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Trends, tropes and positioning in the university research sub-system n emerging knowledge economies : a theory of research entanglement

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Table of revisions to PhD thesis: Abrahams

Proposed revised title: Trends, tropes and positioning in the university research sub-system in emerging knowledge economies: A theory of research entanglement

Examiner A: Comments	Response – significant revisions
	I have (i) incorporated numerous sections citing and engaging with a selection of the literature as advised by the examiner and (ii) attended to key items from the list of revisions proposed – these being the two main requirements for this examiner. I have used the guidance of the examiner to acknowledge that the five dimensions are not in themselves new. These are already-existing dimensions, which have been discussed in the literature on higher education, innovation systems and strategy (amongst other knowledge fields). Also, many of the attributes of the five dimensions of research entanglement are to be found in research published by other authors. However, many of the attributes listed in the thesis are not strongly present or are absent in the literature, for example *inner city renewal* as an explicit attribute of academic values. Hence, the grounded theory methodology revealed attributes that are already explicit, but in a different context. It also revealed attributes that are not prominent in the literature. The specific dimensions and attributes are gathered from the case studies, not introduced from the literature; their presence derives from the particular university contexts, not from the literature; these dimensions and attributes rose to the surface over an extended period of data collection and coding. Furthermore, the thesis outlines how these attributes cluster together and how the five dimensions weave together into a "state of research entanglement". Neither Olsen (2007) nor Pinheiro et al (2014) reflect on what in this thesis is referred to as the theory of the whole and notably, the dimension of value is not included in either article. Furthermore, Pinheiro et al conclude that the "tensions and dilemmas" limit the academic freedoms of actors, who have to evolve "coping strategies". The data and analysis in this thesis suggests a different view, namely that academic actors and institutions are leveraging complexity (whether these are tensions or dilemmas or other forms of complexity) to advance the 21st century knowledge production project. This achieves the main purpose of the study. This theorization partially addresses the gap in knowledge on "how" universities position themselves with respect to

		research activeness (both actors and institutions are engaged in positioning), a gap that authors and scholars continuously add to from a very wide range of studies and fields of study. Much of the literature recommended relates to the university as a whole. The focus of the thesis is on the research "sub-system" of the university and the transition from research activeness to research intensiveness. Given the guidance of the examiners, this clarification was necessary, and I have therefore, as far as possible, focused the writing explicitly on the research sub-system and on matters related to research activeness and research intensiveness.
Chapter 1	Introduce key statements notably problem statement here and repeat in chapter 3	The entire chapter 1 has been revised to take account of the relevant examiners' comments and in order to provide greater clarity with respect to the remainder of the work. Problem statement was already in chapters 1 and 3. The comment on structuring of chapters for a "standard" PhD approach was not adopted, as the structure follows the guidance given at the university where the student is registered, ie the standard approach at the university of registration.
	Originality, significance and contribution to knowledge	Chapter 1 uses the work Cryer, P. (2006). *The research student's guide to success*, 3rd edition. Berkshire, UK: Open University Press, to set out the forms of originality that are sought in a PhD thesis. Originality and significance are connected requirements for a PhD thesis. Putting originality into perspective, Cryer discusses eight interpretations of originality: (i) Originality in tools, techniques and procedures (ii) Originality in exploring the unknown/unexplored (iii) Originality in exploring the unanticipated (main route versus sidetracks) (iv) Originality in data (v) Originality in transfer of mode or place of use (originality of research need not be new in absolute terms) (vi) Originality in by-products (vii) Originality in the experience (viii) Originality as 'potentially publishable' – article on new forms of value published, plans for future publication in order to interpret 'potentially publishable'. As is explained in Chapter 10, this study engages with four forms of originality: (i) in techniques - the use of grounded theory methodology rather than standard qualitative data analysis (iii) exploring the sidetrack of "strategy as positioning" with respect to research activities in universities, rather than the main route of university activities in the knowledge economy (iv) originality in data in the sense that the particular case studies have not been conducted before, the particular data has not previously been collected, coded, organised or synthesized and (viii) potential for publication in that new theory has been generated. Chapter 10 also includes a brief comment on the balance between originality and conformity in new ideas or new theories. For example, Hanauske, Bernius and Dugall (2007) use the term "entanglement" when discussing

		aspects of the open access publishing behavior of scientists, but do not elaborate a theory of research entanglement. Many authors have written on the subjects of actors, institutions, resources, values and value, but none has formulated and made explicit a theory of research entanglement arising from these elements.
	The concept of positioning – with respect to strategic thinking about research strategy	The concept of positioning is taken from Sun Tzu's The Art of War (translation by R L Wing, 1988) – this is about positioning for success (or triumph), widely used in the field of strategy. Where there is "conflict" in the environment, in other words, where the environment is unfavorable, positioning is necessary. Wing's interpretation is that positioning will advance the capacity for success in unfavorable environments. Many concepts have been used to explore and explain a wide range of aspects of research activity in universities (research ambidexterity, nested tensions, entrepreneurial universities, university technology transfer, research intensity, other), however these are all building blocks for understanding the complex nature of the success of university-based research production. Similarly, the research undertaken here searches for additional building blocks to understand successful university research production, because the full nature of this phenomenon is not yet understood. Moving from the research design (positioning) to the data to the literature, this work relates to the perspective presented by Mintzberg, Ahlstrand and Lampel (1998) on the "positioning school" or "strategy as analytical process". This study uses data coding as the basis for theory generation, it does not use conventional qualitative data analysis.
Chapter 2	The role of the literature review in grounded theory.	Specific literature from the suggested list has been included, notably Clark (1972; 1983; 1997; 1998); Olsen (2007), Pinheiro, Geschwind, & Aarrevaara (2014); Tapper and Palfreyman (2009), as these do have bearing on specific aspects of the thesis. They are included in Chapter 2 and in Chapter 9 as it is appropriate for a grounded theory methodological approach to review the relationships and linkages to existing literature after exposition of the grounded theory, noting that this was done in the original submission with respect to the concept of "entanglement", but not with respect to the broader literature on university change. It works relatively well to make reference to the selected literature in the theory building process, but not to use the literature to build the theory. From my perspective as researcher, it would have been better to pay even greater attention to the innovation systems literature in its relevance to university research sub-systems, rather than to reference the broader literature on university change, as the research is cast more strongly within an innovation systems frame. This is not inappropriate as the researcher must be able to choose particular lenses for research design.
	The specific literature	What does the revised chapter 2 offer? (i) An introductory discussion on the positioning school of strategy is

