfer are often associated with innovation exchanged or sold on the market for profit. This innovation is described as requiring entrepreneurial initiative in order to kick-start technology transfer. I look at the purpose feature because the studies that I use as examples focus on the purpose of technology transfer in the wider economy and society. In the case of the study that I look at here, the study by the Technology Innovation Agency (TIA) (2019), the focus is on the local communities surrounding the universities that are being observed. As the literature review in Chapter Two showed, in the South African context the government aims to ensure that innovation policy and technology responds to the socio-economic needs of the country. So, using the purpose feature in the Entrepreneurial University in my ideal-type construct I show how the South African reality diverges from the purpose feature in the Entrepreneurial University ideal-type. This is an important finding, because the studies that I have grouped under this category are based on assumptions that imply that the purpose feature in the ideal-type exists in reality.

Figure 23 below illustrates the purpose feature in the Entrepreneurial University. In Chapter Six, I defined the purpose of the Entrepreneurial University as increasing the stock of applied knowledge for profit. In other words, there is an emphasis on increasing the stock of knowledge that can be commercialised for sale on the market. This is why the code is defined as knowledge for profit-making or for generating market value. This may include changes in the behaviour of academics who may begin working as 'academic capitalists'. In reality, however, a problem arises in the South African context where technology transfer networks may place emphasis on ensuring that innovation translates into profit in the market. The literature between Chapters Two to Five spotlighted the problem that under-developed contexts are characterised by patronage. Patronage can influence the political sphere and the market/business sphere. The literature in Chapters Two to Five also shows that universities in South Africa have been affected by the phenomenon of patronage as recently as last year, in 2020. Recall that the literature exposed the possible involvement of some members of the university sector in COVID-19 personal protective equipment (PPE) tender corruption. Another

research study also showed that some technology transfer initiatives in South Africa distribute resources according to patronage networks. Recall from that study that the end result was that white-owned Small Micro and Medium Enterprises (SMMEs) received disproportionately more opportunities to collaborate with universities than did non-white owned Small Micro and Medium Enterprises (SMMEs). This illustrates that markets are complex and they are especially complex in terms of their relationships with other institutions like universities. The profits generated from economic growth that arises through technology transfer may be enjoyed by those in positions of power in the network, whether they are prominent academics or owners of Small Micro and Medium Enterprises (SMMEs). In the light of this, I suggest that within the universities that are part of technology transfer networks there may arise academic patronage instead of academic entrepreneuralism, which is the concept used in Chapter Six to discuss entrepreneurial universities. The function of this in the system is a resource distribution based on those who are members of the political in-group. I hence argue that while the formal purpose of technology transfer may be an increase in the stock of applied knowledge that can be commercialised on the market for profit, contextual factors may hinder the extent to which this occurs. The more patronage occurs, the less efficient resource allocations may be, and the lower the profitability of technology transfer initiatives. I further argue that my extended analytic framework allows me to deconstruct the features in the Entrepreneurial University to demonstrate why in reality the market may not work perfectly in South Africa in the way some researchers believe it does. My extended analytic framework also allows me to show how a phenomenon like patronage affects the purpose feature of the Entrepreneurial University.

Figure 23: The Purpose of the Entrepreneurial University

Concept	**Definition**	**Code**	**Finding**
Purpose: Increasing the stock of applied knowledge for profit.	Increasing the stock of knowledge that can be commercialised.	Market Value (MV): knowledge for profit-making.	Implicit assumptions in the studies: The purpose of technology transfer is to generate profit making innovations that can be sold on the market. The technology transfer network works to this end.

			Gaps in the assumptions that surface from analysis using the form feature: While government policy statements and university policy statements may state that technology transfer ought to lead to profits on the market, in reality the contextual factors in South Africa seem to suggest that academic patronage can and may replace academic capitalism. It can thus affect the outcomes of technology transfer. This may lead to inefficiencies that stifle the profitability and the effectiveness of technology transfer initiatives.

In the next section I analyse the empirical studies that I categorised together because they were looking at the developmental contributions that universities in South Africa make to development.

8.3.3 Universities and their Developmental Contributions to Development

In this section I look at two studies that I grouped together with the studies that implicitly suggested that universities make a developmental contribution to development. As stated in the opening of this chapter, the studies that I have included in this evidence review can be grouped under more than one set of ideal-type relationships. This is because in reality

universities make contributions to development that are simultaneously abstract, entrepreneurial and developmental. Therefore, the same economic growth and labour market studies that I analysed in terms of their entrepreneurial contributions to development can also be analysed in terms of their developmental contributions to development.

Below, in section 8.3.1.1, I start with a study that looked at the developmental contributions that universities make through labour market rewards. I look at one of the implicit assumptions in the study, and the ways in which my extended analytic framework shows the problems with this assumption.

8.3.3.1 Universities and their developmental contributions through labour market rewards

I now turn to a study that considered the developmental contributions that universities make to development through labour market outcomes. I choose the study by Branson et al. (2013) as my main example. I use the form feature in the Developmental University ideal-type to analyse the empirical study. In Chapter Six I defined this form feature as the overlapping scientific-economic-political community. I also stated that this means that the Developmental University functions as part of the scientific, economic and political sphere. This further means that the knowledge market serves functions that contribute to the political project (which emphasises industrial and social transformation). Academic work is structured in a highly co-ordinated way through the state, and is hence very co-operative because of the vertical authority of the state. This is how I defined the code in Chapter Six. I use the form feature in the Developmental University ideal-type to analyse the assumptions implied in the empirical study that I have grouped here. The study by Branson et al. (2013) assumes that youth unemployment can be addressed through the provision of more higher education to young South Africans. However, this is not immediately the case as other conditions need to hold in order to for the crisis of youth unemployment to be addressed in South Africa. The literature in Chapter Two points out that developmental states have seemingly played a strong role in steering skills supply for their economies. That literature argues that the developmental states in the East Asian tigers allocated people into specific qualifications, and ensured that the economy and specific sectors in it were developed. Thus, when people completed their qualifications, jobs were available in the labour market for them to fill. This made it possible

for them to enter jobs and enjoy labour market rewards like earnings. The empirical studies that I have grouped here implicitly assume that the South African case works the same way, and that the state is capable enough to steer the university sector and the labour market to achieve these kinds of institutional arrangements. In reality, the South African case is such that the state is unable to support job creation. Again, in reality, the university sector also seems to have limited confidence in the ability of the state to allocate graduates into university qualifications under the pretext that there are jobs available for them to fill once they complete their qualifications. Therefore, I argue that my extended analytic framework allows me to deconstruct the features in the Developmental University to demonstrate why in reality the institutional arrangements between universities and the labour market seem poorly co-ordinated by the South African state. In other words, the South African reality diverges from the ideal-type Developmental University. My extended analytic framework also allows me to show how a phenomenon like a state with weak capabilities affects the form feature of the Developmental University. I have tabulated this finding in Figure 24 below.

Figure 24: The Form of the Developmental University

Concept	Definition	Code	Finding
Form: Overlapping Scientific, Economic and Political Community	Knowledge market as part of the national project	University functions as though the science sphere is part of the economic and political spheres. The Academic Work for Science Making (AWS) is co-operative. Mainly vertical authority with some horizontality.	Implicit assumptions in the studies: The studies seem to imply the assumption that labour market rewards are possible because the state is capable enough to determine the needs of the economy, see to it that students enter the qualifications needed in the economy and then enter the relevant jobs and earn incomes. Gaps in the assumptions that surface from analysis using the form feature: In reality, the South African state is seemingly not capable enough to steer the university sector and the labour market to achieve these kinds of institutional arrangements. In reality, the South African case is such that the state is unable to support job creation. Furthermore, it seems the university sector seems to have limited confidence in the ability of the state

			to allocate graduates into university qualifications under the pretext that there are jobs available for them to fill once they complete their qualifications.

I now turn to one of the studies that implied developmental relationships between universities and South Africa's society and economy through the technology transfer pathway.

8.3.3.2 Studies looking at the developmental contributions that universities make through technology transfer

In this section I discuss one of the studies that look at the developmental contribution that universities make through technology transfer. Then I discuss the reasons for which one of the assumptions in this study is seemingly partial.

I analyse the empirical study by Harsh et al. (2018) and show why the assumption that nano technology can or will lead to jobs may seem misleading in the context of South Africa's communities. These communities are riddled with socio-economic challenges. These, poverty, unemployment and inequality, were discussed in the literature review between Chapters Two to Five. Using the core feature in the Developmental University in my ideal-type construct, I show how the South African reality diverges from the ideal-type. This is an important finding because the studies I have grouped under this category are based on assumptions that imply that the core feature in the ideal-type exists in reality.

Figure 25 below illustrates the core feature in the Developmental University ideal-type. In Chapter Six I defined this core feature as the development and acquisition of applied scientific knowledge for industrial and social transformation. I also stated that this means that the applied ideas developed and acquired in the Developmental University are a result of the relationality between these applied ideas and the people constructing them. This further means that there is a network of interacting scientists developing and exchanging these

applied ideas among themselves. This is how I defined the code for the core feature in the Developmental University ideal-type in Chapter Six. In reality, however, rather than South African universities having the ability to develop and acquire knowledge, the literature in Chapter Two highlighted that many universities in the university system suffer from a weak academic core. From that chapter it became evident that this not only means that South African universities when compared to countries at similar stages of development have relatively lower numbers of academic staff with PhDs, but they also graduate lower numbers of Masters and PhD students and hence produce fewer research outputs. This is despite the example seen here of nanotechnology research. The study by Harsh et al. (2018) that I am grouping and analysing under the technology transfer pathway where universities make developmental contributions to development assumes that it is possible to generate employment within the local communities, where this technology transfer was developed simply because research and innovation has been carried out. The literature shows that in order for a process like technology transfer to occur there have to be a sufficient number of academics with PhDs working in the university. Staff need to have the capacity to dedicate the hours to a new spin-off or to supporting an existing business to take-up the new innovation for a sufficiently long period of time so that employment can be generated. This is but one condition required among many to see to it that a technology as complex as nanotechnology can either directly or indirectly contribute to employment in South African communities. At some point in their study Harsh et al. (2018), reflect on the fact that one of the disadvantages of this technology was that it might end up in waste streams. The authors of the study suggested that it was unclear to researchers whether this trade-off was acceptable or whether more time should have gone into the further research (Harsh et al., 2018). I therefore argue that my extended analytic framework also allows me to show how a phenomenon like an insufficient number of researchers or research hours affects the core feature of the Developmental University. I have tabulated this finding in the figure below.

Figure 25: Core of the Developmental University

I now turn to the empirical studies that simply treat universities simply as businesses that supply and demand goods and services.

8.3.4 Universities and their Contributions as Businesses

In this section of the chapter I discuss one of the studies that I grouped under the category of studies that only considered universities in terms of their contributions as businesses. As stated in the opening of this chapter, these studies did not treat universities as distinctive institutions, but rather as similar to any other business. I analyse one of the assumptions in this study and show the problems with this assumption in section 8.4.1.

Concept	Definition	Code	Finding
Core: Development and acquisition of applied knowledge for industrial and social transformation	The relationality between applied ideas and the people constructing them.	Social Production of Applied Scientific Ideas (SPAI): network of interacting scientists who develop and exchange applied scientific knowledge.	Implicit assumptions in the studies: The studies seem to implicitly assume that South African universities have a sufficient academic core to lead to direct and indirect effects from technology transfer like employment creation in communities. Gaps in the assumptions that surface from analysis using the form feature: In reality, South African universities seem to have such a weak academic core that it seems unlikely that academics have the hours to dedicate to either develop spin-offs or support existing businesses sufficiently so that employment is generated in communities that suffer from significant socio-economic challenges and likely needed additional conditions to facilitate outcomes like employment creation.

8.3.4.1 The Problem with the Assumption that Universities can be Regarded as Businesses

In this section I look at a study that explicitly assumes that universities in South Africa simply operate as businesses. The studies seem to suggest that universities do so by supplying and demanding goods and services to other businesses in the economy. This implies, according to these studies, that universities are in part constitutive of business-like features.

The main study that I analyse here is the study by Kleinsmith & Horn (2015). The first major problem with this study is that it seems to background the features that make universities universities. The study seems to neglect any real consideration of the core features of universities like the development and acquisition of knowledge. The study seems only to note these features on the periphery. The study also seems to neglect any consideration of the purpose feature of different universities, or the different sets of norms at work in different universities and what that may mean for the kind of knowledge or the graduates that different universities develop. Further, these sets of norms can determine the range of service and community engagement activities that universities may or may not participate in. This may include the sorts of business functions that universities may serve in society and the economy. It may also include a university's relationships with other businesses.

I use the core feature in the Abstract University ideal-type to show the problem with assuming away the features of universities and treating universities like businesses. For instance, even if universities demand items like facilities for their residential premises, in theory universities are not competitive businesses that demand goods or services to the same extent or at the same rate as might other businesses that need to attract customers. In theory, students make decisions on the basis of the academic merit of a university. Students are, in theory, not customers who can be attracted with attractive residential facilities that inflate the cost of providing higher education. If a university develops scientific knowledge that is rigorous, then even without any fancy residential facilities supplied by other local businesses to a university, the university would still be fulfilling its main functions. Therefore, the university must necessarily have all the features of a university, exist as a university and develop knowledge, graduates and carry out service/community engagement to make any of the indirect contributions that it makes through supply and demand. This is tabulated below in Figure 26.

Figure 26: Core of the Abstract University

Concept	Definition	Code	Finding
Core: Development and acquisition of knowledge	The historical relationality between ideas and the people constructing them.	Social Production of Scientific Ideas (SPI): network of interacting scientists who develop and exchange knowledge	Implicit assumptions in the studies: the studies assume that universities operate and transact the way that traditional businesses do. Gaps in the assumptions that surface from analysis using the form feature: The university must necessarily have all the features of a university, exist as a university and develop knowledge, graduates and carry out service/community engagement to make any of the indirect contributions that it makes through supply and demand. So, to neglect or treat them as an after-thought these features is seemingly absurd.

To summarise, the main issues discussed in this section were the lack of detailed analysis of the essential features that make universities universities. Because of this, although the study analysed here predicted that certain economic outcomes would arise from the establishment of Sol Plaaitjies university, the nature of these outcomes could not be specified. Further, the contribution that the university would make to the city as a university was not sufficiently analysed or predicted. This brings this section and this chapter to a close.

Conclusion

In this chapter, I used the functionalist ideal-types in my extended analytic framework to show that empirical studies that analyse the relationship between South Africa's universities and the development of its society and the economy leave us with partial findings. I have argued that my extended analytic framework allows me to deconstruct the features in each of the three ideal-type universities. In so doing it allows me to demonstrate why in reality the assumptions defined by the researchers conducting the empirical studies do not quite hold. Specifically, the empirical studies provide linear pathways of change or contributions through which universities stimulate development. Further, they assume causal relationships. In contrast, the ideal-types in my extended analytic framework show reciprocal or mutually constitutive relationships which will shift each other over time. These could also lead to different outcomes over time. The university is hence not an independent variable leading to a predicted change. It is a part of a moving system, and as the system moves, the university changes, and that in turn will shape the roles that it can and cannot play in the long term.

On the basis of the analysis in this chapter, my second finding in this study is that although the pathways described and the assumptions framing each study are presented as implicitly entrepreneurial or developmental, the outcomes with respect to these types of relationships between South African universities and development seem inconclusive. These findings answer sub-research question 1. My extended analytic framework hence also allows me to show how real-world phenomena affect each of the features of universities. Therefore, a second key finding from this chapter is that there is a two-way relationship between universities and development in South Africa. To elaborate, what particularly comes out is that some of the studies ignore the core role that universities can and do play in development. Further, the core role is by no means guaranteed in the context of substantial material deprivation.

In the next chapter I analyse interview data from respondents in the South African university sector. Again, I use the three functionalist ideal-types in my extended analytic framework to analyse the data. Given that the relationship between South African universities and development seems neither significantly entrepreneurial nor developmental (at least

according to this chapter), the aim of the next chapter is to establish what the nature of the relationship is according to respondents' perceptions.

Chapter Nine

Interview Data Findings

Overview

The findings from Chapter Eight showed that the empirical studies under review were unable to adequately capture the way the dynamics between universities and development in South Africa work. I elaborated in detail why this is the case in the conclusion of the last chapter. In this chapter, I analyse perceptual data from key actors in the South African higher education system. I use codes to categorise the data according to the different types of pathways of change that these perceptions correspond to. I also deconstruct the pathways according to the different ideal-types of universities they correspond to. I further deconstruct these perceptions according to the different features in the ideal-type universities that each corresponds to. I find that most of the data corresponds to none of the three ideal-types of universities that I have taken from the literature. Rather, the perceptions suggest that the contribution of universities to South African development is understood as what ought to be an Ubuntu-welfare contribution. This stance from the interview data is very much determined by South Africa's socio-economic context. This normative aspiration has led to some recent changes in university structures and policies to meet the social needs of actors in the sector. This is the third finding from this study. While this is on one level admirable and understandable, it is also possibly concerning, because it could threaten the core nature of the university, and then, by implication, the ability of the university to contribute to development.

The analysis of interview data using the three ideal-types constructed in this study tested whether respondents' views on the relationship between universities in South Africa and the development of society and the economy converge with or diverge from the theories that underpin the empirical studies analysed in Chapter Eight. The main finding is that these views mainly diverge from what came out of the empirical studies in the previous chapter.

This second set of data from 33 participants is important because the perceptions of those in the university sector surfaces a preoccupation with context. This leads to views that ignore the specificity of a university, which could undermine the university's core work in the long term. In addition, the views of respondents may have a bearing on the way policies and practices relating to universities and development change over time. This is especially true with regard to the respondents who work as academics or managers in the university sector, and respondents who are members of government departments or regulatory bodies in the university sector.

I group the findings from this data into 10 themes. I did this by picking out key words or phrases that respondents referred to when speaking. For example, race or apartheid were dominant features of many interview discussions. Each time respondents mentioned these words and phrases I noted it and grouped those data points together. Another example of a dominant theme was the three socio-economic challenges of poverty, unemployment and inequality in South Africa. There were 10 themes in total. The first 3 themes, discussed in section 9.1., answer research question 1 (What do existing notions say about the relationships between universities in South Africa and the development of South Africa's society and economy?). The next 5 themes answer both research questions 1 and 2. The last 2 themes, discussed in section 9.2., answer only research question 2 (What theories are emerging about the relationship between South African universities and development?).

Several issues came up from the perceptions presented through these themes. These ranged from epistemic access and physical access, funding, and the under-preparedness of students entering the university system. Other issues included identity and alienation, student housing, tensions surrounding private returns. Entrepreneurship, graduate employability, research and innovation, community engagement, citizenship as well as dialogue were also some of the issues raised.

9.1 First Group of Themes: The Academic Core, Entrepreneurial and Developmental Notions of South African Universities and their Contribution to Development

In this first section, I begin by presenting the first group of three themes that emerge from the interview data. I make two overall arguments in section 9.1.1:

1. The first is that only a small focus among respondents was placed on the academic core of universities in South Africa. Recall that the academic core refers to the development and acquisition of knowledge.
2. The second argument is that decolonisation was raised frequently when referring to the academic core in South Africa.

In section 9.1.2 I argue that there is limited evidence to demonstrate that respondents' views on the relationship between South African universities and development correspond to notions that there are mainly entrepreneurial dynamics in the relationships between South African universities and development.

In section 9.1.3 I discuss the claim that there is only marginally more evidence to suggest that respondents' views on the relationship between South African universities and development correspond to notions that there are mainly developmental dynamics in the relationships between South African universities and development.

This data answers research question 1: What do existing notions say about the relationships between universities in South Africa and development? The notions that exist from key stakeholders highlight the absence of strong notions relating to the academic core, and highlight the emphasis on decolonising the academic core. Further, they show a limited belief among respondents that the universities in South African do or should contribute to development through entrepreneurial dynamics. Only to some extent do respondents' views suggest that universities in South African do or should contribute to development through to developmental dynamics.

9.1.1 Theme 1: The Academic Core and Decolonisation

I start this section by presenting data that speaks to respondents' views about the academic core in South African universities. This is an important theme because based on the literature in Chapters Three and Five, when developing countries are encouraged to emulate economies with strong knowledge components, strong emphasis is placed on improving the academic core of universities. Based on that literature the academic core is assessed by looking at the number of staff with PhDs in universities and their research outputs. These outputs include graduate students of Masters and PhD programmes, as well as publications. The academic core is also assessed in terms of publications and graduates from the science, technology, engineering and mathematics (STEM) fields. There is acknowledgement among respondents of a weak academic core in South Africa. Just under a third of the respondents, 10 in total, referred to the problem of a weak academic core. However, it was not spoken about in a very urgent tone.

Specifically, all 8 higher education experts interviewed highlighted this either explicitly or implicitly. In contrast, only 1 student and 1 member of society referred explicitly to this. In the main, this view was expressed through descriptions of the relationship between the poor quality of primary and secondary education in South Africa, and how this affects higher education. All of these respondents felt that the lack of a strong foundation at the primary and secondary levels of education inhibits the academic core later at the level of higher education. Respondents also highlighted that this problem mainly affects black learners from poor socio-economic backgrounds.

This problem was also expressed in terms of the inability of the South African secondary education system to prepare students to enter the science, technology, engineering and mathematics (STEM) fields in universities. Respondents expressed that as a result the university system struggles to graduate the already low numbers of students from the science, technology, engineering and mathematics (STEM) fields. The main argument is that learners come into the university weakly prepared and as a result struggle to complete degrees in these fields. This was highlighted by respondents especially with respect to black students.

Below are three quotes from 1 student representative, 1 government official, and the Chief Executive Officer (CEO) of the Centre for Higher Education (CHE) at the time supporting this claim. I analysed these views using the Abstract University's core and form features because none of the views related to this theme were necessarily consistent with entrepreneurial or development notions of the academic core.