	selected or not selected.	briefly presented in chapter 2 and revisited in chapter 9. (ii) Explanation why some literature was included in the study and why some literature was excluded: following types of literature were included – (a) that which gives a broader overview of the research dimension in universities from an innovation systems perspective (b) that which gives insight to "positioning" for research activeness or intensiveness (c) key features of university research in acknowledgement of the transition to a knowledge economy – relates to the gap in published knowledge. The examiner advised that literature on the applied field of higher education should be incorporated, including literature on university change, the university in the regional and national economy including entrepreneurial science, values and changing nature of the academic profession, marketization and competition in higher education, managerialism and strategic science regimes, university as organization and institution, interweaving tensions and volitions in HE systems and organizations. This is a significant volume of literature, yet it is only a subset of the literature on higher education change. Not all of the suggested literature is relevant to the study, as explained below. For example, the literature on path dependencies, nested tensions, other, is broadly related (some relevant literature is included now), but not directly relevant as this study is not focused on understanding university dynamics within national and regional innovation systems. The thesis acknowledges that universities operate within such innovation systems, but the study is focused at the micro- (actors, resources, values) and meso- (institution, values, value) levels of the university research sub-system. In particular, the Pinheiro et al (2014) article on nested tensions and interwoven dilemmas in higher education operates at the macro- level of the institution and the macro- level of the European innovation system. Most importantly, this thesis is about explaining particular aspects of the phenomenon of research activeness and research intensiveness, not about explaining the broad dilemmas and tensions faced in higher education. While this study is about higher education change, it is about a very specific aspect of that change, namely emergent strategies of positioning in university research. This has been made even clearer in the revised thesis. A significant part of the literature relevant to the stated dimension of study has been included in the literature review chapter, presented in a way that provides clarification of relevant existing knowledge, but does not trump the data in guiding data analysis and theory generation. Beyond the list suggested by the examiner, there is a vast literature on university research, covering a wide

		range of phenomenon, but only some literature can be cited. Thus for example, literature on entrepreneurial science is cited, but only some of it is cited as the subject of study is not entrepreneurial science. I agree on the necessity of discussing the general field to which the research belongs, noting that this research can be said to belong to many general fields, for example the field of institutional change at universities or the field of university research strategy. I argue that this study belongs more directly to the field of university research strategy and only tangentially to the field of institutional change at universities. The reason for making this case is that the field of institutional change at universities is a very broad field, whereas this study addresses itself to a very specific field, namely emergent university research strategy – not strategy documents, but strategy as practice. It may be argued that the establishing background context, the problem statement and even the research questions reflect a much broader intention. I therefore mention the following explanatory points: (i) the research commenced with a direct perspective on positioning – this was the starting point (ii) in order to get to positioning, it commenced with a broader perspective (what Cryer calls the main route), progressively narrowing down through the process of data collection and coding as the sidetrack became visible. The particular nature of positioning was not clear from the outset, but was observed as the research process unfolded. Thus the nature of positioning was not anticipated at the outset. It is noted that the objective of the literature review was not to situate the work within the literature prior to data collection, analysis and theory design; but rather to leave the thinking framework open ended. Additional literature has now been included in Chapter 2 and Chapter 9 during the process of revisions, as its relevance was recognised at the theory design stage and was highlighted by the examiners.
Chapter 3	Discussion on the selection of India and South Africa	Reasons for this choice include (i) India and South Africa each have a few "global-player, elite" universities (Tapper & Palfreyman, 2009, p.215), which are were the main universities studied. India and South Africa have sufficient similarity at the level of the national research-oriented universities to include both in the study, noting that "these two countries have been engaged in processes of global integration and formation of national systems for research and innovation for at least two decades" (see thesis, chapter 1, page 2); (ii) The research design could benefit from reviewing practice in a country that was marginally ahead of South Africa in terms of being focused on global competitiveness in higher education research. For example, the 40-plus national universities of India have been focused on creating value through research production for at least two decades,

		despite the initial separation of research from universities by the state and the subsequent post-2008 institutionalisation of research in universities by the state (not quite the deinstitutionalization and reinstitutionalisation of research that occurred in Poland (Kwiek, 2012); (iii) India is one of the large developing countries that operates to some extent in the English language medium; (iv) pragmatism – I was invited to study and teach for a short while in India. Furthermore, India and South Africa were selected because (v) they do not offer the opportunity for a direct comparison and the study was not intended as a comparative study, indeed the coding of data and analytical components of the India study assisted in clarifying (a) the need to focus on the university research setting and (b) the relevance and ways in which to adopt a grounded theory methodology. Indeed, many of the challenges observed at the South African university were also apparent in the particular university contexts studied in India. The dissimilarities between the two countries was explicitly noted in chapter 1.
	Theory neutrality of the part and of the whole	This is fair comment. The grounded theory approach adopted is not theory neutral. It explicitly adopts a view from writings on universities in the knowledge economy. It uses a knowledge economy paradigm as a lens, a vantage point, a way of seeing. It does not use this paradigm to influence the coding of the data or the theory building. In grounded theory, absolute neutrality is not required (Kenny & Fourie, 2014), rather it is understood that the researcher will be weakly or strongly influenced by a much broader range of theory and scholarly writing than what is set out in the documented research. However, the theory should not be "forced", by linkages to literature or other influences outside of the data.
	Link between literature review and research design	The literature review informed the research design and methodology in the following way: Reading the literature on entrepreneurial science and other dimensions of universities and their behavior in the context of innovation systems, I wished to explore beyond this existing literature, which mainly (though not exclusively) presents a view from the highly industrialised economies in their transition to knowledge-based economies, noting also that much of the literature on innovation systems and universities from the emerging economies echoes this body of literature. I wanted to search for an understanding of "how" universities in emerging economies break through the complexity of moving from being research active to becoming research intensive, without making the assumption that the trends and behaviors of actors and institutions is necessarily the same in these economies as in the industrialised economies, or that the transitions are the same. Hence, I regarded it as appropriate to use the literature as a backdrop, rather than as a frame, selecting only a sample of the relevant

		literature.
	Consistency of being a data-driven study in whole and in part	Mostly resolved.
	Voice of the author with respect to methodology and methodological choices: discussion of ontological and epistemological elements	Agree – done.
Chapter 4	Include direct quotations	In the original submission, direct quotations were used in each of the data chapters, including in chapter 4, clearly referenced to the particular key informant and with the key informant naming convention clearly set out in Appendix F in the original submission. Grounded theory methodology texts advise that the data should be presented in as much depth as possible as the theoretical sampling is conducted on an extensive set of data.
	More careful selection of critical data	Improved.
	Originality in data	Exploratory research draws the initial categories into a connected architecture that persists through the remaining case studies.
Chapter 5	Include direct quotations	In the original submission, direct quotations were used in each of the data chapters, including in chapter 5, clearly referenced to the particular key informant and with the key informant naming convention clearly set out in Appendix F in the original submission. The only further improvement here could be increased annotation of data to the particular key informant.
	More careful selection of	Edited.