Figure 27 - The Academic Core

The current system keeps knowledge essentially at the top. The doors to higher education have been opened, but the highest dropout rate is young black students from disadvantaged backgrounds. Student Representative Council Member at a Historically White University, 23rd January 2018: Line 93-99	**Feature:** Weak Abstract Core **Definition:** Development and acquisition of knowledge. The social production of ideas (SPI) is compromised because the network of interacting scientists who develop and exchange knowledge is compromised. This is because it fails to integrate certain members of society. **Description:** There is some developmental orientation because of the emphasis placed on the race of the students that drop-out (and thus the need for transformation), however the main issue is the weak academic core resulting from the weak balance between the vertical and horizontal relations among those developing knowledge and those acquiring it. **Why I choose this feature: Knowledge is the core of the university's work.**
You go to high school where the maths becomes exciting and in the process of excitement you start realising you don't have enough teachers who can offer you those classes, maths and science. Director General Department of	**Feature:** Weak Abstract Core **Definition:** Development and acquisition of knowledge. Again the network of interacting scientists who develop and

Science and Technology, 25th September 2018: Line 25-27 *If you go to Thohoyandou you won't see a child from Mbili School walking around. If you walk around elsewhere you will see children walking around in school hours, you find teachers sitting in the staff room… By the time the unprepared kids hit varsity that is where the quality of education comes in. It is the single biggest threat.* Person in a senior management position at the Department of Science and Technology (DST), 25th September 2018: Lines 159-162	exchange scientific knowledge is compromised because of the poor preparation of learners. In other **Description:** The development and acquisition of knowledge is weak in the university because it is inherited from the lower segments of the education system. Of particular interest is that part of the reason for this is the lack of commitment from teachers or the community. **Why I choose this feature:** The contents and quality of knowledge are core to the university's work.
And the thing that I am working on research universities there is no research universities in Africa where there are no fees as a general statement. Take fees out of the South African system and South Africa is not going to have research universities either because it is fees that helps research universities get additional funding that they can use in different ways. Person in a senior management position at the Centre for Higher Education (CHE), 25th September 2018, Line 160-163	**Feature:** Weak Abstract Form **Definition:** Compromised scientific community. Strengthening and advancing the intellectual network (through funding that enables research) is emphasised. **Description:** This stakeholders is highlighting the critical role that research plays in the formation of a university system. Without this as an aspect of academic work, then the development of knowledge is stifled. Fees enable the university to acquire the infrastructure and staff required in order for research to be conducted. **Why I choose this feature:** How research is funded and the other elements required in order to facilitate it are matters of form.

The problem of the weak academic core was not a dominant theme in the interview data. As stated in the beginning of this section, only a third of respondents raised this.

The need to advance the decolonial project came up much more frequently when the development and acquisition of knowledge was discussed. Just under half of the stakeholders (15) interviewed referred to this either implicitly or explicitly. The quotes below come from the CEO of the South African Graduate Employers Association (SAGEA), 2 academics and 1 student representative. 1 of the academics seems to agree that decolonisation is imperative. However, on the point of language, she highlights that it is not necessarily possible to lecture in a language other than English in a multi-cultural context like South Africa. Not many respondents flagged the possible challenges around decolonisation, especially given an already weak academic core. I use the core and norm features in the Developmental University ideal-type to show that. I choose this ideal-type because it foregrounds social transformation (although it treats this as an outcome of industrial transformation). In the table I explain why I choose each of the features that I do to anaylse each data point.

Figure 28 - Decolonisation

I think what we need to do is to make sure that the research for the PhDs in South Africa is brought to life and stories told are current, academics need to participate actively to contribute to challenges. Person in a senior management position at the South African Graduate Employers' Association (SAGEA), 8th October 2018 : Lines 176-180	**Feature:** Developmental Core **Definition:** Development and acquisition of applied knowledge. Social Production of Applied Ideas for social transformation. Network of interacting scientists who develop and exchange relevant and applied knowledge. **Description:** The development and acquisition of knowledge is weak in the university because it is lacking the characteristic of contextual relevance. Relevance is regarded as a necessary condition for social transformation. **Why I choose this feature:** The informant is describing the contents of the knowledge

	that he/she believes should be developed and acquired
This is a major thing…decolonisation. I think decolonisation was started soon after the fees must fall or during that time but I don't think we are engaging enough… Academic at a Historically Black University, 3rd May 2018: Lines 11-12	**Feature:** Developmental Norms. **Definition:** Development and acquisition of applied knowledge. Building the national identity through debate and disagreement in order to re-contextualise and re-define knowledge so that it is contextually relevant. **Description:** The decolonial project cannot take place if there is no local discourse around it to tell South African stories in the view of this respondent. **Why I choose this feature:** I choose the norms feature because the informant suggests more engaging should be done
How can we decolonise if I must reference a dead white man? My ideas are mine. Just because someone else had the idea, doesn't mean it is not mine. Students cannot feel like knowledge workers if we are not allowed to participate as makers of knowledge. Student from a Historically Black University, 3rd May 2018: Lines 239-242	**Feature:** Developmental Core **Definition:** Development and acquisition of applied knowledge. The relationality between applied ideas and the people constructing them. **Description:** Part of the decolonial project that this respondent raises is the difficulty of locating oneself in the global network of ideas particularly as a process of decolonising knowledge. **Why I choose this feature:** The informant is describing the contents of the knowledge that he/she believes should be developed and acquired
My students want me to explain why they do not need English, but English is an important medium of communication. I cannot teach them in their languages.	**Feature:** Developmental Norms **Definition:** Collectively oriented norms where building national identity is

In this province we have like 3 languages. Academic from a Historically White University, 23rd April 2019: Lines 201-202	foregrounded. Concern with how the political nature of what we are taught, and how it is taught. **Description:** In this instance, the stakeholder is problematising the aspects of the way that her students understand the decolonial project. She implies that the method and technique for knowledge acquisition among students must be maintained by using the language that gives students access to this knowledge. In this case that language is English. **Why I choose this feature:** The informant is concerned with the accessibility of the knowledge she teaches and thus the communist norm.

All the views discussed above seem not very consistent with the Abstract University ideal-type. Rather, when the development and acquisition of knowledge is described, decolonisation is foregrounded much more.

Next, I look at the extent to which respondents' perceptions indicate entrepreneurial and developmental notions of the relationships between South African universities and development. I do this using the data presented under themes 2 and 3 below. Based on this data, I find that perceptions that are consistent with the dynamics in an Entrepreneurial University are not very pronounced among South African respondents. Furthermore, only marginally more emphasis seems to be placed on notions that are consistent with the dynamics of a Developmental University.

9.1.2 Theme 2: Only Very Marginal Aspects of the South African University System Display the Entrepreneurial University

In total, 11 of 33 stakeholders mentioned entrepreneurialism implicitly or explicitly.

Only 3 stakeholders spoke explicitly about entrepreneurialism. Below are quotes from these respondents. These are taken from CEO of the South Africa Graduate Employers Association, the Vice Chancellor of a historically black university, and the then CEO of the National Student Financial Aid Scheme (NSFAS). In addition, 7 stakeholders referred implicitly to the need for entrepreneurial attributes among students or staff in universities, or in the structures of universities. I use the Entrepreneurial University ideal-type to analyse the data points presented below. In each table I explain why I have chosen the feature I have chosen to analyse the data.

Figure 29 - Notions Indicating an Entrepreneurial University

It costs an excess of half a million rand to get to university so it is important to get a return on investment of that expense. Person in a senior management position at SAGEA, 8th October 2018: Lines 37-41	**Feature:** Entrepreneurial Form **Definition:** Overlapping Scientific and Economic Communities. Rewards for students, academics and their departments are monetary. **Description:** The input-output logic of the market is foregrounded and the proportion of the return must exceed the cost for the graduate and the wider economy. **Why I choose this feature:** The informant is spotlighting the role that universities play in supporting the ability of other institutions and activities in generating profit. This is a matter of ends and the sorts of rewards generated which are part of the form feature of the university.
…all of it and starting from the beginning education should be and is a public good no doubt and that public good but not so much for the reasons that are often kind of put on the table but yes we would need higher education for the market for employability… Vice	**Feature:** Entrepreneurial Purpose **Definition:** Increasing the stock of applied knowledge for profit. Scientific knowledge is intended to enable the creation of market value for profit.

Chancellor of a Historically Black University, 23rd September 2018, Lines 77-79	**Description:** The market and graduates' ability to work productively in the economy is foregrounded. **Why I choose this feature:** The informant's view highlights what higher education in his/her view should do in society.
When you know how business schools have become such the talk of the town? Is because they have designed their content in partnership with the public sector and the private sector, so they designed fit for people's curriculum and it therefore becomes relevant and intriguing for the participants and that is why sort of GIBS became a new motivation factor for everyone. If you 1have not been to GIBS you haven't started. So, there could be some learnings there that... even our courses we can re-design with public sector focus groups. There is enough chartered accountants interest groups that you can put in the room and re-design the entire curriculum and then you have got enough engineers to get into a focus group and re-design it and get into a culture of reviewing that every three to five years having those focus groups, and therefore you are teaching what is relevant, what is current and there are enough people trying to write text books in a much more friendlier way that is relevant to the practice and have enough more case studies. Former person in a senior management position at the National Student Financial Aid Scheme (NSFAS), 25th September 2018, Lines 184-194	**Feature:** Entrepreneurial Form **Definition:** Overlapping Scientific and Economic Communities. Regulations take on the free-market form (minimal interference from the state) and the university collaborates with whomever it must in order to respond to the needs of the market. Authority is decentralised and bottom-up in this instance. **Description:** Emphasis is placed on opening up the network of scientists who develop and exchange applied knowledge. Research, teaching and learning practices break down the disciplinary boundaries in this kind of university. However, in this case it is the boundaries regarding who can participate in the way that scientific knowledge is organised and taught to students. **Why I choose this feature:** The informant is describing the set of actors which he/she believes can and should partake in developing the curriculum. These actors are part of the form feature of the university.

Based on the findings here, there is a sense among respondents that emphasising profit is an important imperative. However, it cannot be argued from this that notions that correspond to

the Entrepreneurial University ideal-type are significantly prevalent in South Africa's university system. This is because based on this data entrepreneurial notions are a minority view.

Below I move on to what the data says about notions that are consistent with the dynamics of a Developmental University.

9.1.3 Theme 3: Aspects of the South African University Display more of the Developmental University Types of Dynamics

The data under this theme mainly emphasises the regulatory role of the state and the need for more state steering. Of the 33 stakeholders, 19 felt that the missing political will from the state left the university system particularly weak. 1 stakeholder, the CEO of the Centre for Higher Education, highlighted the need for the state to steer 'human capital' planning much more aggressively. He argued that the state should penalise students who leave the country to work outside of South Africa.

The subject of state steering was especially pronounced in relation to the financing of higher education. All stakeholders commented on fees. At the time the interviews were conducted the Fees-Must-Fall student movement had taken place just a few months prior. A lot of debate continued among the public and in the media on the subject of university fees during the interviews. On the day that the interview with the former CEO of the National Student Financial Aid Scheme (NSFAS) was conducted, staff at the National Student Financial Aid Scheme (NSFAS) headquarters were protesting the terms of their employment (specifically, their wages). This came very much on the back of the Fees-Must-Fall movement, a part of which was targeting the need to end the outsourcing of workers in universities in order to establish better employment packages for these workers. One can argue that the Fees-Must-Fall movement spread a kind of 'protest fever' across various segments of the South African higher education sector.

Of the stakeholders interviewed, all student representatives and members of civil society highlighted the need for the state to provide free higher education. 3 representatives of government broached this issue while still indicating that it was constrained by the limited

money in South Africa's public purse. It is in this context that the quotes below were made. The views presented were from the Director General of the Department of Science and Technology (DST), the CEO of the Centre for Higher Education (CHE), 1 academic, and 1 Vice Chancellor from a historically white university. I use the Developmental University ideal-type to analyse the data points presented below. In each table I explain why I have chosen the feature I have chosen to analyse the data.