	critical data Originality in data	 Institutional overview of a large research active university.
Chapter 6	Include direct quotations More careful selection of critical data Originality in data	In the original submission, direct quotations were used in each of the data chapters, including in chapter 6, clearly referenced to the particular key informant and with the key informant naming convention clearly set out in Appendix F in the original submission. Edited. Write up of evolution of a nascent digital technology hub.
Chapter 7	Include direct quotations More careful selection of critical data Originality in data	In the original submission, direct quotations were used in each of the data chapters, including in chapter 7, clearly referenced to the particular key informant and with the key informant naming convention clearly set out in Appendix F in the original submission. Edited. Write up of evolution of a 21st century institute.
Chapter 8	Include direct quotations More careful selection of critical data Originality in data	In the original submission, direct quotations were used in each of the data chapters, including in chapter 8, clearly referenced to the particular key informant and with the key informant naming convention clearly set out in Appendix F in the original submission. Edited. Bringing together data on intellectual property rights and open access publishing, emerging areas of theoretical

		investigation and knowledge production on the African continent.
Chapter 9	Links with literature, theories, concepts – eg decoupling, multiple cultures, bottom-heaviness, autonomy, nested or interweaving tensions, etc.	The literature recommended by the examiner covers the broad field of higher education change. This thesis pertains to the research problem of university "positioning" strategy with respect to universities pursuing research activeness and research intensiveness in the 21st century. Thus, a small selection of articles and works was chosen from the list recommended by the examiner, as a larger selection would be too diffuse to focus attention on the dimensions of the theory of research entanglement. This selection includes mainly the work of Clark, since the thesis is situated within the same broad canvass and there are specific and noticeable reference points between the thesis and Clark, though the thesis covers a smaller and more specific scope. Furthermore, while the type of research problem is similar between the two (mapping the nature and dimensions of the university landscape), the particular research problem in the thesis is not identical and the theoretical formulation in the thesis is distinctive from Clark's work. I suppose the relationship could be best described in the following way – some parts of the work of Clark and the work presented in the thesis are similar, but the whole of the work of Clark and the whole (theory of research entanglement) of the work presented in the thesis are dissimilar. It is fair comment that the theory building chapter, chapter 9, could have incorporated many, many more references to literature, including that in the list recommended by the examiner and an extensive additional literature that has arisen in the period 2000 to date. However, this approach would simply be emphasizing the existing literature, rather than the evolving theory. Hence, I have considered it best to highlight the most critical literature with respect to "positioning", rather than draw on the much broader literature, which will highlight too many dimensions to work with. The crucial issue here is the theory building. Yes, I agree that the theory could have been different if more of the literature were referenced to the various elements of dimensions of the theory, but that is what I wanted to avoid and what grounded theory advises should be avoided, that the theory building should not be over-determined by what we already know. My concern is that there is no end to the discussion on the nature of grounded theory, noting the existence of at least three formal schools of grounded theory (Glaser, Strauss & Corbin, Strauss, Charmaz) as discussed by Kenny and Fourie (2014). I have done my best to balance the need for acknowledgement of the literature on innovation and universities, university change and positioning strategy, but the balance is imperfect for now. A real challenge is that each of the three examiners required the inclusion of quite significantly lengthy, yet different sets of literature, in addition to the

		literature already selected for inclusion in the original submission. What is interesting about Clark's work, and relevant to this thesis, is how he develops theories from data gathered through case studies in several components of his body of work. So, he develops the theory of organizational saga using what is effectively a grounded theory methodology. While he does not use the words grounded theory, the theories are essentially derived from data and Clark specifically states that he is theorizing from data obtained from observation, not building on previous theory. There are many theoretical and methodological similarities for the thesis with the work of Clark (1972; 1998), as Clark (i) is investigating particular aspects of transitions in higher education and (ii) uses grounded theory methodology. It is inevitable that there would be similarity in the nature of the work, as we are studying the same institutional type, even if not the same institutional transitions or phenomenon. It is noted in this regard that Clark's study on the five organizational pathways of transformation referred to above was developed from case studies conducted at five European universities. He says "I treated each university as a case study of institutional change, with its own uniquenesses and peculiarities. But as the research proceeded I was also able to tease out some elements of change that these five universities, variously located, had in common. I came to call these elements "pathways of transformation"; and was able to use them to frame the case studies. The study allowed me to interact closely with the institutions I was studying, in a rich and rewarding way that I had not experienced before. "Practitioners" were my teachers; "practice" rather than prior "theory" was the basis for my results". In this study, I took a similar approach – case studies and grounded theory – of my own volition and research design, not because I was copying Clark. The key difference between this thesis and the work of Clark is that Clark progressively sketches particular features of the higher education landscape and higher education change through his many works. The particular feature addressed in this thesis, namely the sidetrack of academic actors and institutions pushing through adversity in the research game, is not examined in Clark's body of work in any depth. The following are my rough annotated comments as the basis for revisions in the main text. Clark, B.R. (1972). The organizational saga in higher education. *Administrative Science Quarterly*, *17*(2), 178-184. In this work, Clark builds a theory of organizational saga to express the bonds and sense of community and inclusion built up over generations, for internal and external groups associated with a type of organization, in this case – three universities. This is the organizational saga of loyalty and community. One of the many values

		of this theorization is that, as with the perceived value of grounded theory (Kenny & Fourie, 2014), the theory survives for a very long time, even where the context, environment and era changes. But not all organizational sagas in the world of universities are about loyalty, community and shared histories. As Clark suggests, some organizational sagas include exclusion or at least perceptions of exclusion. This theory of organizational saga is interesting, but not useful in thinking through a strategy of positioning because it is about the university as a whole, the university as a culture. Clark shows us the state of the institutions. On the other hand, this thesis addresses itself to the emergent strategies in positioning the university with respect to its research activeness or research intensiveness, the part of the cultural life of the institution that is most clearly connected into the broader innovation system. Clark, B. R. (1983). *The higher education system: Academic organization in cross-national perspective*. Los Angeles, CA: University of California Press. This work incorporates a few relevant concepts, namely adaptive capacity, basic values, conflict and accommodation. By adaptive capacity is meant "the capacity to add and subtract fields of knowledge and related units without disturbing others", noted by Clark as "The fundamental adaptive mechanism of universities and larger academic systems". He remarks on this type of adaptation as being that of localized interests, citing also Durkheim's discussions on universities bending and adapting themselves to change in their environments. This adaptive capacity is found in the particular case study universities in India and South Africa, and is included as a component in the theory building process. Clark refers to four sets of academic values, namely social justice, competence, liberty and loyalty. This study takes a very different view of academic values, based on an early 21st century perspective. Indeed, much of the work of Clark can be cited to relate to particular findings in this thesis, and some additions are therefore made to chapter 9 of the thesis. However, the thesis is not primarily concerned with understanding each of the factors and nuances in these factors for their own sake. The thesis is rather concerned with the overarching phenomenon of "positioning" the university with respect to its research activeness or research intensiveness. Notably, in a UNESCO speech entitled "University transformation for the twenty-first century", Clark (1998, p.4) maintains his views on adaptive universities: "Adaptive universities construct a portfolio of small experimental steps, changing that portfolio from one decade to the next as they learn what works and what does not, and as they sense what new opportunities should be explored". However, his discussion of adaptive capacity (Clark, 1983; 1998), while noting that universities experience limitations on their capacity to adapt due to funding and regulatory and other restrictions (Clark, 2001), does not grapple with the dimensions of research entanglement that push