Figure 30 - Notions Indicating a Developmental University

If we are really to create that you are therefore able to have knowledge workers knowledge because such workers are what is going to save us from going to dig the holes in Limpopo in North West in Mpumalanga to extract coal and platinum to send it abroad and back to SA as convertors. The knowledge workers will ensure that you can execute knowledge to beneficiate. Then you will be able to sell products. The story of Finland moving from a resource-based to a knowledge-based economy with a structure that was like ours- forestry and stuff like that cannot be driven without education. That's why I really see education as the single most powerful thing. You might not have gold or diamond or platinum but if you have education…. You can ask the Singaporeans. If they want to put up a building they must reclaim from the sea. But everyone wants to be there because there is educated human capital… Person in a senior management position at the of DST), 25th September 2018 : Lines 95-112	**Feature:** Developmental Purpose **Definition:** Increasing the stock of applied knowledge for structural transformation and nation-building. The instrumental political value of knowledge is regarded as a significant purpose **Description:** This respondent's view highlights that the main purpose in this type of university is increasing the stock of applied knowledge that can be used for structural change. However the focus is on advancing the country's stage of development, and then distributing the benefits of profit to achieve equity, socialisation and nation-building. **Why I choose this feature:** The informant believes that the purpose of knowledge is to achieve industrial transformation
But, they're going to get such a private benefit from getting that free education that they going to have to pay back. But, when they start working they've got to pay back, they've got to pay back	**Feature:** Developmental Form **Definition:** Overlapping Scientific, Economic and Political Community.

something at least because otherwise they just have huge public benefits. And it's not clear what kind of contribution they are making to the public good. But, if they are earning a salary and they are working then they should pay back... the middle lot, I think they should also pay back… Person in a senior management position at the CHE, 25th September 2018, Lines 147-151	Regulations take on the co-ordinated form (a degree of steering from the state). Authority is centralised and top-down (vertical). **Description:** The respondent seems to think that the public good role of higher education must be aggressively pursued. The implication is that the state would have to see to this through a centralised set of regulations. **Why I choose this feature:** The informant is referring to the private rewards that graduates receive from higher education, and the ways in which these can be redistributed. This is a matter of form because certain regulations would be required.
It is not a public good if graduates do not pay back directly into the system. This is why I am not sure about the thing of free education. Academic at a Historically White University, 25th February 2019, Lines 236-237	**Feature:** Developmental Form **Definition:** Overlapping Scientific, Economic and Political Community. Regulations take on the co-ordinated form (a degree of steering from the state). Authority is centralised and top-down (vertical). **Description:** The respondent seems to think that the public good role of higher education must be aggressively pursued. The implication is that .the state would have to see to this through a centralised set of regulations. Given the weak capabilities of the South African state, the stakeholder does not think it is possible for the state to

	regulate the university sector should free higher education be provided. **Why I choose this feature:** The informant is referring to the private rewards that graduates receive from higher education, and their lack redistribution. This is a matter of form because certain regulations would be required.
But, what I heard from students during the protest was we don't actually want to be those people the sort of people that are envisaged in programme level outcomes. I don't like these things called graduate attributes who decides what the graduate attributes have to become is it for us, for me sitting here to write to this graduate attribute and then to say to every single student in this university that is who we want you to become not... so I heard students saying that is not who we want to be we want other roles in society other than the ones you have set up for us… Vice Chancellor (VC) at Historically White Rural University, 25th September 2018, Lines: 61-65	**Feature:** Developmental Norms **Definition:** Nationally oriented norms. Method and technique emphasise an organisational structure that is more responsive to both industrial and social transformation (-DMTE). The sense of national ownership is not just over scientific knowledge itself, but over what is done with the knowledge and the instrumental value of knowledge for the political project. **Description:** The respondent is expressing the rejection of a narrow, instrumental emphasis on being employable in a business. He is highlighting the instrumental role that graduates play in the national political context. **Why I choose this feature:** The informant understands knowledge as part of social transformation. He further believes that students should have a broader spectrum in terms of

	the citizens they can develop into, rather than the narrow graduate attributes focus. These are normative judgements.

With these three quotes, I make the claim that the South African university system is marginally more Developmental than Entrepreneurial. We will see that the themes that follow in the next sections often intersect with developmental theory at some point or other. However, they place emphasis on racial transformation and on welfare more than they do on any other sorts of development outcomes.

The next set of themes starts by substantiating the claim that racial transformation is important in the relationship between South African universities and development. They highlight that South Africa's past necessitates transformation.

9.2 The Second Group of Themes: Racial Transformation and Activism for Post-Apartheid Redress

This section presents two big themes which emerge from the interview data relating to the democratic transformation agenda within South Africa's university system. The fourth theme of this study raises the issue of ongoing racial injustice or the disadvantage that non-white groups continue to experience. I present this theme in section 9.2.1. The fifth theme raises the importance of activism among respondents in South Africa's university sector in order to counter ongoing apartheid related injustices. I present this in section 9.2.2. This data answers research question 1: What do existing notions say about the relationships between universities in South Africa and development? The notions that exist highlight the need for universities to contribute to post-apartheid redress and transformation.

9.2.1 Theme 4: A Dominant Post-Apartheid Transformation Narrative of Development

Every stakeholder interviewed discussed South Africa's apartheid history in some way or other. They discussed it either explicitly or implicitly in terms of the particularly difficult experiences

of black students or academics. Or they discussed it in terms of their own difficult personal experiences. All respondents described the 'public good' role of universities as necessary in addressing the injustices of the past in South Africa. Those who spoke with the most enthusiasm about this were respondents in the government sector, student representatives and civil society groups.

I categorise the transformation agenda as part of the Developmental University, because this type of university emphasises the national political project. The interview data further substantiates the last theme in the previous section: that the perceptions of South African respondents are more consistent with the dynamics in a Developmental University than an Entrepreneurial University.

The quotes below come from 1 student representative, 1 representative from a civil society organisation called Education First, and 1 higher education expert.

Figure 31 - Notions of the University's Role in Post-Apartheid Transformation

From the fees must fall protests 2015, 2016, 2017 students were very clear. Where we talk about injustices of our past, the dismantling of the apartheid legacy, it's extremely important that students who deserve have access to higher education. Student Representative Council Member at a Historically White University, 23rd January 2018: Lines 52-56	**Feature:** Developmental Form **Definition:** Overlapping Scientific, Economic and Political Community. Politicised Culture and Organisational Structure **Description:** Although the points here are largely about the form of the university, the tone of these two quotes links the form with the symbols that this form portrays. Protest action symbolises the resistance against issues like where funding comes from and how that shapes institutional culture. **Why I choose this feature:** The informants discuss representation, which is a matter of who is visible, who participates
In terms of Institutional culture: what you find is that a lot of funding still comes from the Afrikaans community. Even within the context of council, a lot of those who are in the university system pre-1994 still occupy positions of power. Institutional culture becomes a hard thing to change. At (our university) I was shocked I was driving into campus yesterday I saw NG Kerk they were having a getaway for first year students, but only Afrikaans first year students.	

Student Representative Council Member at a Historically White University, 23rd January 2018: 214-224	and who makes decisions. This is a matter of form.
In my lectures for history I just felt so disadvantaged. As a black, when white students could discuss seeing the historical places the lecturers were teaching on, I didn't even know where on the map those places were. It limited my education so much. This is why I became an activist. I wanted us to have a voice in these lecture halls. Education First Representative, 12 June 2018, Lines 299-300	**Feature:** Developmental Norms **Definition:** Collectively oriented. Method, technique and organisational structure made more responsive to nation-building opportunities (-DMTE) **Description:** This respondent is concerned with the alienating way in which non-white individuals like him experience the university. He later implies that knowledge or pedagogy can and should be applied in ways that advance racial transformation. **Why I choose this feature: the respondent is referring to normative issues by discussing inclusivity.**
At the University of Kwa-Zulu Natal UKZN) we saw some of the very first non-white professionals taking their place in important roles in society...From small forms of resistance against the Apartheid government, to having ministers of health and what-not being UKZN alumni today. The education we got was a tool to challenge Apartheid. Today this seems to have been lost and less and less of the public good role of the university is on situating graduates in critical institutions in order to transform these. Higher education expert, 12 June 2018, Lines 12-15	**Feature:** Developmental Purpose **Definition:** Increasing the stock of applied knowledge to achieve equity, socialisation and nation-building. Emphasis is on the political value of knowledge for formulating a national identity. **Description:** This respondent is bringing attention to the role that knowledge played in enabling the resistance. Not only was the university serving as a site for resistance, it was also a vehicle that enabled graduates to occupy important roles in some of society's most important institutions.

	Why I choose this feature: The purpose of knowledge according to the informant's view is to be used to transform society.

The last quote draws attention to the dissatisfaction of respondents who see transformation as still lacking in institutions.

The next theme highlights the role that several of the respondents have played as activists in the South African university sector. All of the respondents who discussed this felt that institutional transformation required organised resistance. The views under this 5th theme begin to take a turn towards the welfare of not only the university and its staff and students, but also the local community. Therefore, the next half of this chapter takes a turn, because the views here can be grouped together based on their overarching welfare and communitarian tone.

9.2.2. Theme 5: Activism Emerged as an Important Issue within the Community

Because several of the quotes below do not immediately fit into the Abstract, Entrepreneurial or Developmental University ideal-types, I categorise these quotes as falling under a 'community-oriented' type of university. I will show below that the theme of community arises significantly from these quotes. I define the core, purpose, norms and form features for these community-oriented notions of the relationships between universities in South Africa and development as I go along. I mainly draw from the public spheres and public good literature in Chapter Three.

Of the 33 stakeholders that were interviewed, 26 had a background that included some kind of university or general activism either in the past or the present. Or they were somehow involved in non-profit organisations where they participated in activities directed towards social justice. If not, then they had done service work as part of their community-engagement within the university. They described their work in the university sector as demanding more from them than simply what they were paid to do or formerly mandated to do. This they regarded as a form of activism that was necessary in order to achieve change on the ground.

Of the quotes below, 1 comes from a student representative and 1 is from a higher education expert. I choose these two quotes in order to juxtapose the two types of activism that came out from the data—the community-oriented and the developmental types of activism.

Figure 32 - Activism as a Central Part of the University's Contribution

It is my fifth year. It's a three year degree but politics has always been my real passion more than being a student. Within the city I sit on three committees—economic and spatial planning, health committee, housing committee. I was deployed by the DA to tackle student specific issues. Housing is a huge issue for students. I essentially look at how we can create affordable accommodation for young people in (our city). This city has the highest concentration of students in the country. But there are often council meetings which get disrupted, and I also have to do party work, I am in charge of Democratic Alliance Students Organization (DASO) inside the region. Student Representative Council Member at a Historically White University, 23rd January 2018: Line 31-40	**Feature:** Community-Oriented Form **Definition:** Not only an overlapping Scientific, Economic and Political community, but there seems to be an emphasis on the community within the geographical location of the university. Put differently there is a strong Community/Welfare dimension to this. The academic work process is community oriented and is entirely horizontal/flat. **Description:** The respondent here is pointing out the need for the local government to make a co-ordinated effort with the university in order to meet the housing needs of students. This statement reflects a welfare orientation. Although it seems Developmental, it is not because the relations between stakeholders are completely flat. **Why I choose this feature:** The actors in the network and how they are organised is a matter of form.
But, this would be an organisation that we are not that interested in labour issues we're not really a union that's why we call ourselves a staff association, we want to engage with issues around academic freedom and so forth, and actually speak also to the issue of the university as a public institution,	**Feature:** Developmental Norm **Definition:** Nationally oriented norms. This means that their status and reputation is strongly attached to the identity of South African academics.

and it is actually part of our constitution that we want to advance the ideal of the university as a public institution. You know, so that is the specific focus so not so much labour issues per se, it is more around what does it mean to be an academic today in South Africa, with all these pressures coming down on us that are seeking to curtail academic freedom you know so… Higher Education Expert at a Historically White University, 22nd March 2018: Line 60-68	**Description:** This respondent seems to emphasise that identity politics of being a South African academic. As such, what is also at the fore of the work that activists in the university are fighting for is their autonomy in this context. **Why I choose this feature:** The respondent is describing a concern with the balance between national interests and the scientific norm of disinterestedness.