		forward the emergence of new fields of research endeavor, research-based innovation, new institutional dimensions, under conditions where the main structures and processes of the university are generally unable to provide a supporting environment and the entanglement process and its outcomes may push forward the university as a whole. Clark, B. R. (1995). *Places of inquiry: Research and advanced education in modern universities*. Los Angeles, CA: University of California Press. In this work, Clark advances his project of setting out the landscape of higher education change in the twentieth century. The work is concerned with understanding national systems of higher education, in particular the research-teaching-learning nexus. Beyond the fact that it sketches additional contours of the higher education landscape, the work does not relate directly to positioning strategies of universities for greater research activeness and research intensiveness. Clark, B. R. (1997). Common problems and adaptive responses in the universities of the world: Organizing for change. *Higher Education Policy*, *10*(3–4), 291–295 Clark, B. R. (1998). *Creating entrepreneurial universities: Organizational pathways of transformation*. New York: Pergamon. (i) a strengthened steering core (ii) an extended developmental periphery (iii) a diversified funding base (iv) a stimulated academic heartland (v) an entrepreneurial culture – enabling universities to meet the heightened demands to become more innovative and entrepreneurial. But are these really pathways? They seem to be contributing factors rather than pathways. In South Africa, these five pathways or contributing factors are not dominant modes within universities, in the 21st century steering cores are often focused on bureaucratic maintenance rather than on innovativeness or entrepreneurialism, in quite similar ways to Clark's lament on European universities. In this study, the focus is on strategic "positioning" with the data focusing largely on what research actors do, their resources, values and value created, but most importantly how research actors engage in "positioning the university". While it does include an institutional perspective, it does not focus particularly on what university management does. (ii) In South Africa and India, many parts of the "expanded developmental periphery" are relatively new, for example in South Africa technology transfer offices are typically about seven years old as they were formally constituted after enactment of the IPR-PFRD Act, 2008. Chapter 9 acknowledges Clark's formulation of this expanded developmental periphery. (iii) The importance of the discussion on "resources" in the thesis relates to the chaotic relationship of actors with resources, particularly

		funding, nevertheless Clark's work is referenced in chapter 9. (iv) The ways in which this study moves beyond Clark's perspective on "a stimulated academic heartland" are expressed in chapter 9. (v) The variance with Clark's conclusion of an integrated entrepreneurial culture are expressed in chapter 9. Clark, B. R. (2001). The entrepreneurial university: New foundations for collegiality, autonomy and achievement. *Higher Education Management, 13*(2), 9-24. In this article, Clark focuses on the reinterpretation of historical values, one could say the repurposing of the historical values of collegiality, autonomy and achievement (or success or academic excellence) from an era of management for an era of entrepreneurialism. Central to this article is the question: "How can we, in our setting, position our organisation to best pursue opportunities? And keep, we might add, the underlying values that characterize universities" (Clark, 2001, p.17). While the question is posed as a general question, and is thus very similar to the research question posed in this thesis, the context for Clark's (2001) question is the transition from the collegial university or the distinctive college with its own organizational saga to the entrepreneurial university. In this thesis, the context for the research question is the complexity encountered when attempting to pursue research activeness and research intensiveness of various kinds, which certainly includes the possibilities of entrepreneurial science, but is not occupied with that particular endeavor. Furthermore, in this thesis the elaboration of academic values extends beyond the repurposing of historical values to include additional values. He pursues an extensive discussion on university change and which kinds of universities, under what circumstances, may best adapt to change. Olsen (2005) notes and discusses the many challenges for the university in Europe (Olsen, J. (2005). *The institutional dynamics of the (European) university*. Centre for European Studies, University of Olso.) In this paper, he notes that actors may have shared objectives or conflicting objectives with respect to university "autonomy", a key concept in the academic values literature. He recognises four main governance perspectives for the European university: a self-governing community of scholars, an instrument for national political agendas, a representative democracy, a service enterprise embedded in competitive markets. He engages with the possibility that any particular university may, at any point in time, occupy all these "positions" simultaneously, with one or another position being dominant. The research paper points to several dilemmas – in short, proliferation of identities, individual freedom, access to resources, renewal and continuity. The most important, and the most relevant part of this work is the inductive argument that "institutional success may also carry the seeds of institutional confusion, crisis and change", which is echoed in this thesis. "Historically, universities

		have survived by turning institutional confusion and crisis into reexamination, search, innovation and rejuvenation. There is no guarantee it will happen again. Developments will, as before, depend upon many factors the University can not control. What the University can do is to critically re-examine its self-understanding as an academic institution: its purposes, core values and principles, its organization and governance systems, its resources and friends, and its social obligations" (Olsen, 2005, p. 39). Tapper, D. & Palfreyman, T. (2009). Reshaping the university: The rise of the regulated market in higher education. Oxford, UK: Oxford University Press. With respect to Britain, the authors discuss, inter alia, the rise of the research agenda in the context of higher education behaving as an industry responding to market dynamics and the resulting organizational fragmentation that occurs. This is interesting, but tangential to the focus of this thesis. The same dynamics are observable at the case study university, for example, the JCSE focus on software innovation and its industry orientation. However, the thesis does not seek to engage with the marketization aspects of this orientation, how the university is affected by marketization. The thesis is concerned with the ways in which research actors and institutions achieve research activeness and transition to research intensiveness. Kwiek (Kwiek, M. (2012). Changing higher education policies: From the deinstitutionalization to the reinstitutionalization of the research mission in Polish universities. *Science and Public Policy, 39*, pp. 641-654, doi:10.1093/scipol.scs042) concerns himself with the ways in which the research mission shifts in importance depending on external factors including higher education policy. This work is set in the paradigm of institutional theory, not in the paradigm of theory of "positioning" institutions or institutional cultures, practices, orientations. Pinheiro, R., Geschwind, L. & Aarrevaara, T. (2014). Nested tensions and interwoven dilemmas in higher education: The view from the Nordic countries. *Cambridge Journal of Regions, Economy and Society*, *7*, 233–250. doi:10.1093/cjres/rsu002 This article observes the prevalence of Olsen's (2007) four dilemmas in Nordic countries, (i) internal tensions over matters such as the appropriate balance between equity and excellence (ii) governance arrangements pertaining to centralization versus autonomy (iii) funding and resource matters and their effect on the relative independence and academic freedom of the university mission from external capture and (iv) the interplay between change and continuity and the effects of path dependencies. The article notes a range of

		tensions and dilemmas, including in the areas of governance, managerialism, funding and financial autonomy, government and regulatory pressures. It argues that these tensions and dilemmas are interconnected in Nordic universities, as previously argued by Olsen (2007) with respect to European universities. However, in reviewing Olsen's dilemmas in the Nordic context, the authors reflect on tensions and dilemmas with respect to "goals, objectives and strategic interests". The thesis is not particularly concerned with the specific goals, objectives and strategic interests set out in the conclusion to this article. Rather it is concerned with " how" research actors and research institutions push through the adversities raised by the presence of these tensions and dilemmas. The authors also comment on "European" academic values, noting specifically, transparency, participation, accountability, effectiveness and coherence, high quality teaching and research, internationalization, broad participation in decision-making. By contrast, the academic values discussed in the thesis emphasise innovation orientation, indigenous science orientation, open science (sustainable urban design, inner city renewal have been added at the revisions stage, based on further attention to the data) as part of a changing values system. While these attributes do feature in the HES and IS literature, they do not feature prominently as, or are never explicitly noted as academic values. Birnbaum, R. (1988). *How colleges work: The cybernetics of academic organization and leadership*. San Francisco, California: USA: Jossey-Bass Inc. Publishers. The data coding for the research problem on "positioning" universities leads to the identification and presentation of a number of categories, sub-categories and causal conditions. Some of these are visible in the work of Birnbaum, either explicitly or implicitly, notably the notions of cause and effect, tight and loose coupling and their effect on survival of parts of the institution, shared meanings. However, the purpose of the book and much of this particular work addresses itself to the role of the administrator, what the administrator should do and how. The focus of the thesis, on the other hand, is what scientists and the research sub-system of the university actually does. It argues that university leadership should encourage this research entanglement behavior within the research sub-system in order to derive success in their endeavors to foster ever greater research activeness and research intensiveness. Birnbaum points to the existence of many sub-systems and institutional cultures, but does not concentrate his analysis on the specifics of the research sub-system. In reading this work, I also read a contemporaneous review by Reyes (Reyes, P. (1990). Reviewed Work: *How Colleges Work: The cybernetics of academic organization and leadership* by Robert Birnbaum, *The Journal of Higher Education*, 61(3), 357-360, DOI: 10.2307/1982138), which argues as follows: "The central aim is to establish the plausibility of a framework to study the academic organization of colleges and universities. Though the

		book amply demonstrates the usefulness of the cybernetic model in explaining how colleges work, I am disappointed, not by Birnbaum's work, but by the limited progress we have made in the area of organizational theory in higher education. We know that the systems approach to theorizing is logical, simple, and intuitively appropriate, but we also know that this approach is difficult to defend. The model has conceptual holes [I] and it's difficult to define for empirical application [2]. Moreover, the systems approach uses basically a structural-functionalist view in which the stability of the system is its main concern. This view does not address other important issues that are associated with institutions of higher education. Questions that need theoretical speculation include: What is the relationship between the design of work and control within colleges and universities and the nature of the society within which they occur? What are the nature and functions of ideologies that buttress, disguise, or justify organizational in- equalities and hierarchy within colleges and universities? My point is that we have to move away from the structural-functionalist perspective which is ideologically conservative and related to the status quo. Furthermore, we need to avoid the assumption or image that colleges and universities are unavoidably static, an assumption we make when we use the systems perspective. The emphasis placed on rules and regulations and other structural processes leads organizational analysts to neglect the more dynamic aspects of colleges and universities". I have significant resonance with this view in relation to this particular study, as the focus of this thesis is on positioning for advancement, rather than on the nature and functioning of the sub-system. While I agree with the examiner that a number of themes in the HES literature, including "decoupling, multiple cultures, bottom-heaviness, autonomy" are relevant to this thesis, it would require much more extensive engagement with the literature to set out a discussion of each of these, while detracting from the main objective of the thesis, which was to produce a theory derived from data, not from literature. Thus, I have worked in to the thesis a reasonable sample of the proposed literature, but have not attempted to engage with all the literature. Furthermore, there are many other concepts, themes and theories in the literature, which were not recommended, such as the concept of "research ambidexterity", which adapts the concept of ambidexterity from the organizational theory environment to the environment of entrepreneurial universities, which are of significant interest and value to this study (Chang, Y-C., Yang, P. Y., Martin, B. R., Chi, H-R., & Tsai-Lin, T-F. (2016). Entrepreneurial universities and research ambidexterity: A multilevel analysis. Technovation, http://dx.doi.org/10.1016/j.technovation.2016.02.006). I am a bit concerned with creating a conceptual soup that relates research entanglement to everything. Regrettably, much of the literature on "positioning" in the field of strategy relates to (i) marketing (Urde, M. & Koch, C. (2014). Market and brand-oriented schools of positioning, *Journal of Product & Brand Management*, 23(7), 224-230, dx.doi.org/10.1108/17515630810906729) and (ii) competition (Kalafatis, S., Tsogas, M., & Blankson, C. (2000). Positioning strategies in business markets. *Journal of Business & Industrial Marketing*, 15(6), 105-115,