In addition to this juxtaposition, the CEO of the Centre for Higher Education (CHE) contested the assumption that activism is a good thing. This was the only stakeholder who problematised the effects of the Fees-Must-Fall movement. He highlights below that the absence of a pact among society (the source of which should be the state) led to adverse effects because of this activism. He also felt that certain groups in society pursued their interests to the detriment of other social groups that do not benefit from their activism.

Figure 33 - Activism and the Possible Challenges it Raises

That study didn't actually show that how those same students fucked up the university, paralysed it, that the university actually provided the space in which they could have a conflict with the government and that is what happened in most African universities. The socialisation of the students became part of the contestation amongst the elite and the universities who couldn't manage it. So what a lot of these students and these African elite in African universities contributed to the social good is very, very unclear. As a matter of fact, you could argue that they contributed to the opposite, they contributed to internal strife to conflict between the elite they never formed a pact, they were as much part of the problem as they even more part of the problem because they went to university. So, again, a key issue is the contribution to the	**Feature:** Developmental Form **Definition:** The Academic Work Process for Commercial and Political Science Making (or Commercial/Political Scientific Academic Work Process - PCSAW). Lack of vertical authority from the state to steer the national project **Description:** This quote illustrates the absence of the pact required in order for South African universities to have Developmental University type characteristics. According to this respondent, the lack of social contract means that some members of society are

public good depends on the social contract in the society. Person in a senior management position at the CHE, 25th September 2018, Line 113-121	able to organise themselves for their own interests at the expense of the interests of others. **Why I choose this feature:** The informant in the university is highlighting that the actors in the university and the way that they organise are affected by the weak capabilities of the state. The form of the state affects the form of the university.

Based on this data South Africa's racial history creates the need for transformation and activism.

Next, I turn to the third group of themes. These look at the broader socio-economic factors facing South Africa. These are important, since broader external socio-economic factors have inspired activism in the university according to the views below.

9.3 Third Group Themes: External Socio-economic Factors and the Community as a Priority Public Sphere

These quotes show how the university is affected by external socio-economic factors, or can effect change in relation to these factors. These quotes indicate perceptions that are consistent with the Developmental University to the extent that they spotlight the need for transformation. I show this in section 9.3.1. However, these perceptions are evidently also very welfare oriented. I show this, too, in that section. Section 9.3.2 looks at the emphasis among respondents on the importance of the communities surrounding universities, and the need for universities to be responsive to their needs. Finally, section 9.3.3. shows that the fencing off of universities from communities is seen by respondents as a barrier to the public good role that universities can serve. This data, like the previous, answers research question 1: What do existing notions say about the relationships between universities in South Africa and the development of South Africa's society and economy? The notions that exist highlight the link between socio-economic factors and the sorts of contributions that universities can and ought

to make to development. This data also answers research question 2: What notions are emerging about the relationship between universities and development in South Africa and how do conceptions of the public good and the public sphere contribute to these emerging notions? These notions, as I show below, relate to ideas that the community should be prioritised by universities and the contribution they strive to make towards development.

9.3.1 Theme 6: Concern Regarding the Relationship between Socio-economic Factors and their Effects on the Way the University's Contribution to Development is Understood

While the teaching, research and community engagement activities were discussed by all respondents to different degrees, there was a clear slant towards the public good as serving the community. Teaching and research were described as necessary to support the community.

Of the 33 stakeholders, 23 referred in one way or another to the welfare needs of the communities that universities are located in and did so highlighting the socio-economic constraints in these communities. These views could be grouped as falling under a Developmental University, because developmental theory can be of the social developmentalist variety. However, these views can also fall under a communitarian type of theory because they are very particularistic in nature. The problems raised below are relevant nationally but can also express themselves in a very specific way depending on the shapes they take in different communities. Respondents seemed much more interested in the particular way that communities experience these problems.

Socio-economic issues in communities came up most strongly among students and members of civil society. However, in addition to the 1 union member from the National Education Health and Allied Workers Union (NEHAWU), and 1 student activist, the quotes below come from 1 Deputy Vice Chancellor (DVC), 1 Vice Chancellor (VC), and 2 academics. From these, I make the claim that socio-economic factors and issues of welfare are increasingly seen as important among academics and managers in the university as they are among students or civil society.

Figure 34 - Socio-Economic Factors and their Effects on Notions about what Universities Contribute to Development

Let's talk of some universities having access to land, some universities have got farms, big farms that they can use for their enterprises. Secondly, student housing and thirdly, access to the university, where do they live and how far do they have to get to the university. It's all because of this land acts have thrown into the deep and now they have to come to the university. The fourth one to address the issue of student hunger. Imagine if we had land and we had our own farm here, we just grow our stuff for the university to feed. Hunger is a real thing. Deputy Vice Chancellor (DVC) of a University of Technology, 3rd May 2018: 261-277	**Feature:** Welfare Form **Definition:** Not only is the university part of a scientific community, but the availability of a vast range of social protection **interventions** is highlighted as one the foremost critical issues. **T**he culture and organi**s**ational structure emphasi**s**es the provision of social protections **Description:** The inputs required to reduce the vulnerability of students to poverty are an important part of the organisation's infrastructure. The subject of land is entirely about student and community hunger. Not only do research, teaching and learning practices break down the disciplinary boundaries, but the boundaries in terms of the role of academics is to offer support that insulates students. Thus, the academic work process also changes. **Why I choose this feature:** The informant views part of the form of the university as a provider of food.
I mean, students are struggling financially and they don't eat. But think about the fact there they don't even have access to good food…the campuses sell bad food…imagine if we had a Spar (supermarket). Academic at a Historically Black University, 7th August 2018: 13-17	**Feature:** Welfare Form **Definition:** Not only is the university part of a scientific community, but the availability of a vast range of social protection interventions is highlighted as one the foremost critical issues. The culture and organisational structure emphasises the provision of social protections **Description:** The inputs required to reduce the vulnerability of students to poverty are an important part of the organisation's infrastructure. Here the input is a supermarket

	which can provide good quality food. Not only do research, teaching and learning practices break down the disciplinary boundaries, but the boundaries in terms of the role of academics is to offer support that insulates students. Thus, the academic work process also changes. **Why I choose this feature:** The informant views part of the form of the university as a provider of food.
The fact that the universities have not responded to the water crisis is unbelievable... There must be a way that the researchers are always planning or preparing for things like this. If we think of what water is for a people. Water is life. National Education Health and Allied Workers' Union (NEHAWU) Representative, 4th July 2018: 203-204	**Feature:** Developmental Purpose **Definition:** Increasing the stock of applied knowledge for national needs that include the symbolic meaning of access to water. Knowledge for profit-making as well as formulating a national identity. **Description:** The stakeholder here is describing an understanding of water that is not just about the everyday functional uses of water, but also the symbolism of water. **Why I choose this feature:** The informant's view refers to the role of scientific knowledge in supporting key symbolic resources that play a role in national socialisation
Student hunger is the main problem in our universities. Students cannot study on an empty stomach. Nobody can. VC at a Historically Black University, 11th February 2019, Lines 63-64	**Feature:** Welfare Form **Definition:** Not only is the university part of a knowledge market that serves the national political project, but the welfare project is highlighted as another one of the foremost critical issues. Welfare-oriented culture and organisational structure **Description:** Whereas the authority in the Developmental University is vertical, the

	relations here are entirely flat. The subject of food insecurity is entirely about student hunger. Not only do research, teaching and learning practices break down the disciplinary boundaries, but the boundaries in terms of the role of academics in the university are so loose that feeding students adequate food is a priority issue. **Why I choose this feature:** The informant views part of the form of the university as a provider of food.

The next theme from the data concerns the way the community is most commonly referred to by the respondents. The uses of the terms 'village' or 'family' were very prevalent. These themes show that the community among these respondents is not simply understood as the place that the university is physically located in. It is in the places that students come from and the people in them. These places can be physically far away from the university itself.

9.3.2 Theme 7: The primary public sphere is the community, so the public good is that which serves the community

There was a clear emphasis on seeing to it that universities serve the immediate community (which was defined as the family or the village, not always necessarily as the place the university was located in), rather than the broader national agenda. All respondents except 1 either stated this explicitly or implied it.

Most of the emphasis in terms of this came from the 9 students and 7 members of civil society. 4 higher education experts, as well as 2 government officials also highlighted this. The set of quotes below come from 1 student, the CEO of the National Institute for the Humanities and Social Sciences (NIHSS), 1 Department of Science and Technology (DST) official, and 1 National Tertiary Education Union (NTEU) representative.

Figure 35 - Notions that the Community is the Primary Public Sphere

There is someone on the SRC now who will be the only person in his village to have a degree. He is someone who can go back and make a difference… Student Representative Council Member at a Historically White University, 23rd January 2018 : Lines 93-99	**Feature:** Community-oriented Form **Definition:** Overlapping Scientific Community, Economic Community and Local Community. Breaking-down the physical boundaries between the university and the community or family of the student **Description:** The rewards for graduates include community-based status, reputation and recognition for the contribution that they make to their personal community. **Why I choose this feature:** The respondent regards the community that the university should contribute to not just as the one it is located in, but even geographically distant places that students identify with are regarded as part of the community.
Even in that element of it not being clear why is it that you are getting an education, there was a huge sense of commitment to education both by the parents and by the teachers and the community. That is probably just how during those days life in the villages were. You couldn't afford to not go to school because if you are deciding not to go because your parents aren't there if your neighbours see that you aren't going to school you know you are in for some serious trouble when your parents return. You had that community approach to raising a child. That shaped a lot of the cultural approach to raising a child in the community. Person in a senior management position at the DST, 25th September 2018 : Lines 9-21	**Feature:** Community-oriented Norms **Definition:** A community-oriented moral code where familial identity family bonds are centred. **Description:** This informant brings to the fore that the responsibility of the child/children's education lies with all. It is not individualistically framed. Thus, the rewards are also very much the rewards of all family and community members. **Why I choose this feature:** The respondent is describing the value that communities place on education.

One thing to note from these quotes is that it is not clear what the implications are for research, teaching or even service and community engagement. It is also harder and harder. as the research attempts to categorise the quotes in terms of core, purpose, norms, or form, to see clear distinctions between the features of universities. From the quotes, I make the claim that the roles that the university is understood as playing appear to take on a more and more loosely defined understanding. I now move on to the next theme.

9.3.3 Theme 8: The Notion that the Fenced-off Location of the University is a barrier to the Public Good of the University

The other theme in relation to the community was the view that the community cannot be served, if the university is fenced-off or located in a way that symbolises its distance from the rest of the community. The data below shows that this was not extensively brought up by respondents. However, when grouped with the two other themes in this section, it seems to highlight the importance of symbols.

4 respondents pointed out the problem of universities being fenced-off from the community or being located on a hill above the rest of the community. 1 was a Deputy Vice Chancellor (DVC), 2 were students, and the last 1 was a Gender Equity Officer. I categorise this concern as largely communitarian because it is seems largely about the symbolism of eliminating the physical boundary between the community and the university.

However, one of the problems noted by the informants on this issue was the matter of safety on South African university campuses, and the challenge that this poses in terms of pursuing the idea of fully accessible campuses. I therefore make the claim that the matter of physical accessibility is contested as female respondents were the ones raising the importance of physical accessibility, but also warning of the dangers of campuses being fully accessible.