		http://dx.doi.org/10.1108/10610420410529735). Even more regrettably, no literature could be found on positioning strategies for universities. In this thesis, the interest in positioning lies in how the actors and the institutions (universities) position themselves in their own sector, in relation to how they can be "their best selves", noting the widespread interest to be not only research active, but research intensive, as expressed by universities themselves. While this view also finds expression in public policy, it is the interests of the academics, scientists and universities that is in focus here. Furthermore, this focus on positioning relates to the view gained from the translation of Sun Tzu's works, namely that the institution is positioned in such a way that it does not have to compete, but that it "wins" because it has positioned itself in such a way that its reputation invites "no competition" (this can be interpreted as inviting collaboration rather than competition). In the university sector (please note that we are concerned here with the university, not with all forms of higher education), while competition is prevalent (for example competition for research funding and research personnel), universities that have a powerful reputation will attract funding and personnel through their "positioning", in addition to direct marketing or direct competition. Reference Wing's translation of The Art of Strategy and Mintzberg, Ahlstrand & Lampel (1998). In summation, the thesis is concerned with "how" research actors and research institutions position themselves for greater research activeness and the transition to research intensiveness within the context of various tensions and dilemmas. So it is not the existence of the particular tensions and dilemmas that is being presented, but rather the approach to resolving these tensions and dilemmas, in other words, the theory building is concerned with the ways in which research actors and institutions resolve the thesis versus anti-thesis perspective and successfully attempts to find the approach to resolution, to synthesis, or sublation, where the initial thesis versus anti-thesis is replaced, superseded (aufgehoben), a dialectical transition point.
Chapter 10	Original and/or substantial contribution to the advancement of knowledge	Chapter 10 uses the work Cryer, P. (2006). *The research student's guide to success*, 3rd edition. Berkshire, UK: Open University Press, to discuss the forms of originality that arise in this PhD thesis. Originality and significance are connected requirements for a PhD thesis. In this thesis, originality arises in respect of the theory building process grounded in data derived from the case studies of research activeness, leading to explication of a theory of research entanglement. Cryer notes that there is generally a balance between originality and conformity, suggesting that any new theories may contain elements of pre-existing ones. This theory has a high degree of originality in that it uses the metaphor of entanglement (derived from other

		uses of entanglement) to provide a theory of strategic positioning of universities with respect to their research activeness. The initial theory is set out in a reasonable degree of detail. The significance of this theory is that it draws out the real strategy of positioning being played out at the actor and institutional level, rather than reflecting on strategies that have been designed by institutional management. It focuses on strategy *emergence*, rather than strategy *design*. This aligns with the objectives of the study, which were to discover the real world practices within the realm of research active environments in universities. The theory of research entanglement is significant because it demonstrates that parts of the university and the university as a holistic research entity operates through a combination of (i) explicit research strategy design (management leadership develops strategies and programmes and funds these) and (ii) tacit research strategy emergence. Awareness and understanding of the specific nature of research strategy emergence can allow for a more open set of approaches to building research activeness and research intensiveness in universities. This work may not yet be a substantial contribution to the advancement of knowledge, but it forms the foundation for further studies. The concept of research entanglement incorporates five dimensions widely recognised in the literature, each having several attributes, some which have been articulated in previous research, and others which have not previously been articulated. Furthermore, a formative theory of research entanglement for greater research activeness and transition to research intensiveness is presented. The next study, continuing this work and funded by the Open AIR network, will explore innovation entanglement at five technology hubs in South Africa. In summary then, this study engages with four forms of originality: (i) in techniques - the use of grounded theory methodology, rather than qualitative data analysis, to develop a theory which has not previously been explicated (iii) exploring the sidetrack of "strategy as positioning" with respect to research activities in universities, rather than the main route of university activities in the knowledge economy (iv) originality in data in the sense that the particular case studies have not been conducted before, the particular data has not previously been collected, coded, organised or synthesized and (viii) potential for publication: an article on new forms of value has been published in *Journal of the Knowledge Economy* (2015), plans for future publication include translating the case studies into a more accessible form for journal publication, and an article discussing the theory of research entanglement, its content, distinctiveness from existing theory and value to researchers and

		theorists.
Section: "Revisions required"		The majority of these points of guidance have been attended to, except for the advice on splitting chapter 1, as the structure of chapter 1 follows the requirements set by the examining school, Wits School of Governance.
Section: References		Errors mostly addressed, a final edit required.
Examiner B: Comments		**Response – Pass with revisions** **I have attended to the list of recommendations of the examiner.** This examiner notes that the study crosses the fields of SIS and HES, but then finally comes to the conclusion that this is a study on strategy (correct). However, the examiner does not relinquish the requirement to include literature on HES. Were this work in the field of strategy in business, would it be appropriate to require the inclusion of a wide range of literature on business studies? The literature cited in this study is a sub-collection of the range of literature that could have been chosen, and was chosen for its reflection on "positioning" of universities with respect to research practice.
Chapter 1	Clarify the discipline and/or field and/or focus of study	The meanings of trends, tropes and positioning as used in the title all relate to the field of knowledge of strategy: Mintzberg, H. Ahlstrand, B. & Lampel, J. (1998). *Strategy safari: A guided tour through the wilds of strategic management*. New York: The Free Press. Mintzberg et al identify 10 schools of thought pertinent to strategy formation, as well as "the whole beast" of strategy formation. The concept of "positioning" in this study was imported from Sun Tzu (The Art of Strategy) as part of the research design, but reviewed through Mintzberg et al after completion of the theory building process and applied in the following way, not as "the whole beast": • Strategy as patterns (trends) – identifiable patterns of behavior, as seen in the case studies • Strategy as positioning – "strategy formation as an analytical process", analysing data to understand the process of locating specific university research practices within the university landscape, based on the conceptual framework of organisational actors and other factors, mainly internal to the university; the aim is "conducting of strategic analyses in support of" the formulation of strategy…"The role of positioning is to support that process (formulation of strategy), not to be it". And "This school has opened up tremendous avenues for research and has provided a powerful set of concepts for practice. But people must build from these, developing a synthesis that encompasses a broader perspective within this school of thought…In other words the positioning school must use its powerful foundation not to restrict strategic vision but to enlarge it". Positioning explained using the literary trope of "entanglement" in other words entanglement is a specific metaphor for positioning. Also, use of the word tropic (science, biological use), as meaning turning toward, or having an

	Clarify the theoretical originality	affinity for to elaborate the concept of positioning, because positioning is not self-explanatory. • Strategy as organisational learning – "strategy formation as an emergent process". In this study, entanglement emerges as a way of positioning, through specific choices which become patterns of behavior through organisational learning, imitation, adoption, other. "University" is used as a form of metonymy – permissible – a trope based on proximity of the meaning or correspondence of meaning **Why: to discover and to theorise an important strategic mindset relevant to research and innovation in the university** Originality in exploring the unanticipated – the strategy of university positioning – main route (university strategy) already explored (for example, Keller, G. (1983) Academic strategy: The management revolution in American higher education. Baltimore, USA: The Johns Hopkins University Press.), but unexpected and unexplored sidetracks leads to exploring the sidetrack. The literature reviewed engages with (i) the nature of knowledge production (ii) the conditions within which knowledge is produced (iii) trends in universities in knowledge economies. This thesis explored the "strategy as practice" that enables research activeness and transitions to research intensiveness for the scientist-researcher and for the institution.
Chapter 2	• Address the HES literature effectively • Comment on multiple fields of study from varying disciplines: SIS, HES, organizational change theory • Provide an adequate review of international, African and South African literature on HES in the knowledge economy	I have included some of the suggested literature as theoretical context, particularly that literature that reflects on "positioning" of universities with respect to research practice. I submit that this study is in the field of research and innovation strategy, not organizational change theory. This study is not concerned with the nature of organizational change, but with "positioning", a term taken from strategy literature dealing with the application of Sun Tzu's strategic thinking modes to organizational strategy. It is a study in the strategy of positioning, which is a single element of organizational strategy. The study is not concerned with multiple elements of organizational strategy, only positioning. Furthermore, the study is concerned with the "how" of strategic positioning – how does the university create or establish and advance its strategic positioning. The term university is used as metonymy, not simply in its functional meaning. Neither is this a trans-disciplinary study. The study of SIS can be multi-disciplinary or trans-disciplinary, with respect to the disciplines of political science, law and regulation, economics, strategy and leadership. Similarly, HES can be multi-disciplinary or trans-disciplinary with respect to the social sciences, law and regulation, economics, strategy and leadership. While SIS and HES literature is relevant, it is not obligatory to understand how these overlap with strategy when grounded theory is the selected methodology. Grounded theory is

		concerned with collecting and understanding data, then theory building, and checking that the theory is original as the process of data collection and theorization proceeds. Knowledge economy used as a concept, not as theory, not as policy terminology – this is not a public policy study, it is a study to understand some aspects of how organizational positioning works (i) in a particular era, the era of knowledge formation through research-activeness and research-intensiveness, (ii) in a particular institutional setting, namely a research-active university with pockets of research-intensiveness. These are the delimitations of the study, in other words they inform the scope of the study.
	• Critical comment on the discourse of the "knowledge economy" and problematizing the concept of "knowledge economy	Chapter 2 clarifies the way in which the concept knowledge economy is used and why. This section has been rewritten to include more critical reflection. Please note that the section was not intended as a discussion of public policy, but rather presents a particular paradigmatic viewpoint.
	• Views on Marginson and Barnett	It may be that Marginson and Barnett are ideologues, but this study is not concerned with their ideologies, simply with key ideas from their particular interpretations of reality. For example, with respect to Barnett, the notion of the university "in ruins", refers to the previous forms, notions, designs, structures and strategies of the university being overcome and replaced by new forms, notions, designs, structures and strategies. One such idea is the idea that there can no longer be a single conception of "the university", but rather than there are many conceptualisations of the "university" which can coexist, in other words poly-conceptualisation rather than mono-conceptualisation.
	• The representative nature of the case studies selected	The interest of this study is in research activeness and research production, not in research publication or research output per se – each of the cases was selected because of the difficulties encountered with pursuing a particular aspect of research. Thus the case studies are not intended to be representative, but rather to provide the foundational data for discerning patterns, positioning and strategy emergence. In a social constructivist epistemology (set out in the revised chapter 3) the objective is relevance and insight, rather than representativeness.

Chapter 3	Clarify the transition from the literature review to the research design – make the logic clearer than original version	Done. Originality in tools, techniques and procedures – grounded theory
Chapter 4	• Create a better structure, clearer presentation of data and argumentation for this chapter and why it should be included • Create a clearer argument of the value gained from the India data and its influence on the South African component of the case study	Done. This chapter is important and necessary from the methodological process, as it is the data and the chapter that created the direction for the South African case studies and for clarifying the focus on positioning. All the themes that arise in this chapter relate in some way to the positioning of universities in India. Please note also that the population of universities (national universities or "global player, elite universities") at which the data was collected is that population of universities most similar to the South African research active universities. The chapter has been revised so that the logic of the explanation given here is clearer to see.
Chapter 5	• Context of Wits in the South Africa HE system • Absence of a discussion on national and institutional policies • Poor empirical faculty-based data with no	Done – how to characterize Wits in relation to other universities in South Africa and India. I do not wish to introduce this aspect because the work is not about national policies at all. Also, I do not wish to introduce a discussion on institutional policies for the reason that the work is about strategy as "positioning", not about strategy as "design". While the two are related, the scope of this work is to focus on "positioning". I have included three important segments of data from SA HE Open Data – (i) research publications output 2013 (ii) weighted total research outputs per academic staff member 2013 (iii) research income as percentage of block

	systematic comparison between faculties or with other universities, situate Wits for the reader, see SA HE Open Data	grant. These were the only data sets relevant to this study. The data used in chapter 5 is the data available in Wits own documents. Please note that the empirical data chapter (chapter 5) simply presents a subset of the vast quantity of data available for comparison. The objective of the work is not a comparative analysis of faculties or universities. The data presented in this chapter illustrates that Wits as a case study institution is a research active university with pockets of research intensiveness. The inclusion of SA HE open data in the revised chapter 1, shows that Wits is one of 6 research active universities with high weighted total research outputs per academic staff member and with pockets of research intensiveness.
Chapter 6	Who are the entangled What is entangled	Greater clarity has been given to this through editing, in particular adding to the already existing chapter summary headed insights for theory building.
Chapter 7	Who are the entangled What is entangled	Greater clarity has been given to this through editing, in particular adding to the already existing chapter summary headed insights for theory building.
Chapter 8	Who are the entangled What is entangled	Greater clarity has been given to this through editing, in particular adding to the already existing chapter summary headed insights for theory building.
Chapter 9	• Clarity of thought • Methodology to test the claim • A few unrepresentative cases do not make the case • Cop-out	Greater clarity has been given to this through editing, in particular adding to the already existing chapter summary headed insights for theory building. The role of grounded theory in initial theory building, "testing" is clarification of the explanatory value of the initial theory This thesis is not about representative cases, it is about unrepresentative cases, cases that are peeking their heads out above the general activity. This study demonstrates a particular form of positioning across multiple contexts and types of research endeavor, namely research entanglement. It is therefore postulated that, across a range of diverse cases, research entanglement is common. Clark (1998) in his case studies on pathways of transformation, finds peculiarities, uniquenesses and commonalities, as the foundation for this particular theorization of university change. The focus there too is not representivity of the particular cases. On this point, I don't agree that the proposal for further study is a cop out. In the revised thesis, I have done a