Figure 36 - The Notion that a Fence Impedes the Public Good Role of Universities

The university is positioned on a hill. The community is below us and that creates the idea that the university is. DVC at a Historically White University, 12th January 2018: Lines 343-350.	**Feature:** Community-oriented Form **Definition:** Overlapping Scientific Community, Economic Community and Local Community. Breaking-down the physical boundaries. **Description:** The **respondent** emphasises that the geography of the university serves the symbolic function of producing and maintaining the physical accessibility or inaccessibility of the university for the community. **Why I choose this feature:** Issues relating to the physical structure of the university are issues of form.
I think without a doubt. Anyone is allowed to use the sports facilities. But definitely not enough. Are there benefits, yes, but we could really be benefiting the community. We have students at the (other) campus who are studying business; there are so many small businesses around there. Let them offer their services to assist those businesses. It's generally just sports facilities. But we don't just have sports facilities we have libraries as well. That's one way you could really benefit the community. But the university is gated. Only students can go in and out. Do we benefit the community, yes, but not close to enough… Student Representative Council Member at a Historically White University, 23rd January 2018: Lines 343-350.	**Feature:** Community-oriented Form **Definition:** Overlapping Scientific Community, Economic Community and Local Community. Research, teaching and learning practices break down the physical boundaries. **Description:** Not only is the respondent noting the need to breakdown physical boundaries, but many like him felt that the bureaucratic relations between the university and the local community were raised as posing a particular problem to the ability of the university, industry and the community to work or function together. **Why I choose this feature:** Issues relating to the physical structure of the university or its facilities are issues of form.

Even just to walk on this campus is not safe. People get mugged and raped. Where is security? What does the local police do? Too much access is given to the public. Student Representative Council Member at a Historically White University, 17th December 2018: Lines 112-115.	**Feature:** Community-oriented Form **Definition:** Overlapping Scientific Community, Economic Community and Local Community. Breaking-down the physical boundaries between these overlapping communities. This cannot take place if other aspects of the community do not work. **Description:** This quote highlights that the university cannot fully serve the functions that stakeholders would like it to if other arms of society are not working to keep certain other aspects of the community in order. The stakeholder is implying that the university cannot be open to the community if the police are unable to maintain order and safety. **Why I choose this feature:** Issues relating to the physical structure of the university and how it affects the safety of those on the campus are issues of form.
The thing is that students go to the police station to report sexual violence or sexual assaults. They do not feel that the internal system in the university attends to their cases. Gender Equity Office Representative at a Historically White University, 28th March 2019: Lines 150-180.	**Feature:** Community-oriented Form **Definition:** Overlapping Scientific Community, Economic Community and Local Community. Outputs emphasised are those that change the condition of those living in the community. **Description:** The respondent is problematising the inability of the university to widen its targets from simple equity-related issues, to targets that address the current crises of the community. In this case the crisis is gender-based violence. It is a national crisis,

	but also a localised crisis that expresses itself slightly differently in different communities. **Why I choose this feature:** Issues relating to the structures that regulate the university and protect or discipline those in it are issues of form.

I now present the two final themes from the interview data.

9.4 Fourth Group of Themes: The 'Ubuntu' moral code

Having shown that the perceptions of the respondents described so far express a highly communitarian understanding of the relationship between South African universities and development, I now present the data that describes sharing as intrinsically rewarding in section 9.4.1, as well as the data that speaks explicitly to the 'Ubuntu' moral code in section 9.4.2. This data answers research question 2: What notions are emerging in South Africa about the relationship between universities and development, and how do conceptions of the public good and the public sphere contribute to these emerging notions? These notions, as I show below, relate to notions of community and family as the main public spheres, and the Ubuntu moral code.

9.4.1 Theme 9: The Notion that Communitarianism is more Rewarding than Individualism

All participants interviewed seemed to have no problem accepting that the public good means that the benefits of higher education should be shared among all of society.

3 respondents pointed out the view that being able to serve one's community or family is something graduates derive utility from. One respondent pointed out that this is something common among different nationalities, and thus it is not peculiar to South Africa. Another noted that sharing is not necessarily burdensome, and that sharing can and should be understood as a reward instead. 1 of these stakeholders was a member of National Tertiary Education Union (NTEU), the other was the former CEO of the National Student Financial Aid Scheme, and the last was the secretary of South African Union of Students (SAUS).

Figure 37 - The Notion of Communitarianism as more Rewarding than Individualism

That is an assumption that we made. I don't think that everybody shares. I think some people share, but then that sharing also gives them some sort of utility -it makes them happy. But, if you chose not to share you wouldn't have to, so and I think it is a... I'm familiar with the concept of 'black tax' and I think clearly a component of this income sharing can be ascribed to historical injustice. But, we have a lot of foreign students sitting here in our MBA classes and they point out to me that perhaps it's not such a unique thing in the sense that in communities where your family is having a tough time people tend to share. National Tertiary Education Union (NTEU) Representative from a Historically White University, 24th October 2018	**Feature:** Community-oriented Form **Definition:** Overlapping Scientific Community, Economic Community and Local Community. The benefits that graduates derive include the ability to be altruistic towards the people in one's circle. **Description:** This respondent understands the overlap between the private benefits that graduates derive and their ability to share these publicly (or for the public good) as potentially linked. He also notes that this is not peculiar to South Africa. **Why I choose this feature:** The rewards that are enjoyed by graduates are part of the form feature of universities.
For me that is the problem, that we call it a tax. The word tax is bad. It should not be 'black tax' because it is a good thing for graduates to do. Former person in a senior management position at the NSFAS, 25th September 2018, Lines 203-204	**Feature:** Community-oriented Form **Definition:** Community-oriented identity and bonds between communities and families. The rewards that this kind of university produces are materially beneficial for the graduate, but these benefits spill-over to other members of the graduate's family or community **Description:** This respondent is asking us to reframe the current way in which we regard 'black tax'. Instead of seeing it as a dysfunction, which he implies it is sometimes, he asks us to see it as a function. **Why I choose this feature:** The respondent sees this as one of the good outputs that universities generate. Outputs are a matter of form.

What is the point of university if you are not enjoying the benefits by giving to your family or your community? Member of South African Union of Students (SAUS) in an upper leadership position, 8th October 2018, Lines 76-77	**Feature:** Community-oriented Purpose **Definition:** Increasing the stock of applied knowledge for community-building. Emphasis is placed on how graduates enhance the personhood of those in the community or family through sharing the benefits of what they derive from a university education. **Description:** This respondent regards the ultimate benefit of the university as giving to one's family or community. This is because under the Ubuntu-Communitarian moral code, one's personhood is derived from the personhood of others in the community. **Why I choose this feature:** The well-being of others is the main purpose of communitarian activities and institutions.

9.4.2 Theme 10: The Emergence of an Ubuntu Moral Code came up Frequently Among Respondents

The culmination of the data so far reinforces the point that I have been building up to in this chapter, namely that the Ubuntu moral code is the dominant theory underpinning the views of respondents.

12 respondents mentioned Ubuntu either implicitly or explicitly. In the implicit sense they would refer to the importance of both students and academics remembering who they are or where they come from. In other instances, they would highlight that, as individuals, we are because others are too. This is however less than half the number of stakeholders, and yet this is the one theme that was raised by the largest number of respondents.

The quotes below come from 1 member of civil society, 1 student, the former CEO of the National Student Financial Aid Scheme, and 1 higher education expert.

Figure 38 - The Role of Ubuntu in Universities

Patriarchy is incredibly harmful. It has been harmful for the Fees-Must-Fall movement, so the role that men play in the community and the role that women play must break out from the traditional roles. Men are because women are… Activist from Sizimbokodo, 23rd January 2018: Lines 93-99	**Feature:** Ubuntu-Communitarian Norms **Definition:** Community-oriented norms that emphasise personhood. Community projects rely on the protection of every member of the community's personhood. Methods and technique are structured to enable this. **Description:** There is emphasis in this respondents view on the co-dependence of men's personhood on that women. In her view, the political resistance cannot take place without the equality of women being acknowledged and advanced. **Why I choose this feature:** The informant refers to 'tradition' which invokes normative ideas.
I think for me public good is personified by 'Ubuntu', which is doing something because it is necessary to be done without having to expect recognition or reward for it. And also try to move society forward. All that intervention is always put in place to try and move society forward or make a situation better and predominantly some of those is that they might not be commercially viable to be sold as products, that for me is my understanding of public good. In South Africa we have used public good as a way of corporate social responsibility and I sort of think we then commercialise it from that point and forgot to give it proper meaning of what public good… Former person in a senior management position at the NSFAS, 25th September 2018, Lines 53-59	**Feature:** Ubuntu-Communitarian Norms **Definition:** Community-oriented norms. Methods, techniques and organisational structures emphasise the ultimate intrinsic value i.e. each individual's personhood as a member of the community. **Description:** In this respondent's view the norms of Ubuntu must be foregrounded to allow the outputs that the university produces to serve the public good **Why I choose this feature:** Not expecting recognition is a key normative part of Ubuntu.

I think that is sort of the basic role that it is a place where people can expand their potential, develop as a human being, develop the right values if they don't bring them with them and I think our students most of our students actually already do have those values. Which could be broadly understood as Ubuntu which I think I prefer at the moment to citizenship because I think Ubuntu captures the working out of those obligations and in multiple frames and etcetera and I think is more interesting. Higher Education Expert, 28th August 2018, Lines 161-166	**Feature:** Ubuntu-Communitarian Norms **Definition:** Community identity and community bonds through personhood. The attributes of humaneness, personhood, and morality are regarded as the main intrinsic purpose. Deterrence, returning and replacement, apology, warnings and punishments. **Description:** This respondent views the development of the Ubuntu moral code as a key aspect of the university's purpose. In so doing the university enables the community bonds described above. **Why I choose this feature:** Obligations are a key normative part of Ubuntu.

This chapter has covered the 10 themes that I have pulled out from the data. To recap, the first three themes confirm what I found in Chapter 8. Recall that I found that there was not enough evidence to justify the definition of pathways of change and the assumptions underpinning them using the entrepreneurial and developmental notions. These notions do not seem substantially applicable in the South African context. One reason could be that there is not enough of a strong academic core in South African universities to allow them to support institutions and activities for commercialisable innovation or knowledge for-profit, or for structural industrial transformation. The data here instead suggests that informants believe that universities should make a mainly welfare and communitarian/Ubuntu contribution to the development of South Africa's society and economy.

To restate, the first three themes presented in this chapter were:

> Theme 1: The constraints on the development and acquisition of knowledge in South Africa and the weak academic core are not a priority concern among respondents in the South African higher education sector

Theme 2: According to respondents' views, aspects of the South African University system display the Entrepreneurial University kinds of contributions to development very minimally

Theme 3: According to respondents' views, aspects of the South African university system's relationship development display the Developmental University kinds of contributions only marginally more

These themes answer research question 1 by showing that these are common-sense notions that do exist somewhat among respondents who are members of universities, and the close public surrounding universities. However, upon closer inspection, these notions do not seem applicable enough to the South African context.

The second group of themes show more accurately what notions exist among respondents. They do this by showing that these notions spotlight transformation. Therefore, these themes answer research question 1 better than the first group of themes. To restate, the next group of themes were:

Theme 4: There is a dominant post-Apartheid transformation narrative of development in South African universities

Theme 5: Activism emerged as an important issue within the community.

Theme 6: There is an urgent concern regarding the relationship between universities and both the effects of socio-economic factors on them, and their ability to effect change with respect to those socio-economic matters. This inspires the strong emphasis on activism.

Theme 7: The primary public sphere is the community, so the public good is that which serves the community

Theme 8: The notion that the fenced-off location of the university limits the public good role that universities play.

These themes also answer research question 2. The interview schedules were based on the notions of the public good role of universities. Thus, these themes answer the question regarding how conceptions of the public good are shaping the emergent notions about how universities in South Africa do or ought to contribute to development.

The following themes further answer research question 2 more explicitly.

Theme 9: The notion that communitarianism is more rewarding than individualism was a noticeable theme

Theme 10: The emergence of Ubuntu as a moral code that many of the stakeholders would like to see the university embody much more

In sum, my argument is that there is a common-sense view that universities in South Africa do contribute to development entrepreneurially and developmentally, and ought to do so even more. However, the perceptual data is unable to show that respondents believe that universities contribute significantly towards development through entrepreneurial dynamics. Moreover, the perceptual data shows that respondents believe only to a marginally larger extent that universities contribute to development through developmental dynamics. Although the views that spotlight transformation can be categorised as developmental (because developmental theory foregrounds both industrial and social transformation), the perceptual data shows much more emphasis on social transformation. Perhaps this is not a very surprising finding, given South Africa's pervasive history and how it continues to shape universities today. What is striking, however, is the nature of the shift in the way that social transformation is understood. This shift is expressed through the vocabulary of care, communitarianism and demands among respondents for the expansion of social protections that would normally be provided by institutions other than universities. These ideas are so prevalent among respondents, that maybe an entirely different theory holds together the respondents' notions about universities and development in South Africa. In the main these ideas foregrounded the welfare of communities in and around universities. They also foregrounded Ubuntu. This is my third finding in this study.

Conclusion

In this chapter I have presented four groups of findings to argue one important main point. My main point is that the perceptual data presented here suggests that the university should contribute to development in a way that is characterised by Ubuntu-communitarianism. In the first section I made the claim that South African universities are not perceived as displaying

relationships or dynamics that can be categorised as consistent with the Abstract or Entrepreneurial University ideal-types. Some perceptions suggested that there is some degree to which the dynamics making up the relationship between universities and development can be categorised under the Developmental University ideal-type. In Section 2 I presented themes that further supported this claim. However, I showed that these place more emphasis on social transformation, rather than industrial transformation. Then, Section 3 made the claim that respondents' perceptions foreground the community as the priority public sphere, and problematise the fenced-off location of the university. The latter was described by respondents as limiting the public good role that universities can play. Finally, in Section 4 I made the claim that respondents would like to see the university take on an Ubuntu-Communitarian Type of university.

In the next chapter I analyse these themes and discuss their implications in more detail. I also conclude the thesis by recapping how I conducted this study to come to the three sets of findings I have presented over the last three chapters.

Chapter Ten

Conclusion

Overview

This chapter provides an overview of the main argument and conclusions of the study. I start by restating the problem that this study focused on. Then I restate the purpose of the study and my research question. Further, I present the main findings in the study and discuss some of the implications of the analysis. Finally, I consider the contribution that the thesis makes to knowledge.

10.1 Summary of Analysis

The purpose of this study was to build insight into the dynamics of the relationships between universities and development in South Africa. In Chapter One I began by outlining the problem that was the focus of this study. To define the problem, I stated that researchers and policymakers appear to believe that universities can and should contribute to development in South Africa. Yet, the extent to which they can do so, and how exactly they can do so is less clear. I presented examples of the kinds of analyses that exist. These analyses included rates of return studies which provide analyses of the benefits that individuals enjoy through the labour market rewards from investing in more higher education (Morris 2015, Marias 1994, Hosking 2003, Bhorat et al. 2017, Bhorat et al. 2014). These provide information regarding aggregate outcomes (Allais, 2017). Then I discussed tracer studies which provide more nuanced information (Allais, 2017). I then considered studies that look at the perceptions of employers and graduates themselves regarding what capabilities they believe arise from more higher education. Cloete & Maassen (2017) explore the relationships between universities and development by looking at the academic core in one of South Africa's universities (Cloete & Maassen, 2017). These are just some examples of the evidence available for a relationship between universities and development in South Africa.

I followed by making the argument that these analyses are seemingly superficial, and that the reason for which we lack insight into the relationship has to do with the under-theorisation of what universities in South Africa contribute to development. I showed that the literature states three main ways in which this relationship has been under-theorised. I demonstrated that the literature suggests that the first way in which this under-theorisation occurs is through the lack of contextualisation of the concepts being used. I then demonstrated that the second way in which under-theorisation occurs is through the use of these concepts in ways that are embedded in economistic ways of thinking (Marginson, 2011). Finally, I demonstrated that the third way in which the under-theorisation occurs is through the overall ambiguity of the concepts we are working with (Prates et al., 2020). I finished by highlighting that failing to address these theoretical shortcomings perpetuates our lack of understanding of the nature and the extent of the relationship between universities and the development of society and the economy. This study has tried to overcome some of these theoretical shortcomings.

Therefore, as stated in Chapter One, the purpose of this study was to build insight into the dynamics of the relationships between universities and development in South Africa. The aim of the study was hence to make a new knowledge contribution by offering a new analysis of the relationship between universities and development, using new conceptual tools that deconstruct the dynamics underlying the relationship between South African universities and development.

Given the aim of this study, my main research question was 'What are the relationships between South African universities and the development of South Africa's economy and society?'

I broke this question into three sub-questions:

1. What do existing notions say about the relationships between universities in South Africa and the development of South Africa's society and economy?
2. What notions are emerging in South Africa and how do conceptions of the public good contribute to these emerging theories in South Africa?

3. What are the implications of these emerging notions for providing a new analysis of the relationship between universities and the development of South Africa?

I used the literature review from Chapters One to Five to contextualise the study. Then, I also brought together concepts from my literature review to develop an extended analytic framework. The extended analytic framework was made up of three ideal-types. The three ideal types were: The Abstract University, the Entrepreneurial University and the Developmental University. I used this extended analytic framework to analyse the two data sets, the empirical studies and the interview data, in order to answer the main research question, and the three sub-questions following it.

As discussed in the findings chapters of this study, my study has three main findings. My first finding, based on the empirical studies analysed in Chapter Eight, was that it is not the case that universities in South Africa make significant entrepreneurial contributions to development. The second finding, also based on the empirical studies analysed in Chapter Eight, was that it is not the case that universities in South Africa make significant developmental contributions to development. Therefore, although these two notions exist in the South African literature, and studies imply that they are taken as existing in the South African case, there is not enough evidence to substantiate this belief.

My analytic framework allowed me to show that the empirical studies seemingly fail to account for the ways in which the South African university system may not make entrepreneurial or developmental contributions. In other words, the analytic framework showed the divergence between the South African reality and pure ideal-type constructs that imply certain straightforward pathways of change.

The third finding in my study was from perceptual interview data. I found that most of the perceptions held by respondents implicitly focused on the purpose and form that universities need to have to contribute to development. What I mean is that respondents were less focused on the intrinsic benefits that universities confer to society and the economy. Rather, they were more focused on the instrumental benefits that arose from universities. Often respondents went from talking in terms that were strictly defined to the core knowledge work of

universities, to broader notions of the relationships between universities and development. In other words, they would quickly move from talking (very briefly) about knowledge, to food insecurity, and the need to ensure that students have housing and other forms of social protection. This was evident in some of the major themes in the data. Initially the themes referred directly to the knowledge functions of universities. For example, innovation and knowledge commercialisation were evident, although these were not very strong themes. Then the themes began to take a more contextual shape as respondents began to touch more on the racial history of South Africa, and the important role that universities have to play in racial redress. Respondents then raised the strong links between race and class, or socio-economic status. These themes tended to be discussed more with respect to teaching, institutional culture and community engagement, rather than knowledge production. Finally, as socio-economic issues began to come up, and unemployment, poverty and inequality were raised more and more often, the perceptions of respondents began to foreground the importance of universities in alleviating these issues in surrounding communities. It was not stated how exactly this could be done, only that community and family bonds would or should motivate individuals or groups of individuals in universities to share their resources. Not much policy or research is available in South Africa on what more community engagement interventions mean for the 'core functions' of universities in South Africa, according to Boughey & McKenna (2021: 130). Community engagement through universities may be necessary and desirable. However, it must be managed so that South African universities can still be sufficiently outward looking. Community-engagement must also be managed so that thought can be given to the implications for the specific role of research or teaching in such interventions. In addition, Tilak (2018) warns that a delicate balance must be struck so that universities do not become too parochial when striving to be relevant and responsive.

To restate, my analytic framework thus showed that when I grouped respondents' perceptions, very few corresponded to the entrepreneurial or developmental contributions that universities can make to development. Significant numbers of respondents did, however, emphasise the importance of racial transformation—but that is not a developmental view without the foregrounding of industrial transformation. Furthermore, more than anything welfare was mentioned by the respondents.

What might be the implications of this finding? I elaborate this in the following section.

10.2 Implications for South African Universities and Development

If, in the main, respondents perceive that universities do or ought to make predominantly welfare contributions, then it can be argued that this finding means that universities are required to take on more unremunerated activities as part of their functions. I will elaborate this point.

Increasingly, the role of universities seems to be loosely defined, especially given that South African universities do not quite seem to work entrepreneurially or developmentally (based on the empirical review). By 'loosely defined' I mean that there is no longer any real sense in which universities seem to be required to do distinct work in society. Rather, they are required to perform the sorts of social and welfare functions performed by parts of the state that meet housing, food, transport, etc. needs. Thus, there seems to be no demarcated role for university knowledge, or for teaching, in solving the problems of society. Under the guise of communitarianism and the Ubuntu moral code, academics and students are encouraged to take on roles and responsibilities in communities and families to support these entities where state support fails to reach their needs. Here I also need to reiterate that my analytic framework highlights the two-way relationship between different approaches to development, and changes within the university. None of the empirical studies look at this. Neither does it come up in the perceptual data. This is very interesting, because this analytic framework elaborates how changing one feature changes the other features in universities. Put differently, we need to consider how universities are affected by playing different development roles. If the knowledge developing and teaching functions of universities are backgrounded, these functions will certainly deteriorate over time due to neglect. For example, it is possible that as university structures change to shape institutional culture, those academics and students who do more welfare-type work will earn better reputations than those who do not. This would create pressure for those who do not do this kind of work to do it. So far it seems that the point is that there are no rewards; that the reward or the utility lies in helping itself. I elaborate this point a little bit more below.

While pressure is placed on the university to carry out unpaid work that is described as either 'care work' or 'welfare work.', this work is quite clearly under-valued and viewed as unproductive. This is a trend affecting many feminised forms of work, not just in universities, but across various social spheres. Recall in the literature in Chapter Three that the problem of under-valued care work came up in feminist economists' critiques of the public sphere. The problem arises that when work involves caring or nurture, it tends to be regarded as the responsibility of women. Further, much in the same way as the idea of caring was used historically to extract free or cheap labour from women in their professional work as nurses and teachers, the Ubuntu notion seems to be invoked in order to extract more free labour from university staff. It also tends to go unremunerated. Given that the language around Ubuntu-communitarianism centres so much around family, it does not seem clear that if academics or students take on more work of a welfare nature, then it will be rewarded. It seems implied that the reward or the utility is in helping itself.

On the basis that academics and students are required to carry out more welfare work, I argue that a fourth ideal-type of university can be named. I call this the 'Welfare University'. I argue that this type of university seems to seriously downplay or undermine the essential core of the university. We see floundering with respect to the purpose, the norms and the form of universities in South Africa, because the core, the development and acquisition of knowledge, seems to be lost. The main result of that is a very narrow instrumental perspective on what universities can or should contribute towards development in South Africa. Another is that this welfare-oriented emphasis is so broad and loose that it seems to dismiss anything intrinsic about universities, while at the same time being used to list unrealistic expectations from them.