		substantial amount of work to address the concerns of the examiners, however, further study is still required, as this theory is still in its formative stage. A proposal for further study has been accepted and funds awarded for investigating the theory of entanglement in a tech hub setting (study of five tech hubs in South Africa) and extending the theory of research entanglement to a theory of innovation entanglement.
	• Data as grounding for conclusion	In social constructionist epistemology, the narratives and reflections provide accepted forms of data, while in grounded theory methodology the five qualitative case studies provide sufficient grounding for the data.
	• Slipping between the individual and the institutional	In some instances, the use of the term "university" is an instance of metonymy. Also, the institution (university) is the creation of individual endeavors and the term can therefore be used to denote application to the institution. I will be more careful in attending to the proper use of the terminology.
	• No contribution to the advancement of new knowledge	While I searched on Google, Google Scholar and in university library databases using many alternatives to the terms "university research entanglement strategy", I did not find publication of similar work on strategy as positioning, or indeed any work relating to these search terms, other than what is already reported in the original thesis submitted for examination. I read many, if not all, the recommended works and found that, except for the work of Clark and the strategy literature itself, the terminology of "positioning" is not common with respect to studies on universities.
Chapter 10	No contribution to the advancement of new knowledge	Contribution on strategy as positioning or "strategy formation as an analytical process" (Mintzberg et al) – advances knowledge by theorizing the actions occurring in the research-focused activities of universities from the perspective of strategy as positioning, including position awareness or clarity, seeing your own position in relation to other positions, strengths and weaknesses of the position, how to advance the position, understanding values and value associated with the position. The five attributes of positioning are not randomly chosen but derive from the data. They compare well with the factors made explicit in literature on strategy as positioning, but advance knowledge by giving substance or materiality to positioning for research-focused activities at universities. Other uses of positioning relate to the field of marketing (Harrison-Walker, L. J. (2009). Strategic positioning in higher education. Academy of Educational Leadership Journal, 13(1)). There is a vast literature to be explored, much greater than it is possible to explore in this thesis. Nevertheless, all the literature I have read does not explicate this particular track in the field of strategy as applied to university research activities.

		Originality as 'potentially publishable' – article on new forms of value published during the course of work on the thesis, plans for future publication in order to interpret 'potentially publishable' include: (i) a series of three articles, one on each of the case studies, incorporating historical data and also new data to be collected and developing the coding in a more suitable format and presentation for a journal article: case study of JCSE tech hub to be submitted to *The Journal of Technology Transfer*, case study of Agincourt health surveillance project to be submitted to *Higher Education Research and Development*; case study of open access to be submitted to *Journal of the Knowledge Economy*. (ii) an article on the theory of research entanglement to be submitted to *Journal of the Knowledge Economy*. (iii) an article on the particular use of grounded theory methodology, emphasizing its value in research on strategy formation as an analytical process (the positioning school) to be submitted to *The Grounded Theory Review*.
Examiner C: Comments		**Response – some interesting perspectives** **This examiner made only remarks, no recommendations for revisions.** The most important examiner comments are addressed in the responses above. A few additional comments are added here relevant to chapters 9 and 10 as this is the main focus of the examiner's comments. The examiner did not comment on particular chapters. It is not clear why, if the theory of research entanglement is accepted as new, even if it is not as robust as institutional theory, it does not qualify as the advancement of knowledge or simply as originality.
Chapter 1		The thesis is in the field of strategy, which is related to institutional change, but it is not **in** the broad field of institutional change. They key theoretical concept is "positioning", expressed in the title and in the main research question, a concept taken from the strategy literature, see discussion above. In order to undertake the study in a particular context and institutional setting, it was necessary to also introduce literature that relates to (i) positioning of universities in the 21st century and (ii) creating a perspective on research activeness and research intensiveness, noting that research-based universities are widely regarded as forming part of innovation systems. This literature was relevant to providing a broad canvass for the research, but not a lens through which to observe or develop theory.

Chapter 9		
Chapter 10	No contribution to the advancement of new knowledge	I have rewritten the "journey" section of the relevant chapter to address the guidance given with respect to the theory and its formulation. The examiner advises that the thesis does present new insights, or a new theory, but the theory is not as robust as other theory used in higher education studies. I agree that the theory as presented in the thesis is not profoundly robust, but new theory has to come into being and perhaps cannot, in a single study, be as robust as theory which has been built by multiple researchers over multiple research projects and many scholarly publications. So I would argue that this is the initial exposition of the theory, which will develop through establishing this focus as a line of research enquiry. I have recently submitted a proposal and been awarded a small research grant to conduct further research into forms of innovation entanglement at technology hubs in South Africa. This is seen by the author as an opportunity to further develop the theory of research and innovation entanglement. In my view, a study based in already existing theory, while having the advantage of already existing robust conceptual tools, would not offer the exploratory potential or meet the exploratory purpose of grounded theory. With respect to the examiner's question: So, is the notion of entanglement 'borrowed' from previous utilisations as a key word or concept? The concept of entanglement is an explanatory metaphor or trope for what has been observed with respect to research actors and research institutions pushing through adversity. The thesis acknowledges previous uses of the concept entanglement. This is an approach typically used in grounded theory building, namely to draw out a metaphor from other contexts and other uses and apply it (suitably) in a relevant area of theory. The examiner confirms that a theory of research entanglement has not previously been published.
General comment: (1) The exercise of pursuing revisions to the thesis has been empowering in that it has required great tenacity to complete. (2) I think that one of the reasons why the examiners and I may disagree on some points is that the examiners have noted particular dimensions of the research problem and the theory of research entanglement and have focused on the parts. I have focused on the whole, namely the theory of research entanglement, hence my concern in the theory building section (chapter 9) was not to relate the particular dimensions to existing literature, but to relate the theory itself to the existing literature. (3) The examiners want the study to use existing theory and qualitative methodology, not grounded theory methodology and grounded theory building. I		

have two responses to this (i) In a PhD, students should learn new methodologies. Grounded theory is a relatively seldom-used methodology and one that is necessary to the process of individual learning and advancing knowledge. Grounded theory methodologies and outcomes are not wrong or weaker than other methodologies, they are equal in the scheme of research methodologies. At first application to a particular research problem, the results may well be limited, but can be further developed in successive approaches to the same research problem, an extended research problem or a similar research problem. (ii) Burton Clark (inter alia) uses grounded theory quite successfully in his elucidation of the changing higher education landscape, developing many theories, theoretical perspectives and tropes (metaphors), such as the metaphor of organizational "saga". Therefore, it is noted that grounded theory approaches have been used successfully in higher education research. I further argue that grounded theory methodology is used successfully in this thesis, has produced new theory and theoretical insights (research "entanglement"), incorporating specific forms of originality and contributing to the advancement of knowledge on the "positioning" of universities with respect to their research activeness and research intensiveness, by answering the question "how".		