This study shows how complex and layered the dynamics of the relationship between South African universities and South Africa's society and economy are. It does not necessarily aim to take a stance on what universities can or should contribute to development in South Africa. Rather, it presents a number of competing theories with a view to establish which of these appears the most dominant in South Africa.

As stated in the previous section, this study contributes to current knowledge firstly through the three main findings discussed above. The first finding is that universities in South Africa seemingly do not make a significant entrepreneurial contribution to the development of society and the economy. The second finding is that universities in South Africa seemingly only make a slightly more significant developmental contribution to development in South Africa. And the third finding, is that in the main, South African universities seem to mainly make a welfare contribution to development in South Africa.

To sum up, the contribution this study makes to the higher education and development field is by:

1. Categorising the different types of relationships between types of universities and development in South Africa.
2. Showing that the relationship between universities and development is bi-directional. As much as universities contribute to development, the ways in which they are required to do so also shapes universities.
3. Surfacing a new ideal-type university: the Welfare University. Although introduced by Jansen in his work in 2019, the ideal-type that I develop here is more comprehensive, as it captures the main social and moral underpinnings (Ubuntu, communitarianism, and familial bonds) of the way welfare is conceptualised among South Africans.

Thus, this study has provided a contextualised analysis of the South African case. It challenges the notion that the concepts of entrepreneurialism and developmentalism are as relevant in the South African higher education sector as they are in developed higher education sectors. It shows, instead, that South African aspirations are informed by a nostalgia for the past, a return to the village, large families, and communities. I argue this on the basis of the perceptual data where a common theme was the idea that the public good role of higher education is to allow graduates to give to their families and communities in the villages. Finally, the idea of who academics or students are was much invoked, together with the idea that they also should remember where they come from.

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Appendix A: Complete List of Universities in South Africa Today

Traditional Universities:

1. University of Cape Town
2. Stellenbosch University
3. University of Pretoria
4. University of the Witwatersrand
5. University of Kwa-Zulu Natal
6. University of the Western Cape
7. Rhodes University
8. University of Fort Hare
9. North West University
10. Sefako Makgatho Health Sciences University
11. University of Limpopo
12. University of the Free State

Comprehensive Universities:

13. University of Johannesburg
14. Nelson Mandela Metropolitan University
15. The University of South Africa
16. University of Zululand
17. University of Venda
18. Walter Sisulu University
19. Crime Detection University of South Africa (Forthcoming)

Universities of Technology:

20. Vaal University of Technology
21. Central University of Technology
22. Cape Peninsula University
23. Tshwane University of Technology
24. Durban University of Technology

25. University of Mpumalanga
26. Sol Plaatje University
27. Mangosuthu University

Appendix B: Complete List of Universities in South Africa Under Apartheid

i. Historically White English Universities

1. The University of Cape Town,

2. The University of Natal,

3. Rhodes University and

4 The University of the Witwatersrand.

ii. Historically White Afrikaans Universities

First, a sub-grouping of four universities 'for Africans':

5. Medunsa University,

6. The University of the North,

7. Vista University and

8 The University of Zululand.

Second, a sub-grouping of two universities: one 'for Indians':

9. The University of Durban-Westville

10. and one 'for coloureds' the University of the Western Cape

iii. Historically Black Universities

11. The University of Transkei,

12. North West University,

13. The University of Venda and

14. The University of Fort Hare.

Appendix C: Interview Schedule

Higher education, inequality and the public good in four African countries: South Africa, Kenya, Nigeria and Ghana

Interview Schedule

Thank you for agreeing to this interview. It is one of about 15-20 we are conducting in this country. These will be analysed together with similar interviews collected in three other African countries. Our project is looking at issues around higher education and the public good in four African countries – these are Ghana, Kenya, Nigeria and South Africa. It is aimed at exploring the views of different people within these countries on how they understand the notion of the public good and how it relates to higher education - so how it is taken forward in higher education institutions and across the higher education sector in that country. Our assumption is that people's understandings may be different in the different contexts. The interview will last approximately 1 hour. You are free to stop the interview at any time or decline to answer any question. I'll leave some time at the end, so that if there are any key issues from your side we have not dealt with, you can comment on those.

Who	Main question	Issues to probe and explore (guide for interviewer)
Person's own experiences and background and relationship to higher education		
All interviewees	1. Can you tell me about your own education and work experiences that brought you to where you are now/your current position (working or studying)?	**Education background – schooling to higher education** **Work** background and experience – where, what did they do, journey travelled to where they are now – what do they presently do? **Other important influences** such as community participation, social activism or political involvement

Who	Main question	Issues to probe and explore (guide for interviewer)
Understanding of higher education and the public good and what may have influenced/be influencing their understanding		
All interviewees	2. Can you share with me how you understand • What is meant by/the notion of the public good? • What does this mean in relation to higher education? • What has been most important in influencing your understanding of higher education and the public good? • Do you think that your understanding of higher education and the public good is how most people understand it in your country? If No, what do you think is the dominant perspective or understanding of higher education and the public good in your country?	Keep **discussion very open** so that allow for any issues that the person associates with higher education and the public good to come out – if they are anxious about what to say here explain that part of the project involves exploring the concept and understandings of it and so there are no 'right' or 'wrong' answers here. Try to unpack their input so that it speaks to what we have been characterising as instrumental or intrinsic notions of public good linked to higher education. Some key ideas they might raise would be: **Instrumental** • Skills and knowledge needed for national economic development, including things like health care, education, infrastructural development • Innovation including technological development and social realignments • Political and social stability or increases in tolerance **Intrinsic** • Value of higher education as a physical and cultural space of active reflection for responsible and active citizenry , that creates ideas about social citizenship or an enhanced sphere for comment and criticism of political economy or socio-cultural arrangements • Development of critical thinking • Space for interrogation of social challenges and addressing of injustices, including those perpetuated in the past Do they **connect any of these issues** (ie instrumental and intrinsic approaches)– so for example, do you need protected

		spaces for debate and intellectual engagement to ensure political and social stability?

Interviewees who attended higher education	3. If you think about your own experience of higher education are there any moments while you were studying or since then that have been important to influencing/shaping your thinking about higher education and the public good /and the role it does or should play in society?	When they were at university **did they think then about the role of higher education in society** – did they think about whether it was making a positive contribution and if so in what way, what it would mean for them and their family and friends, who was able to be at university and did higher education increase or decrease inequality? Was there anything specific that happened that made them think about these issues? Has there been anything that has happened since then that has **shifted their thinking** about these things?
Who	**Main question**	**Issues to probe and explore (guide for interviewer)**
The context and its impact on higher education and the public good		
All interviewees	4. What do you think are the two /three most important challenges facing higher education in your country/name country?	Allow person to **articulate what they see as the key challenges** – from macro to micro /system level to institution level Explore what do they see as the key causes of /what is shaping the existing challenges and how this may be constraining a public good agenda/the ability of institutions/their institution to contribute to the public good/give effect to their public good role • Historical legacy and inherited challenges • Important contemporary contextual issues impacting on access such as class, race, ethnicity, gender, geographical location – try to get a clear sense of the inequalities dominant in the country and how this may affect access to and participation in higher education • Impact of contemporary global factors such as globalisation, neo-

		liberalism, privatisation, global competitiveness and rankings • Governance issues such as policy framework, role of the state (maybe too intrusive – maybe not doing enough) • Funding • Role of the private sector (good, bad) • Political trends (local, national, regional, global) that may be impacting • Curriculum and graduate attributes (decolonisation, responsiveness to the labour market and or form of the state) • Graduate employability/unemployment • "Academic freedom" • Public intellectual role of universities
Interviewee who is a key stakeholder but not responsible for leading/managing higher education	5. Do you feel that these challenges are being adequately addressed? • If yes, what strategies or interventions are having the greatest impact? • If no, what do you think needs to be done to better tackle these challenges?	Try to get the interviewee to move beyond yes or no to this question. So if no, what more could be done, whose responsibility is it and what are the roles that different stakeholders need to play, what do they feel may be the reasons why not enough is being done, or they may feel that what is being done is inappropriate in addressing the real challenges that exist (eg. inequality) Try to get a sense of their understanding of competing demands and how these need to be managed If they feel that enough is being done, try and explore what things/strategies/interventions are important and are having an impact Try and get the interviewee to share some of the strategies/interventions etc that they feel are important/are involved in implementing Key here is getting a sense of how they approach competing demands eg. trade offs etc.

		Are these working and is what is being done enough? What more needs to be done? How feasible is this? What conditions would have to be met?

Appendix D: Invitation Letter

Wits Centre for Researching Education and Labour (REAL)

Wits School of Education, 27 St Andrews Road, Parktown, 2193, Johannesburg, South Africa,
REAL Centre, Private Bag x3, Wits 2050 • Telephone +27 (0)11 717 3076 • Fax: +27 (0)11 717 3029

Re: Confirmation of invitation to attend the workshop on Higher Education, Inequality and the Public Good in four African countries: Ghana, Kenya, Nigeria and South Africa

Dear Stakeholder [insert person's name]

This letter serves to confirm your invitation to attend the workshop on higher education and the public good organized through the NRF/ESRC/Newton Foundation project on Higher Education and the Public Good in Four African Countries—Ghana, Kenya, Nigeria, and South Africa. To assist you in obtaining a visa is a description of the workshop below.

The workshop will be hosted by the Centre for Researching Education and Labour (REAL Centre) between the 22nd and 25th of May 2017 at the University of the Witwatersrand in Johannesburg, South Africa.

The purpose of the workshop is to bring together different constituencies – students, academics, government representatives and civil society – to share and discuss their views on the relationship between higher education and the public good. We hope to draw on and analyse the different views shared in the workshop to ultimately develop an indicator on higher education and the public good.

To join us in the discussion, please make the necessary travel arrangements and visa applications as early as possible. We look forward to having you participate in the workshop and share your contributions with the team.

Best Regards

Stephanie Allais, Elaine Unterhalter and the team.

centre for researching education and labour

Appendix E: Letter of Consent

Institute of Education

Higher education, inequality and the public good in four African countries: South Africa, Kenya, Nigeria and Ghana

Logo of associated partners etc.

Dec 2016 – May 2019

Consent Form

If you are happy to participate, please complete this consent form.

I have read and understood the information leaflet about the research	☐	☐
I agree to be interviewed	☐	☐
I am happy for my interview to be video/audio recorded	☐	☐
I understand that if any of my words are used in reports or presentations they will not be attributed to me (presented anonymously)	☐	☐
I understand that I can withdraw from the project at any time, and that if I choose to do this, any data I have contributed will not be used	☐	☐
I understand that I can contact [researcher's name] at any time	☐	☐
I understand that the results will be made public	☐	☐
	☐	☐

Name _____

Signed _____ Date _____

Researcher's name _____ Signed _____

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+44 (0)20 7612 6000 | enquiries@ioe.ac.uk | www.ucl.ac.uk/ioe

Appendix F: Ethical Clearance

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Allais

CLEARANCE CERTIFICATE	PROTOCOL NUMBER: H17/09/01
PROJECT TITLE	Higher Education, inequality and the public good in four African countries: South Africa, Kenya, Nigeria and Ghana
INVESTIGATOR(S)	Professor S Allais
SCHOOL/DEPARTMENT	Education/
DATE CONSIDERED	15 September 2017
DECISION OF THE COMMITTEE	Approved Permission letters are required before data collection can commence
EXPIRY DATE	15 October 2020

DATE 16 October 2017 CHAIRPERSON

(Professor J Knight)

cc: Supervisor : N/A

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University. Unreported changes to the application may invalidate the clearance given by the HREC (Non-Medical)

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. I agree to completion of a yearly progress report.

Signature _____ Date _____/_____/_____

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES