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The University of Sydney
Faculty of Education and Social Work

**Comparing ‘apples with apples’: Professional accounting
practices in university classroom discourse**

Volume 1

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A thesis submitted in fulfilment of the requirements for the degree of
Doctor of Philosophy
March 2014

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Abstract

How are professional accounting practices represented in university classroom discourse and what are the implications of this for theory and practice in professional learning? Professional accounting practices order the world, and are also ordered. In reducing the complexities of social activity to abstract meanings that render it measurable, diverse and complex structures can be compared ‘apples with apples’. This study investigates the relocalization of professional accounting practices in university classroom discourse, working with tools from Legitimation Code Theory, systemic functional linguistics and critical discourse analysis.

Findings draw on digital recordings of seminars presented by three lecturers in different subjects of a Master of Accounting program in an Australian metropolitan university. The analysis examines movements between context-independent and more context-dependent meanings in classroom discourse that mark shifts in emphasis from accounting as a system of representation, to accounting as interpersonal exchange. It considers two sets of social relations at play in the professional classroom: those between lecturers and students, and those within professional practice that are relocalized in classroom discourse.

The framework developed in this study complements current research within the sociology of education. Discussion connects the analysis with recent explorations of knowledge practices in education within Legitimation Code Theory. It draws on foundational principles of a systemic functional model of language, considering the basis of professional practice and professional learning in interpersonal exchange. Conclusions are oriented towards theory and practice in professional learning, recognizing professional educators as agents of change and mediators of ways of thinking and acting in their field that are potentially transformative.

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Chapter 1: Introduction

This study examines the representation of professional accounting practices in university classroom discourse, based on an analysis of seminar transcripts. The research is oriented towards both theory and practice in professional learning, and seeks to model the ways in which professional practices are represented in classroom discourse. In the process, it considers professional practices in relation to the social system or institutional order in which they are embedded, and to which they contribute. The regulative function of the institutional order has consequences for interpersonal exchange and the representation of meaning in accounting, and these are reflected in the representation of professional practice in the university classroom. The study considers the implications of this for both theory and practice in professional learning.

Where research and curriculum in accounting education tends to focus on individual skills or capabilities and is caught in a debate over what constitutes powerful knowledge in accounting, recent research in professional learning is oriented towards aspects of ‘becoming’ (Hager & Hodkinson, 2011) or being a practitioner, within the broader context of learning practices and professional practices. This reflects a turn towards practice in research in sociology and philosophy over the past twenty years (Schatzki, Knorr Cetina, & von Savigny, 2001). Research in professional learning and the sociology of professions tends to acknowledge the changing nature of professional practices in the context of a ‘knowledge’ society (Bell, 1973; Lyotard, 1983), a term often used to reflect the increased role of and dependence on knowledge in modern society (Muller, 2000). At the same time, this literature is characterized by inconsistent accounts of the nature and structure of professional knowledge.

Recent research in the sociology of education (Maton, 2013, 2014; R. Moore, 2013; R. Moore & Young, 2010; Wheelahan, 2010), is critical of educational research and practice that focus on the attributes and capabilities of ‘knowers’, rather than on knowledge. Maton (2013) argues that such approaches are limited by ‘knowledge blindness’, reducing knowledge to a ‘reflection of social power’ (p. 9). He offers an alternative approach to examining knowledge in educational contexts: one that seeks to conceptualize the ‘organizing principles underlying practices’ (2013:10). Within this approach, a coherent account of knowledge structure is regarded as the basis of

knowledge building in educational contexts, allowing the act of knowledge building to be examined empirically (Maton, 2013). Teaching is glossed by Maton as ‘a repeated pattern of exemplifying and “unpacking” educational knowledge into context-dependent and simplified meanings’ (2013:9). Methodologically, his approach examines the ‘semantic profiles’ of educational practice, investigating shifts between context-dependent and context-independent meanings that parallel shifts in semantic density or ‘condensation of meaning’ from more concrete to more abstract meanings, that in combination are conceptualized as ‘semantic waves’ (Maton 2013). This work has been applied to the analysis of a range of educational contexts including analysis of student work and classroom practice, and is located within the ‘explanatory framework’ (Maton, 2014:15) of Legitimation Code Theory. Legitimation Code Theory is a ‘conceptual toolkit and analytic methodology’ designed to examine knowledge practices, allowing ‘their organizing principles to be conceptualized, and their effects to be explored’ (Maton, 2014:3). Maton (2014) provides a comprehensive overview of the two key dimensions of Legitimation Code Theory: semantics and specialization. The first of these two dimensions is relevant to this study, as explained in Section 4.3. A summary of key principles in Legitimation Code Theory can be found in Van Krieken et al. (2010).

This study considers the interface between these two perspectives, one oriented towards becoming a practitioner and the other towards knowledge, and what this means for the theory and practice of professional learning. It presents a case study of the representation of professional practice in three postgraduate accounting subjects: management accounting, accounting information systems and auditing and assurance. Within the context of the degree program and the changing socio-economic environment within which it is situated, this study seeks to provide a framework for examining the development of professional knowledge in the postgraduate accounting context, but that has applicability beyond this context.

Australian accounting education has apparently reached a crossroads (de Lange & Watty, 2011; E. Evans, Burritt, & Guthrie, 2010), a point where the provision of accounting education is changing, where there is growing pressure on the accounting profession and accounting education to meet the challenge of contributing to the sustainability of business practices, and where reforms to the regulatory environment of Australian universities have led to the introduction of national threshold standards

for accounting programs. These changes have a direct bearing on the accounting curriculum as discussed in Section 3.4, and present new visions of what it means to become a practitioner. As such, these changes present a timely opportunity to consider the theory and practice of professional learning within the context of accounting education. Accounting stands out from other professions in that it has close ties with the economy. Accounting practices affect the production and distribution of resources in an economy, and also ‘what is deemed organizationally and socially rational and valuable, and what is deemed to be irrelevant’ (Cooper & Robson, 2006:415). As Bernstein (2001) observes, accountants ‘can be employed in the economic field or in the field of symbolic control’ (p. 24). In the context of the emergence of professions in the nineteenth century, accounting was distinct from other professions in that it did not ‘[stand] outside the commercial and industrial heart of society’ (Abbott, 1988:3).

The analytical framework for describing the representation of professional practices in classroom discourse developed through this study is a central contribution of this thesis, and extends and complements existing research within Legitimation Code Theory as discussed in Chapter 7. Central to this analytical framework is the relationship between accounting practices and the social system within which they are embedded, and the consequences of this for the representation of these practices in university classroom discourse. The framework incorporates principles from Bernstein’s (2000) model of pedagogic discourse, and more recent extensions of this within Legitimation Code Theory (Maton, 2007, 2009, 2010b, 2013, 2014). Given that the strength of claims made in this study rest on the qualitative analysis of data, I have attempted to be as explicit as possible about the development of an analytical framework or ‘language of description’ (Bernstein, 2000:132). As an initial step towards this, Section 1.4 provides an overview of the development of my theoretical and methodological framework in narrative form and describes how this framework is then developed through analysis of the seminar data.

1.1 Research journey and position of the researcher

This study owes much to working closely with discipline academics from the Master of Accounting program at Macquarie University between 2002 and 2007. The study has originated out of our work together on a collaborative teaching and research

project (hereafter referred to as the *Teaching Project*) during that time. The evolution of the *Teaching Project* and its subsequent research agenda provided the groundwork for the ideas explored in this study, and has influenced my position as a researcher as outlined in the following section. As is no doubt common in qualitative research, and possibly even desirable in higher education research, my analytical focus has shifted throughout the course of this project, resulting in a reconceptualization of project aims and research questions since my initial research proposal as documented in the following section.

The *Teaching Project* was designed to integrate the development of academic and professional communication skills with disciplinary learning within the Master of Accounting program (Tindale, 2007, 2008; Tindale, Evans, Cable, & Hamil Mead, 2006)¹ and developed out of a request for help from a discipline academic from the Master of Accounting program. In 2002, I was Academic Coordinator of English Language Programs at the National Centre for English Language Teaching and Research (NCELTR) at Macquarie University. Late in that year, an NCELTR colleague and I responded to a request from a discipline academic on the Master of Accounting program by developing a series of essay writing workshops run as a summer school for students in one subject of the program. The success of these workshops led to a request from the Academic Coordinator of the Master of Accounting program to work with them on responding to challenges presented by increasing non-English background student numbers and a recent change in accreditation requirements for degree programs set by CPA Australia and the Institute of Chartered Accountants in Australia (CPA Australia and the Institute of Chartered Accountants in Australia, 2005). Through processes documented in Tindale et al. (2006), the *Teaching Project* grew over a number of years and by 2006, 36 accounting lecturers and 23 NCELTR teachers were working together running integrated academic and professional communication skills workshops within fourteen of the twenty one units of the Master of Accounting (CPA Extension) program. The *Teaching Project* had the specific aims of increasing student engagement in the Master of Accounting and developing employability skills through integrating graduate capabilities with disciplinary learning, challenging students'

¹ I changed my surname from Tindale to McPherson in 2009.

understandings of the nature of accounting work and assisting them to become active participants in their profession.

The activities of the *Teaching Project* prompted the development of a collaborative action research agenda, resulting in several publications that have since been cited elsewhere, most recently in Murray (2013), Dale-Jones, Hancock, and Willey (2013) and Chanock, Horton, Reedman, and Stephenson (2012), and earlier in Jackson, Watty, Yu, and Lowe (2006) among others. One publication from the *Teaching Project* (E. Evans, Tindale, Cable, & Hamil Mead, 2009) is cited as a resource used in the development of the *Learning and Teaching Academic Standards Statement in Accounting* (Hancock & Freeman, 2010) that will be introduced in Chapter 3. Our first research project, designed to evaluate the *Teaching Project* led to a second project that examined learning through participation in the Master of Accounting program (Tindale, Evans, Cable, & Mead, 2005). As senior researcher on the second project, I was presented with the opportunity to observe classes within several units of the program, and out of that experience I developed a parallel PhD proposal. Based on a review of the literature, I had decided to examine the ways in which pedagogic discourse serves to shape classroom participation and development of disciplinary knowledge within the culturally and linguistically diverse Master of Accounting program (Tindale, 2008).

Of particular interest in my 2006 proposal was the way in which classroom language or pedagogic discourse contributed to the development of disciplinary knowledge among diverse groups of students, drawing on theoretical work by Bernstein (1990, 2000) and Christie (1997, 1999a, 1999b, 2002). I was interested in addressing gaps both in accounting education literature and in studies of pedagogic discourse. As outlined in Chapter 2, research on pedagogic discourse, especially that which was emerging out of collaborative work between sociologists and systemic functional linguists (a relationship documented in Martin, 2011) was expanding from a focus on the recontextualization of knowledge in pedagogic discourse in early childhood, primary and secondary school settings, to examine the recontextualization of disciplinary knowledge in higher education. Work in this area focused on discipline areas such as education, sociology, and history but did not appear to make mention of professionally oriented disciplines such as accounting.

On the strength of my research proposal, I sought ethics clearance to collect the data that forms the basis of this study. Three lecturers were recruited and agreed to allow me to observe and record their weekly seminars. All three lecturers have extensive experience in professional accounting, auditing and information systems development practice, reflecting the recruitment policy within the Master of Accounting program at the time of data collection (Tindale et al., 2006). My initial aims and research questions were oriented towards examining student participation in seminars and their development of disciplinary knowledge, although these were revised as outlined in the following section, confirming Paltridge's (2012) observation that developing research questions tends not to follow a linear path (p. 206).

1.2 Research questions

My shift in analytical focus directed me towards investigating the ways in which professional practices are represented by lecturers in university classroom discourse. An examination of the literature on professional learning and the sociology of the professions led to the development of three interrelated research questions:

1. How are professional accounting practices represented in university classroom discourse?
2. What are the implications of this for professional learning theory?
3. What are the implications of this for professional learning practice?

This shift in focus was motivated by classroom observation during data collection. While observing classes each week when collecting data, I was struck by the extent to which each lecturer made use of their own professional experience as a resource in teaching. Lecturers' references to their professional activity ranged from brief shifts into first person or use of inclusive pronouns, to personal opinions or recommendations based on experience, to more extensive recounts used to illustrate, emphasize or explain specific points, or to provide a 'real world' context for the topic at hand.

As I had the good fortune to observe three different lecturers in three quite different subjects, I also had the opportunity to notice that in giving a real world context for a topic, lecturers represented professional practices in slightly different ways. I looked to the research literature on pedagogic discourse to find a way of understanding these different representations of professional practice, as explained in more detail in

Section 1.4. Where systemic functional analyses of classroom discourse have examined ‘singular’ (Bernstein, 2000:9) forms of knowledge (Christie & Martin, 2007), my preliminary analyses of data suggested that additional tools were required to examine the recontextualization of ‘regional’ forms of knowledge, which in this case linked the world of the classroom with professional accounting, accounting information systems development and auditing practices, and to the social systems in which these are embedded. These two forms of knowledge—singular, and regional, will be introduced in Chapter 2, and the features of knowledge production and structure in knowledge regions in particular will be discussed with reference to accounting in Chapter 3.

1.3 Key findings

This study contributes to theory and practice in professional learning by developing a framework for describing the representation of professional practices within university classroom discourse. The framework takes into account the orientation of professional disciplines towards both knowledge and practice. It considers the relation between professional practices and the social system or institutional order in which they are embedded, and to which they contribute, and the implications of this for professional learning. The study is informed by critical realism, recognizing the dynamic and relational nature of social objects (Bhaskar, 1989), and Archer’s conceptualization of relations between structure and agency (Archer, 2000, 2003).

The language of description developed through this study provides a framework that complements current research within Legitimation Code Theory by examining the condensation of meaning within professional practices and the consequences of this for professional learning. The framework can be applied to describing how lecturers represent not only the knowledge base of their professional field, but also interpersonal exchange within professional practice. Further, it draws on a systemic functional model of language development, to consider the basis of professional practice and professional learning in interpersonal exchange.

The study intends to make a theoretical and practical contribution to professional learning, recognizing professional educators as agents of change and mediators of ways of thinking and practising in their field that are potentially transformative.

Tracing movement between more context-independent and more context-dependent meanings in the professional classroom has potential for revealing the *condensation* of institutional relations in classroom discourse, condensation which in turn supports the *maintenance and reproduction* of professional discourse as system of representation and as a system of interpersonal relations. Hence, the framework also lends itself to exploring *contradictions* within and between institutional and professional discourse at the level of representation and at the level of interpersonal exchange in the classroom. It is through exploring these contradictions that professional learning can provide students with resources to contribute to transformation of their profession by generating new knowledge through their professional practice.

1.4 Structure of the thesis

This thesis seeks to develop a framework or ‘language of description’ (Bernstein, 2000:132) for describing the representation of professional practice within the context of postgraduate accounting. My research process has followed an iterative cycle of analysis and review of theoretical literature: a dialogue that I have attempted to reflect in the overall structure of this thesis. The methodological approach taken in this study emerged out of preliminary data analysis, which prompted further exploration of the research literature and an ongoing reconceptualization of the research questions as outlined in Section 1.2. This iterative approach follows in the tradition of critical discourse analysis, and is similar to that of grounded theory (M. Meyer, 2001:23). While my methodological approach has emerged out of my preliminary data analysis, I have sought to achieve a level of consistency between my aims, research questions and methodology as this is central to research validity (Newman, Ridenour, Newman, & DeMarco, 2003). The study is organized as outlined below.

The theoretical and methodological framework for this thesis is developed through Chapters 2, 3, 4 and 5. Chapters 2 to 4 contextualize the study through a review of the literature in three key areas: disciplinary and professional knowledge in educational practice; accounting practice and accounting education; and the structure of professional knowledge. In seeking to understand the broader context of the classes I was observing while collecting data, I looked first towards literature on learning and teaching as documented in Chapter 2. This directed me towards an extensive body of

literature on the sociology of education that argues for the importance of knowledge as an object in educational research and practice. In reading this research, and in seeking to establish a language of description through this study, I was interested in what was meant by ‘knowledge’, with a view to understanding the status of lecturers’ references to their own professional practice in relation to the ‘content’ of the accounting curriculum.

Bernstein’s model of pedagogic discourse provided a framework for interpreting the broader context of the Master of Accounting curriculum. On the basis of this I began to understand accounting as a ‘knowledge region’ as outlined in Chapter 2, and was able to examine the consequences of this in terms of forces shaping the Master of Accounting curriculum as discussed in Chapter 3. I initially looked towards systemic functional interpretations of Bernstein’s model of pedagogic discourse (Christie, 2002) to understand my data. However in my preliminary examination of seminar transcripts I recognized that ‘knowledge’ in my data included representations of professional knowledge practices. This led me to work by Shay (2012a, 2012b) and Wolff and Lockett (2013) who have described professional knowledge in the curriculum with reference to Legitimation Code Theory (Maton, 2009, 2011, 2013) as discussed in Chapter 4. Their work, and theoretical tools from Legitimation Code Theory, guided the development of a language of description to describe representations of professional practice in classroom discourse through the analysis of seminar transcripts. This involved a systemic functional analysis of thematic patterns and entities in the seminar data, with the interpretation of the latter also informed by critical discourse analysis.

An expanded overview of the theoretical and methodological frameworks underpinning this study can be found in Chapter 5. This chapter locates the methodological approach taken in the study within the case study tradition. Theoretically, this case study is located at the intersection of the sociology of education and critical linguistics, drawing on methodological tools from both fields that share a critical realist ontology. It seeks to complement previous research on knowledge in pedagogic discourse within the sociology of education that is influenced by Bernstein’s (1990, 2000) theory of pedagogic discourse, including more recent social realist extensions of it within Legitimation Code Theory (Maton, 2009, 2010b, 2011, 2013), by using critical discourse analysis as a form of ‘critical social analysis’

(Fairclough, 2012) to examine knowledge building within a professional education context. The analytical framework draws on foundational concepts and principles from systemic functional linguistics, and in particular the work of Halliday and Matthiessen (Halliday, 1985, 1993, 1999; Halliday & Matthiessen, 1999; Matthiessen, 2009). It also draws on several variants of critical discourse analysis, including particularly the work of Fairclough (Chouliaraki & Fairclough, 1999; Fairclough, 2001a, 2003, 2004b, 2005; Fairclough, Jessop, & Sayer, 2002) and van Leeuwen (1993a, 1993b, 2008, 2009).

The language of description itself is developed through a detailed and specific analysis of the seminar data in Chapter 6. The complex task of developing a preliminary language of description based on an analysis of topical Theme² within the seminar transcripts constitutes the first stage of data analysis as documented in Chapter 6. The terms Theme and topical Theme will be explained in Section 5.8. Briefly, Theme is a resource for ‘texturing’ or ‘making texts’ (Fairclough, 2004b:122)—the process by which ‘meaning is channeled into a digestible current of discourse’ (Martin, 2008:35) and made ‘comprehensible to listeners and readers’ (Ghadessy, 1995:xi). It is acknowledged that notions of Theme and approaches to its identification are the subject of some theoretical debate. The approach taken in identifying Theme in this study follows Forey (2002) and Martin and Rose (2007) as described in Section 5.8.

As documented in Chapter 6, topical Themes will be used as a tool for developing a preliminary language of description that tracks lecturers’ representations of abstract, generic, specific and local entities in the seminar data, as well as a range of other features of textual and interpersonal meaning. The preliminary language of description is then expanded within the second stage of data analysis to examine the ‘unpacking’ and ‘packing’ (Maton, 2013) of these abstract, generic, and specific entities. The analysis is provided in full in the appendices contained within Volume 2. Data within the appendices will be described in Chapter 6 and discussed in Chapter 7.

Discussion in Chapter 7 takes up key findings from the analysis summarized in Section 6.9, drawing on key points raised in the literature review in Chapters 2 to 4.

² Following conventions within systemic functional linguistics, Theme and other language functions are capitalized (Halliday, 1985).

Where the two stages of analysis in Chapter 6 address the first of the research questions in Section 1.2, describing *how* professional practices are represented in the seminar data, Chapter 7 addresses the second and third research questions in Section 1.2., explaining the nature of movements between different types of entities in the seminar data and considering the implications of these movements for professional learning theory and practice. The chapter considers the condensation of meaning in professional learning, extending on existing research within Legitimation Code Theory by considering institutional relations in the seminar data. In the process, various categories of institutional abstractions thematized in the seminar data as identified in Chapter 6 will be located on a continuum between system and instance with reference to the context of situation and context of culture: two central constructs within context theory in systemic functional linguistics.

Throughout Chapter 7 the analysis is connected with realist accounts of structure and agency in the work of Archer (1988, 2000, 2003, 2004b) and Bhaskar (1989, 1997), recognizing the nexus between professional learning and professional practice as having the potential to construct, perpetuate, transform or dismantle (De Cillia, Reisigl, & Wodak, 1999) professional identities and the status quo within professional practice. Consideration is given throughout Chapter 7 to the ways in which lecturers exercise their agency in texturing representations of practice. Some critique of a textual view of the notion of ‘field’ within systemic functional linguistics is also provided, with reference made to an expanded view of field in analysis and discussion following Bazerman (1998) and Lemke (1985, 1998). The term ‘field’ as it is used in systemic functional linguistics is introduced in Section 2.3 and critiqued in Sections 2.3 and 4.5. and the implications of an expanded view of field are discussed in relation to the seminar data in Chapter 7.

The thesis concludes in Chapter 8 with a review of the analytical work of the previous chapters and a summary of findings with reference to the research questions around which the study is framed. The chapter acknowledges the framework developed for describing the representation of professional practices in the seminar data as a key contribution of this study. While the framework has been developed with reference to seminar data within three postgraduate accounting subjects, the framework has applicability beyond this context, as a descriptive tool with the potential to reveal the ways in which individual lecturers exercise their agency in texturing representations

of professional practice, as well as differences between professional practices. Chapter 8 marks out a number of areas for future research based on issues and questions raised in analysis and discussion. Implications of the study for professional learning are considered, and the ways in which lecturers reveal the principles by which practitioners *compare apples with apples*—or choose one course of action over another, are positioned as central to professional learning and ultimately to the transformation of practice.

Chapter 2: Disciplinary and professional knowledge in educational practice

This chapter is the first of three that chart the theoretical framework for this study. Professional knowledge occupies a central place in this theoretical framework, and will be the main focus of Chapter 4, which draws together literature reviewed in Chapters 2 and 3. This chapter starts out by locating accounting within literature on the sociology of education. As discussed in Chapter 1, recent literature within the sociology of education argues for a focus on knowledge as opposed to learners, or ‘knowers’ (Maton, 2014) in educational practice. This chapter examines the relevance of this literature to professional knowledge in accounting education, with a view to examining differences between professional knowledge and disciplinary knowledge, and the consequences of this for classroom discourse. It assesses disciplinary knowledge in accounting with reference to classic typologies of disciplines, then moves on to present an expanded, alternative view of knowledge formation and structure that has consequences for induction into the accounting profession and hence for the accounting curriculum. Bernstein’s (2000) sociological interpretation of knowledge formation and structure and his theory of the pedagogising of knowledge will inform an examination of relations between accounting practice and accounting education in Chapter 3. This discussion provides a context for the analysis of classroom discourse in Chapters 6 and 7. While introducing Bernstein’s theoretical framework in this chapter, an introduction to systemic functional interpretations of this framework will also be provided.

The first part of this chapter focuses on the sociology of education, providing a framework for understanding the ways in which disciplinary knowledge is recontextualized in the curriculum. This review starts with an overview of relevant features of Bernstein’s (2000) sociological theory of the distribution of knowledge and touches on aspects of Bourdieu’s (1990a, 1990b) ‘sociology of knowledge’ (Maton, 2010a:36), both of which figure in Legitimation Code Theory (Maton, 2010a). The review then moves on to examine literature on the sociology of professions. This parallel body of literature examines the nature of professions and differences between and within professions, differentiating between professions according to their knowledge base. This literature provides a perspective on

professions and professionalism that will be drawn upon in evaluating models of knowledge structure and professional knowledge in the curriculum in Chapter 4.

2.1 Disciplinary knowledge in accounting

An extensive body of research in higher education draws on categorizations of disciplines, and these have enduring descriptive and analytical potential as tools for examining knowledge from a disciplinary perspective, despite criticisms of epistemological essentialism (Trowler, 2009). Biglan's (1973a) typology of disciplines is an early and well known example, developed originally to examine epistemological issues such as the structure of knowledge and knowledge fields (e.g. Biglan, 1973a, 1973b) and the social structure of disciplines (e.g. Biglan, 1973b). Although Biglan's (1973a) typology of disciplines is argued by Krause (2012) to be limited to a focus on academic research traditions, extensions of his typology by Becher (1989) and Becher and Trowler (2001) have been applied to the investigation of various 'knowledge related' and 'socially related' (Neumann, Parry, & Becher, 2002:406) dimensions of learning and teaching (e.g. Lindblom-Ylänne, Trigwell, Nevgi, & Ashwin, 2006; Neumann et al., 2002).

Accounting has been categorized by Biglan (1973a) as a 'soft-applied' discipline, within his four part continuum of hard-soft and pure-applied knowledge, although, as will be discussed here, the relevance of Biglan's hard-soft continuum to accounting is questionable. In Biglan's terms, the 'hard-soft' dimension of disciplines refers to paradigmicity (Kuhn, 1962, 1970), or the extent to which there is agreement on 'what is known, what constitutes a novel problem, and what constitutes a legitimate way to solve it' (Muller, 2009:210). The 'pure-applied' dimension refers to a discipline's 'requirements for practical application' (Biglan, 1973a:196). As suggested by Krause (2012), Biglan's four part continuum applies specifically to disciplinary research traditions, although the construct of paradigmicity associated with the hard-soft continuum has also been applied in two ways that are relevant to this study: to processes of knowledge formation, and to induction into a discipline. Muller (2009) for example describes paradigmicity as cognate with Merton's (1973) construct of codification, defined as 'the consolidation of empirical knowledge into succinct and interdependent theoretical formulations' (Merton, 1973:507). According to Muller, hardness, or 'progressive abstraction' (2009:213), previously seen (e.g. by Kuhn,

1962, 1970) as a quality to which all disciplines should aspire, can be contrasted with ‘fission’, or splitting into ‘alternative theoretical languages’ (2009:213). Induction into hard, or high codification disciplines (for example mathematics) involves ‘grasping high-level propositions’ where induction into soft, or low codification disciplines involves ‘learning masses of particulars’ (2009:212). Where the hard–soft continuum relates to knowledge formation, there is an alternative type of knowledge formation, often driven by the requirements of an area of professional practice, that Bernstein (2000:9) terms ‘regionalization’ (Muller, 2009). Regionalization is best understood within the broader framework of Bernstein’s sociological theory of the educational distribution of knowledge, and more particularly his theory of the pedagogic device, introduced in the following section. Knowledge regions will be discussed further in Section 2.4, and the implications of accounting’s status as a knowledge region will be discussed in Chapter 3.

2.2 Bernstein’s sociological theory of the educational distribution of knowledge

A fundamental issue explored in this study is the nature of professional knowledge and its representation in classroom discourse. One of the main challenges to be dealt with in establishing a theoretical framework for data analysis, and indeed part of the rationale for this study, relates to the differences between professional knowledge and disciplinary knowledge. The recontextualization of disciplinary knowledge has been the object of extensive sociological research on pedagogic discourse that draws on the work of Bernstein and analytical tools from systemic functional linguistics (Martin, 2011). This includes extensive research on the recontextualization of knowledge in early childhood (including Christie, 1999a, 2002; Halliday, 1993; Hasan, 2002; Painter, 1999) primary (including Christie, 2002; Gibbons, 2002; Iedema, 1996; Morais, Neves, & Pires, 2004; Wells, 1996) and secondary school settings (e.g. Christie, 2002; Christie & Martin, 2007; Gibbons, 2003; Martin, 2007; Unsworth, 1999; Veel, 1997, 1999). This research has provided complex accounts of the processes by which school-aged learners make shifts from congruent meanings to more abstract meanings, evidenced in their understanding and use of technicality and abstraction (Christie, 2002, 2007; Martin, 2007). The focus of this research has been the recontextualization of ‘singular’ forms of disciplinary knowledge in school

settings. A growing body of research also examines the recontextualization of disciplinary knowledge in higher education settings in discipline areas as diverse as education (Singh, Atweh, & Shield, 2005; Singh & Doherty, 2004), and business (Doherty, 2010). Work in higher education draws on Legitimation Code Theory, a set of methodological tools that extend Bernstein's work (Maton, 2010b, 2011, 2013; Maton & Moore, 2010b). This includes studies within the sciences, for example, physics (Lindstrøm, 2010), and other discipline areas such as history (Shay, 2011), sociology (Luckett, 2009), engineering (Wolff & Luckett, 2013), and design (Carvalho, Dong, & Maton, 2009). As will be discussed in Chapter 4, more recent research in this area considers the recontextualization of professional knowledge in higher education as a specific problem that requires an extension of Legitimation Code Theory (Shay, 2012a, 2012b).

Bernstein's theory of pedagogic discourse provides a means for describing knowledge construction, and the rules and processes that determine the transmission of knowledge (Bernstein, 1990, 2000). As described by Singh (2002), Bernstein's work is of 'enormous significance' to examining the means by which knowledge is produced and reproduced in educational settings (p. 572). Bernstein's later work on knowledge structures moves away from the processes of knowledge transmission to consider knowledge as an object (Bernstein, 1999, 2000, 2001). A recent adaptation of Bernstein's work on knowledge structures and pedagogic discourse that considers professional knowledge and its implications for curriculum (Shay, 2012a) will be discussed in Chapter 4. In this chapter, the focus will remain on Bernstein's earlier work on the pedagogic device, which provides a useful framework for considering the accounting curriculum as it is shaped by its broader context.

Bernstein sees pedagogy as the recontextualization of knowledge that originates from fields of intellectual production. He regards pedagogic discourse as a 'rule which embeds two discourses' (2000:31): *instructional discourse*, which is concerned with teaching 'specialized skills and their relationship to each other' and *regulative discourse*, which is 'a moral discourse' concerned with 'order, relations and identity' (2000:32). Bernstein is specifically interested in the principles by which knowledge is reshaped in the classroom context, making a distinction between the 'field of production of a discourse' (2000:34), and the recontextualization of that discourse in pedagogic discourse. He illustrates this by comparing 'the totality of practices which

is called physics in the field of production of physics’, and selections from this that are appropriated and recontextualized by teachers of physics (Bernstein, 2000:34). Bernstein describes the principles of this process as the ‘pedagogic device’ (1990, 2000), conceptualized as three hierarchically related rules: distributive, recontextualising and evaluative. These are defined by Singh (2002) as follows:

The function of the *distributive* rules is to regulate power relationships between social groups by distributing different forms of knowledge, and thus constituting different orientations to meaning or pedagogic identities. Second, *recontextualising* rules regulate the formation of specific pedagogic discourse. These are rules for “delocating a discourse, for relocating it, for refocusing it” (Bernstein, 1996, p. 47). Through recontextualization, a discourse is moved from its original site of production to another site, where it is altered as it is related to other discourses Third, *evaluative* rules constitute specific pedagogic practices. In broad terms evaluative rules are concerned with recognising what counts as valid acquisition of instructional (curricular content) and regulative (social conduct, character and manner) texts. (p. 573, italics added)

At the level of the classroom, distributive rules are realized in ‘specialized interactional practices’ (Bernstein, 1990), such as ‘whole-class teacher monologue, triadic dialogue (teacher question–student response–teacher evaluation)’ (Singh, 2002:578) reflecting different modalities of classification (limits or insulation between categories) and framing (realization, or control over selection, sequencing, pacing and evaluation) (Bernstein, 2000:7). Hasan (1999) differentiates between ‘specialized interactive practice’ as contained within a ‘specific interactive event’, and a ‘social subject’s **sense of specialized interactional practices**’ (p. 17, emphasis in original). The latter includes both ‘recognition rules’, or ‘one’s sense of what defines possible contexts’, and ‘realization rules’, or ‘how the subject’s sense of the context is realized’ (Hasan, 1999:17). As discussed by Singh (2002), ‘students may possess recognition rules (i.e. may be able to recognize *what* legitimate meanings might be put together) without knowing *how* to construct pedagogic texts (i.e. legitimately realize these meanings)’ (p. 579, italics in original). It is noted here that both Singh and Hasan are oriented to the construction of *texts*. The question of what counts as ‘text’ in the systemic functional model is important in this study, and will be discussed further in the following section.

2.3 Systemic functional interpretations of Bernstein's theory of pedagogic discourse

A systemic functional model of language provides analytical tools for examining the ways in which language enacts and transmits culture, viewing language as an 'exchange of meanings in interpersonal contexts' through which 'people act out the social structure, affirming their own statuses and roles, and establishing the shared systems of value and of knowledge' (Halliday, 1978a:2). As such, a systemic functional analysis of classroom discourse has the potential to connect learning with social practices. The systemic functional model is concerned with the functions of language, which as Butt, Fahey, Feez, Spinks, and Yallop (2001) explain 'seems to have evolved for three major purposes:

- to talk about what is happening, what will happen, and what has happened
- to interact and/or to express a point of view
- to turn the output of the previous two functions into a coherent whole. (p. 5)

These three functions of language are termed ideational, interpersonal and textual modes or metafunctions respectively, and defined by Halliday and Matthiessen (1999) as follows:

The ideational metafunction is concerned with construing experience—it is language as a theory of reality, as a resource for reflecting on the world ... The interpersonal metafunction is concerned with enacting personal relationships through language, with the adoption and assignment of speech roles, with the negotiation of attitudes, and so on — it is language in the praxis of intersubjectivity, as a resource for interacting with others. The textual metafunction in an enabling one; it is concerned with organizing ideational and interpersonal meaning as discourse — as meaning that is contextualized and shared. (pp. 7–8)

Reference will be made to these metafunctions in explaining the identification of analytical units in the seminar data in Chapter 5, and again in discussing findings in Chapter 7.

Instructional and regulative discourse within Bernstein's model of pedagogic discourse introduced in the previous section have been reconceptualized by Christie (1999b, 2001) within a systemic functional model as 'two registers or sets of language choices': the instructional register 'relates to the field of knowledge (or the "content") taught and learned'; while the regulative register 'relates to the pedagogic goals and organization of the classroom activity' (Christie, 2001:315). The relationship between these two registers is described by Christie (2002) as one of 'projection': 'the

first order or regulative register ... “projects” a second order or instructional register’ (p. 25). Together, the two registers describe the distribution of knowledge—the process by which ‘specialist expert knowledge ... is decoded or translated (pedagogized) in order to be accessible to those outside the specialist domains’ (Singh, 2002:575). Register is a term from systemic functional linguistics used to refer to texts that ‘share the same experiential, interpersonal and textual meanings’ (Butt et al., 2001:9). By framing instructional and regulative discourse as ‘registers’, Christie provides a structure for examining pedagogic discourse in terms of the variables provided by systemic functional register theory—field, tenor and mode. As defined by Feez (1998),

Field refers to what is happening, the social activity in which people communicating are involved and the topic being talked or written about. *Tenor* refers to the social relationships of the people communicating, their relative status and the amount and type of contact they have with each other. *Mode* refers to the distance between the people communicating in terms of time and space. (p. 6, italics in original)

These three dimensions of register describe the *context of situation*, mapping onto the modes of meaning outlined above: ideational meanings reflect field, interpersonal meanings reflect tenor, and textual meanings reflect mode (Feez, 1998:7).

While Bernstein’s explanations of regulative discourse appear to be expressed in fairly general terms—such as the ‘rules of social order’ (Bernstein, 2000:13), these rules will be seen in Chapter 7 to be fundamental to professional practice and to professional learning. Christie (2002) acknowledges two dimensions of regulative discourse. The first of these involves ‘acceptable patterns of behaviour interpersonally, where these involve behaving within the terms, both spatial and temporal that apply within the classroom and the wider school context and its community’ (p. 163). The second, and, Christie argues, the more important dimension over time, relates to ‘the patterns and methods of handling information, reasoning, thinking, arguing, describing and explaining particular to the instructional fields’ (p. 163) that are recontextualized in pedagogic discourse. While these descriptions relate specifically to school contexts, they can be extended to higher education settings.

A problem for a systemic functional interpretation of pedagogic discourse is that it only appears to allow a narrow interpretation of the impact of regulative discourse.

The reach of the regulative register appears to be divided between behaviour on the one hand, and the ability to produce spoken and written texts of a particular kind on the other. The latter marks the point in the latter stages of schooling where the regulative and instructional discourses converge. Here, Christie's conception of the regulative register aligns with a textual view of field—one that was also evident in Hasan (1999) and Singh (2002) in the previous section. Bazerman (1998) argues that the systemic functional model represents field as 'a series of textual objects' (p. 21). He argues for a broader view of field in which 'the textual mode would be part of ... social and material activity but would not encompass it' (p. 22). While the regulative 'register' in systemic functional terms provides a useful framework for analyzing the ways in which teachers assist students to develop generic patterns at text level, it does not provide an explanation of the ways in which teachers set up meaning relations within classroom discourse that serve to promote particular ways of thinking and acting in relation to professional and institutional discourses that shape accounting practice. A broader conception of field has potential for connecting concepts and models in accounting to the social practices of accounting as will be discussed further in Chapter 7.

A related issue to be considered in this study is the scope of instructional discourse within Bernstein's model. In examining pedagogic practice in school settings, Bernstein describes the recontextualization of discourse from fields of production, such as physics. As discussed by Maton and Muller (2007), Bernstein began to explore the nature of the discourse to be recontextualized towards the end of his life, through his work on horizontal and vertical discourse, and horizontal and hierarchical knowledge structures (Bernstein, 1999). This work was incomplete, but serves as the basis for future exploration of the nature of recontextualized discourses, and more specifically the social practices derived from fields of production that may be implicated in the pedagogic process (Maton & Muller, 2007). The scope of regulative and instructional discourse are important to this study in the context of the relations between professional and institutional discourse. The dividing line between instructional and regulative discourse within Bernstein's pedagogic device is a conceptual space for examining the difference between knowledge and ways of acting or being as these are recontextualized in pedagogic discourse. Given that Bernstein regards instructional discourse as a conduit for 'knowledge' and regulative discourse

as a conduit for ‘social order’ his implication is that ‘order, relations and identity’ (Bernstein, 2000:32) are outside the domain of knowledge. Further, the intersection of regulative and instructional discourse in Bernstein’s model is a site for the legitimation of knowledge carried by the instructional discourse. As noted by Shay (2008),

Bernstein (1975) argues that educational knowledge is realized through three message systems: the curriculum which defines what counts as valid knowledge, pedagogy which defines the valid *transmission* of knowledge, and *evaluation* which defines the valid realization of the knowledge by learners. (p. 5)

The question of the validity of knowledge and its realization directs analytical attention towards an opposition: is the knowledge ‘valid’ or ‘not valid’ and how is this validity constructed (or not) through elements of teaching, curriculum or assessment? While these are valuable questions to ask, they direct attention away from examining a teacher’s agency in ‘texturing’ (Fairclough, 2003:22) instructional discourse: in setting up semantic relations within it that serve to promote and contribute to the assimilation of particular discourses. Bernstein himself draws attention to the risks inherent in constructing such oppositions, arguing that ‘much of the work generating these oppositions homogenizes ... discursive forms so that they take on stereotypical forms where their differences or similarities are emphasized’ (Bernstein, 1999:158). The separation of instructional and regulative discourse in Bernstein’s model of pedagogic discourse is perhaps one that can be traced back to Bernstein’s interest in the natural sciences as a model for objective knowledge, a characteristic of Bernstein’s work noted by Young and Muller (2007). The ‘content’ of instructional discourse will be discussed with reference to contexts of knowledge production in Section 4.2.

2.4 Knowledge singulars and knowledge regions

Bernstein (2000) uses the term knowledge ‘region’ in differentiating between discourses such as ‘physics, chemistry, sociology and psychology’ which ‘have appropriated a space to give [themselves] a unique name’ (p. 9), which he terms ‘singulars’; and discourses such as ‘medicine, architecture, engineering and information science’ which are created by the recontextualization of singulars (‘regions’). Singulars produce knowledge ‘about only themselves’ (Bernstein,

2000:9) that is organized in a way that Bernstein describes as ‘strongly classified’: in other words what ‘counts’ as knowledge within the discipline is clearly bounded, creating a seemingly natural order that legitimates a sense of disciplinary identity (Bernstein, 2000:7). Abbott (2001) claims that disciplines also serve a cultural function in ‘preventing knowledge from becoming too abstract or overwhelming’ by drawing limits around the knowledge of a discipline and delineating the acceptable unknown (p. 130). Where singulars are characterized by a strong sense of disciplinary identity that is shaped around the knowledge of the discipline, Bernstein describes regions as ‘the interface between the field of the production of knowledge and any field of practice’ (p. 9)—in Muller’s words, ‘an ensemble of singulars combined sometimes with segments of everyday or procedural knowledge’ (in Christie, Martin, Maton, & Muller, 2007: 256). This has consequences for the identity of regions as will be discussed in Section 3.2.

Bernstein implies that singular discourses continue to evolve without external influence, although becoming increasingly fragmented (Beck & Young, 2005), but the selection of knowledge within a region is driven by external requirements, that is a field of practice (Wheelahan, 2010). As described by Wheelahan, ‘regions draw on, integrate and recontextualize knowledge from singulars as the theoretical basis of practice in occupations and professions’ (p. 24). This integration can be seen from the direction of higher education—as a field of practice influencing the nature of the discipline, or from the direction of the profession—as a discipline emerging to ‘formalize the particular kind of knowledge and skill claimed by an occupation’ (Friedson, 2001:84). The directionality of this relationship is not straightforward, as described in detail by Abbott (1988:195–211).

Regionalization is described by Bernstein as a process (e.g. 2000:52), suggesting that a knowledge region undergoes ongoing movement towards regionalization, as is implied in Muller’s (2008) conceptualization of regionalization. Further, Muller (2009) suggests that regions aspire to the ‘disciplinary robustness’ of singulars, implying that singulars have some level of superiority over regions. Muller (2008) suggests that one way to differentiate between knowledge regions might be to consider new versus stable regions. This implies that new regions progress towards stability, a proposition that will be discussed further in relation to different types of professional knowledge in Section 2.8. Taking a slightly different view, Shay (2012b)

argues that the key to strengthening a knowledge region lies in a better understanding of the ‘interface between [the] field of knowledge production and [the] field of practice’ (p. 320), as is the aim of her model of the professional curriculum discussed in Chapter 4.

Within higher education, Bernstein (2000:52) acknowledges tensions between knowledge singulars and knowledge regions. Regions may be perceived as a threat to ‘singular’ pedagogic cultures, although they are increasing to such an extent that they could now be considered as the new ‘modal form’ of discursive organization in universities (ibid., p. 55), as work becomes the ‘epistemological organizer of the contemporary university’ (McIntyre et al., 1999:3). As with the hard–soft, pure–applied continua, a tendency towards singularity or regionalization is associated with distinct processes of knowledge formation and types of knowledge structure, as well as with induction into the discipline and identity, both of which are of particular relevance here. While hard–soft and pure–applied distinctions have been long been used as a framework for examining disciplinary differences in curriculum and theories of learning and teaching (e.g. Lindblom-Ylänne et al., 2006; Neumann, 2001; Neumann et al., 2002), as noted above these have been critiqued as epistemologically essentialist and overly structuralist (Mathieson, 2012). More recent research takes a broader view, for example, interpreting disciplinary differences in learning, teaching, research and curriculum within a social practice approach (Trowler, Saunders, & Bamber, 2012) or sociocultural approach (e.g. Mathieson, 2012).

Research on the recontextualization of knowledge in school settings has tended to focus on knowledge singulars, as acknowledged by Muller (in Christie et al., 2007:256). The singular–regional distinction in knowledge structures is not one that is typically used to examine curriculum in higher education, although it has recently formed the basis of Shay’s (2012a) conceptualization of professional knowledge as discussed in Chapter 4. In a separate paper, Shay considers higher education research itself as a knowledge region (Shay, 2012b). Similarly, Clegg (2009) proposes the field of academic development as a knowledge region, however studies of the recontextualization of knowledge in pedagogic discourse in knowledge regions are scarce. Where Bernstein’s model of pedagogic discourse has been applied to knowledge regions in higher education, the regional nature of the discipline under investigation is not necessarily acknowledged (e.g. Doherty, 2010). More recent

work in Legitimation Code Theory offers as an alternative the dimension of ‘autonomy’, drawing on Bourdieu’s concept of ‘field’ (Maton, 2005) rather than Bernstein’s singular–regional distinction, although both are underpinned by the notion of autonomy (Maton, 2014). Work by Young and Muller (2010) suggests however that the singular–regional knowledge distinction remains current in higher education research.

2.5 Bourdieu’s sociology of knowledge

Where Bernstein’s sociological theory provides a ‘theory of knowledge’, Bourdieu offers a ‘sociology of knowledge’ (Maton, 2010a:36). Maton explains this difference in perspective as follows: ‘Bourdieu’s approach embraces questions of ‘who’, ‘where’, ‘when’ and ‘how’; [where] Bernstein’s framework additionally captures the hitherto neglected issue of ‘what’ (Maton, 2010a:37). Legitimation Code Theory is an attempt to incorporate insights from both (Maton, 2010a). Bourdieu’s ideas are important to this study for several reasons. Firstly, Bourdieu’s field theory requires ‘a relational and realist gaze: “To think in terms of field is to *think relationally*”, one must see that “*the real is the relational*” ([Bourdieu 1994]: 96,97)’ (Maton, 2014:20, italics in original). Secondly, Bourdieu’s theory of practice offers a perspective on social structures and practices that can inform an analysis of the representation of these in classroom discourse. Finally, Bourdieu’s theory of practice is a way of moving beyond a dichotomy between structure and agency (Pennycook, 2010:9). This dichotomy will be introduced in Chapter 3 and discussed further in Chapter 7.

The concepts of habitus and field are central to Bourdieu’s theory of practice, and need to be considered at conceptual and empirical levels in relation to each other (Maton 2008). Both are complex and difficult to outline briefly, but detailed discussions of each can be found, among other places, in Bourdieu (1990), with analyses from different philosophical perspectives in Shusterman (1999). As noted by Maton (2012), Lizardo (2004) and Bouveresse (1999), Bourdieu demands a good deal from the notion of habitus, a somewhat controversial concept that connects individual agency and social structure. In simple terms, Schatzki (2001) glosses habitus as ‘practical sense’ (p. 50). Lizardo traces the development of habitus in Bourdieu’s work, and argues that his definition in *The Logic of practice* (Bourdieu, 1990a) is the most definitive:

Systems of durable, transposable dispositions, *structured structures* predisposed to function as *structuring structures*, that is, as principles which generate and organize practices and representations that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends or an express mastery of the operations necessary in order to attain them. Objectively “regulated” and “regular” without being in any way the product of obedience to rules, they can be collectively orchestrated without being the product of the organizing action of a conductor. (Bourdieu, 1990:53, italics in original).

Habitus is a ‘property of social agents (whether individuals, groups or institutions)’ (Maton, 2008:51). It is both structure and structuring in that it is the product of, or structured by, practice and at the same time generates and structures practice. As noted by Bouversesse (1999), the habitus provides an explanation for ‘how the subject of practice can be determined and yet be acting too’ (p. 53). The habitus is a product ‘constituted in practice’ (Bourdieu, 1990:52), and produces practices according to the schemes of ‘perception, thought and action’ (Bourdieu, 1990:54) that are embodied in individuals as a system of dispositions that endure over time and across different settings. While Bourdieu conceives of habitus as structure, in the form of this system of dispositions that shape perception, thought and action, Lizardo notes that this structure is ontologically distinct from macro-level structures of ‘individuals, institutions and organizations’ (2004: 381). Rather, Bourdieu differentiates these from habitus, regarding macro structures as the ‘objectified products’ and habitus as the ‘incorporated products’ of practice (Bourdieu, 1990a:53)

Field, in Bourdieu’s theory of practice, more simply, refers to the ‘field in which one is an actor, such as the field of education’ (Van Krieken et al., 2010:185). The metaphor of ‘field’ emphasizes relations between objects or things in a social space, rather than the properties of the objects themselves (Hodkinson et al., 2008). Fields do not have clear boundaries, may often overlap, and operate at different scales (Hodkinson et al., 2008). Practices are shaped by relations between habitus and field. Sayer (1999) explains the complex relationship between habitus and field by describing the dispositions of the habitus as ‘attuned to the structure and divisions of the social field as experienced by the individual’, and as ‘internalis[ing] and tacitly classify[ing] ideas, practices and objects within that field’ (p. 405). Further, the habitus inclines ‘actors to choose what is in any case available in their position relative to others in the social field, and conversely to refuse what they are refused’ (p. 405). In a discussion of field, Sayer (1999) is concerned with the idea of

judgement, providing a critique of Bourdieu's perspective on moral issues. He argues that Bourdieu makes limited reference to moral values and judgements. Sayer argues for the importance of recognising moral and other judgements in any theory of social action. With reference to Habermas (1990), he argues that '[i]n describing the actions of others ... it is important to remember that "From the function of first persons, what we consider justified is not a function of custom but a question of justification or grounding" ... (Habermas 1990:19)'. This argument will be drawn into discussion of the representation of professional practice in the seminar data in Chapter 7.

2.6 Professions and professionalism

This section will review literature on differences between professions, as a basis for examining accounting in the following chapter, and leading towards an analytical framework suited to examining the representation of professional accounting practices in classroom discourse in Chapter 5. This section draws from a body of literature on the sociology of professions that has some parallels with literature on the sociology of education. Most notably, professionalization, or the process by which an occupation achieves professionalism, has been described within the sociology of the professions as a disciplinary mechanism (Fournier, 1999; Kaner, 2010). With reference to Samuel Weber (1987), Fournier (2000) argues that the 'constitution of the professional field, or discipline, into an independent, autonomous and self-contained area of knowledge that is assumed to reflect some natural divisions and to be an autonomous object of analysis, is central to the making of the professions' (p. 69). While the literature on professions and professionalism is extensive, this section of the review will focus on that which examines knowledge and ways of thinking and acting in the context of professionalism.

Literature on professionalism includes various schemes for differentiating between professions. According to Friedson (2001), a defining characteristic of professions is that recognition derives from 'the state or some other paramount power' such that the activities of practitioners are controlled by the profession rather than by the market (clients or other consumers) or managers (Friedson, 2001:83). Becher (1999) provides two dimensions of difference among the professions in his study: technical–non-technical, and procedural–processual (p. 16). Technical professions rely on 'technical or scientific knowledge', where non-technical professions are largely

independent of a ‘scientifically derived knowledge base’ (p. 18). Along the other dimension, procedural professions are ‘rule-governed’, and processual professions depend on ‘mastery of process’ (p. 16). As seen in Figure 2.1, Becher regards accounting as both non-technical and procedural, where in his terms, medicine and engineering are technical and processual.

Figure 2.1 Becher’s (1999) classification of professions

	Technical	Non-technical
Procedural	Pharmacy	Law, accountancy
Processual	Medicine, Engineering	Architecture

(Becher, 1999:16)

Becher draws comparisons between his procedure–process distinction and the ‘indetermination/technicality’ ratio proposed by Jamous and Peloille (1970), although argues that he uses ‘technicality’ in a different way. Where Becher uses technicality to refer to a scientific knowledge base, he claims that Jamous and Peloille use ‘technicity’, to mean ‘dependence on explicit, codified and rule governed knowledge’ (Becher 1999:18). Jamous and Peloille (1970) take a ‘reverse approach’ (p. 112) to examining differences between different kinds of professional and other occupational work. They claim that:

the definition and social function [of the products of professional/occupational work] are *end results* of: 1) an Indetermination/Technicality (I/T) ratio which characterizes the production process making it possible to arrive at the results expected of any given occupation or activity; [and] 2) the way in which the general balance of social forces, and the system of legitimacy which corresponds to it, uses and expresses this ratio in each historical situation. (Jamous & Peloille, 1970:112, italics in original)

Jamous and Peloille use ‘indetermination’ to refer to ‘the virtualities’ of producers or the organizations that produce them (p. 113): in other words, those aspects of professional practice that are ‘based on an element of intuition and talent that cannot be taught or translated into techniques and transmissible rules’ (Fournier, 2000:75). Robinson (2003) describes these aspects of practice as ‘based on specialist knowledge, its interpretation and the use of professional judgement’ (p. 594). Technicality on the other hand is defined as ‘aspects of work that can be prescribed, “programmed” or subject to routine practices’ (Robinson, 2003:593–594). Jamous and Peloille suggest that indetermination and technicality can be found in inverse proportion within professions, as feature of maintaining jurisdictional control over

professional knowledge: if access to the work of a profession was simply on the basis of mastery of technical knowledge then this would limit the profession's potential for maintaining this control. The capacity of a profession to maintain indeterminacy is seen as a marker of professional status, although interdeterminacy, and hence professional autonomy, is threatened by organizational discourses of accountability and efficiency that give rise to increasing technicality (Robinson, 2003). Robinson argues that practitioners develop strategies to maintain indeterminacy in their practice, giving the example of social workers maintaining a perception of separation between their completion of a risk assessment inventory (a tool associated with technicality) and their own professional assessment of a client (associated with indeterminacy).

Macdonald (1995) differentiates between functional and interactionist models of professions. Structural functionalism is a sociological framework that was influential in the 1950s and 1960s, and in the sociology of education and the professions was concerned with the functions of education and the professions in maintaining social equality and order. A functionalist model emphasizes 'socially functional traits' in defining the meaning of professionalism (Macdonald, 1995:2) —in other words, focussing on skills and competences that contribute to developing "human capital" (Van Krieken et al., 2010:173). Functionalism positions professionals as experts, and professions as part of a larger scale division of labour oriented towards sustaining social order (Scanlon, 2011b). Higgs, Hunt, Higgs, and Neubauer (1999) define the functionalist model as follows:

In the functionalist model, a profession is a body whose membership is accorded after a long effective training under the control of experts in a university context, which guarantees the quality and effectiveness of members' work. Because of this guarantee, professionals are accorded work autonomy and a privileged place in society ... This privilege is intended to be counterbalanced by a service orientation [consistent with Parsons' (1939) characterization of] professions as vocations based on universalism, disinterested service and affective neutrality. (pp. 17–18)

Lizardo (2009) suggests that Bourdieu's work on practices has contributed to their key role in sociological analysis, with 'practices' now as important as 'values and normative patterns' in earlier, functionalist interpretations of socialization. From a functionalist perspective, the "socialized" agent ... is one who has "internalized" (or learned) the system of explicit value orientations typical of her or his society and is able to apply them in practice by ... executing the appropriate set of actions when

faced with a typified situation that requires that action' (Lizardo, 2009:714). In a functionalist model then, the idea of human agency became 'pale and ghostly' while sociological structures 'enjoyed a life of their own' Archer (1982:455). Archer's work will be drawn upon again in Chapter 3, then again in discussion of the seminar data in Chapter 7.

Macdonald contrasts the functionalist model with interactionist models, centred on the 'actions and interactions of individuals and groups [including] how they constituted their social worlds as participants and how they constructed their careers' (p. 4). As an example, Larson's (1977) interactionist approach interprets professionalization in terms of individual and collective actions in a seemingly unconscious 'professional project' oriented towards maintaining a dynamic tension between social mobility and market control, rather than a 'natural historical fact about modern society' (Macdonald, 1995:9). Her model builds on early work by Friedson (1970a, 1970b) and portrays professionalization as 'an attempt to translate one order of scarce resources—special knowledge and skills—into another—social and economic rewards' (Larson 1977:xvii, cited in Macdonald 1995:9). Scanlon (2011a) locates Larson's model within a general sociological 'backlash' against the professions, a movement that was critical of the 'elitist and monopolistic tendencies' of professions (p. 20).

Analyses of professions often draw on Weber's (1978 (1921)) notion of social closure to describe "occupational closure" through the establishment of educational requirements and accreditation as the 'endpoint' of professionalization (Sanders & Harrison, 2008:290). Lander, Koene, and Linssen (2013) define social closure as 'the process by which jurisdictional boundaries are drawn around a particular set of knowledge and skills to make it possible for a profession to ensure quality and competence by providing special educational credentials' (p. 133). The idea of professions progressing towards stability appears to parallel Muller's (2008) view on the process of 'regionalization' as noted in the previous section. An alternative view put by M.K Power (1991), drawing on Baer (1986) is that 'the maturity of a profession is marked by an advancing "soft", "judgement" frontier of knowledge' ahead of 'an increasingly standardized conceptual and empirical foundation' (M.K. Power 1991:335). From this perspective, professions are seen to hold the codification of professional knowledge and the application of discretionary judgement in balance,

legitimizing their domain of expertise and at the same time limiting the risk that ‘outsiders can judge work by its results and control its practitioners by their judgements’ (M.K. Power, 1991:335).

Abbott (1988) tracks the shift in professions from legitimation on the basis of ‘character’ as epitomized by British professionals of the nineteenth century who celebrated ‘gentlemanliness, courage and disinterest’ (p. 191), to legitimation on the basis of ‘technique’. The latter competed with the former by introducing a regime of trainable skills and commensurate social structure. The social structure itself then became a form of legitimation for professions, with neither character nor technique regarded as sufficient values (Abbott, 1988). This structure includes a number of ‘legitimizing values’ (Abbott, 1988:193), in addition to the structural elements of professionalization: ‘examinations, licensing or registration, disciplinary committees, accreditation and ethics codes’ (Abbott, 1988:193). These legitimizing values may include ‘altruism, discipline, efficiency and accountability’ (p. 193) and vary over time and place with reference to social context. Abbott notes in particular the impact of a growing discourse of technical and organizational efficiency on professions. Efficiency can be measured in terms of outputs, and thus has shifted the basis of competition between professions away from ‘general values’ and towards ‘measurable results’ (p. 194)—hence a shift from legitimation based on character to ‘a reliance on scientization or rationalization of technique and on efficiency of service’ (Abbott, 1988:195). Abbott regards legitimation through efficiency as ultimately self-limiting: in medical settings for example “people still perceive a difference between the friendly local practitioner and the technocratic hospital specialist” (p. 209). Further, professionals still seek to differentiate themselves on the basis of character. Abbott cites evidence for this in the teaching of ethics, a focus on the social impact of professional practice and in the corporate identity of top tier accounting firms (p. 209).

Whether the development of a conceptual framework to describe the structure of professional knowledge is a useful goal is the subject of some disagreement in the literature on professionalism. In response to Eraut’s (1994) criticism of research on professional knowledge, Kaner (2010) argues that codification of professional knowledge remains inadequate to describe the complexity of professional behaviour. Kaner also emphasizes the importance of specificity in understanding professional

domains, although warns against specificity to the point of ‘routinization of procedures’, seeing the latter as obscuring a holistic understanding of the ‘reflexive relation’ between individuals and the social in professional practice (p. 195). He calls for an ‘ethical turn’ in professionalism, claiming that it is ethical work that carries ‘the burden of professionalism’ and not knowledge structures (p. 197). Kanes criticizes Friedson (2001) for conceptualising professionalism as a form of ‘self-transcendence’ (p. 185), whereby professionals overcome self-interest through an awareness of ethical behaviour. Kanes notes that an alternative is offered by Young (2006) who argues for professionalism as centred on knowledge, drawing on Bernstein. Beck and Young (2005) see the strength of professionalization and professional identity as associated with knowledge structure: singulars being associated with stronger professional commitment and identity than regions (Guile, 2012). Kanes regards Young’s approach as de-centring professional work, overlooking the ‘creative abilities of human agency and responsibility’ (p. 185). Like Kanes (2010), Edwards is also concerned with the ethical dimension of practice, arguing that an ability to participate in ‘relational practice’ involves a moral, or normative dimension, with practitioners taking moral positions in the resolution of complex professional problems that may cross professional boundaries. The ethical dimension of practice is certainly evident in the case of accounting, which is underpinned by standards of ethical behaviour.

Guile aligns Beck and Young’s views on professionalism with those of Abbott and Friedson, claiming that the work of each rests on ‘un-explicated assumptions about: (i) the universal status of knowledge; (ii) the relation between disciplinary knowledge and professional formation; and (iii) the application of disciplinary knowledge to professional practice’ (p. 90–91). Based on Bauman (1987), Guile argues that since the Second World War, the role of professionals has changed from that of ‘legislator’ who ‘makes authoritative statements which arbitrate in controversies of opinions’ that are legitimated ‘by superior (objective) knowledge’ (Bauman, 1987:4:cited in Guile, 2012:92), to ‘interpreter’ whose role is continue to act within the legislative boundaries of their professional domain while also translating ‘statements, made in one community-based tradition, so that they can be understood within the system of knowledge based on the other tradition’ (Bauman 1987:5:cited in Guile, 2012:92). Guile argues that an explicit focus on the recontextualization of knowledge from one

social practice to another provides a framework for understanding the process of this translation. Guile's work will be discussed further in Section 4.4.

Similar arguments are presented by Scanlon (2011a) who summarizes a number of challenges to the knowledge base of professions. These include the limitations of 'scientific knowledge grounded in technical rationality' for dealing with 'complexity, uncertainty, instability, uniqueness and value conflict that characterize real practice'; the relative rather than rational nature of professional knowledge; the dynamic nature of professional knowledge, which requires that professionals engage in lifelong learning; and technological and sociocultural changes that have increased the accessibility of knowledge and therefore challenge the exclusivity of professional knowledge.

2.7 Chapter summary

Discussion in this chapter has raised issues to be considered in relation to the tension between knowledge and ways of thinking and acting as a practitioner that was introduced in Chapter 1. It has also raised a number of points that will be considered in the analytical framework to be developed in Chapter 5. Underpinning this analytical framework is the idea that there is a relationship between the nature of a discipline and the structure of knowledge in that discipline, and that an understanding of this relationship is useful in preparing students for future professional practice. This chapter has shown that typologies of disciplines that characterize academic knowledge are not relevant to accounting, but that Bernstein's sociological theory provides an alternative view of knowledge structure that is relevant to professional areas. A difficulty for the framework to be developed here is that Bernstein's (1990, 2000) model of pedagogic discourse derives from the natural sciences. Within his model and systemic functional adaptations of it, there is a clear separation between knowledge on the one hand, and ways of thinking and acting on the other. Given the manner in which ways of thinking and acting as a practitioner are drawn upon to legitimate the activities and jurisdictional control of professionals as described by Abbott (1988), this suggests the need for a framework that takes into account both knowledge and ways of thinking and acting as a practitioner. This issue is connected with differences between the natural and social sciences that will be taken up again in discussion at the beginning of Chapter 4.

Pedagogic discourse has been presented in this chapter as a process by which knowledge from a field of knowledge production is relocated and reshaped in educational settings. It is concluded from this discussion that an extension of Bernstein's model of pedagogic discourse is required to account for the recontextualization of knowledge of the social world (as in accounting) as opposed to the 'natural' world in classroom discourse. In this chapter it has also been shown that professionally oriented disciplines, as knowledge regions, are shaped by disciplines and fields of practice. The distinction between knowledge singulars and knowledge regions has implications for what counts as 'knowledge' in the professional curriculum. Knowledge regions have been described as a combination of theoretical (singular) knowledge and everyday or procedural knowledge—different kinds of knowledge will be discussed further in Chapter 4.

This chapter has also approached the issue of knowledge as it is conceived within the sociology of the professions. Here, relationships between the knowledge base of a profession and the nature of professional practice have been considered. Professions have been shown to be subject to a disciplinary logic, meaning that maintaining professional boundaries are a feature of professional identity in the same way that disciplinary boundaries are a feature of disciplinary identity. These points will be examined with reference to the accounting curriculum in Chapter 3, as they have a bearing on the research questions addressed in this study.

Chapter 3: Accounting practice and accounting education

The previous chapter has provided two perspectives on accounting. First, literature on the sociology of education shows accounting to be a regional discipline, facing both inwards to disciplinary knowledge and outwards towards the profession. Second, literature on the sociology of professions suggests that accounting could be characterized, as with other professional fields, by a tension between professional knowledge and ways of being a practitioner. This chapter adds a third perspective, describing professional and educational practices in accounting as being embedded within larger social systems. The first part of this chapter reviews research that recognizes the relation between structure and individual activity in accounting, and that draws on Giddens' (1979, 1984) structuration theory. Later in this chapter, it will be suggested that the work of Archer (1982, 1995, 2003) offers an alternative perspective on these relations that will be drawn upon in discussion in Chapter 7. The second part of the chapter extends discussion in Chapter 2 by describing two forces that interact in shaping the university accounting curriculum in Australia: the regional nature of the accounting discipline, and the role of the State in constructing teachers and students in ways that are consistent with policy imperatives (Beck, 2009).

3.1 Professional practices in accounting

The nature and scope of accounting practices and the organizational contexts within which they take place is so broad that it would be impossible to provide a succinct description of the accounting profession. Differences in work practices can be found between different types of accounting firms (Big 4, mid-tier accounting firms, and regional and local firms) as well as between organizations within each group (Lander et al., 2013). Further, notions of accounting itself are 'fluid, historically contingent and constantly shifting' (Miller & Power, 2013:27). The operationalization of accounting rules in accounting practice is a function of the relationship between practitioners' identities as 'individual, public sector, or corporate accountants and auditors, and what this means in terms of their allegiances and concerns' and 'regulatory processes' (Cooper & Robson, 2006:416).

Definitions of accounting can be found in the recent *Learning and Teaching Academic Standards Statement for Accounting* (Hancock & Freeman, 2010) and the

Oxford Dictionary of Accounting (Law, 2010). The *Learning and Teaching Academic Standards Statement for Accounting* purports to describe the ‘nature and extent of accounting’ as follows:

Accounting is concerned with the provision, analysis and communication of information to a broad range of internal and external stakeholders for a variety of resource allocation decisions and compliance purposes for example, regulation and governance.

Accounting practices undertaken to assist resource allocation decisions and compliance include, but are not restricted to:

- recording and summarising transactions and other economic events
- application and interpretation of accounting standards in the preparation of financial statements
- analysis of the operations of business (for example, performance measurement; management control; decision analysis)
- financial analysis and projection (for example, analysis of historical trends for budgeting; analysis of financial ratios for budgeting or raising funds; analysis of cash flow from operations; analysis of financial risks in light of operating in an uncertain future economic climate). (Hancock & Freeman, 2010:7)

This definition is oriented towards accounting as the provision of economic information, emphasizing the technical nature of accounting procedures as tools for revealing economic facts (P. F. Williams, 2002). This reflects a general turn in accounting discourse away from notions of accountability, with the effect of masking the ‘inherently ethical nature of accounting practices’ (P.F. Williams, 2002:3).

The *Oxford Dictionary of Accounting* (Law, 2010) defines accounting as:

[The] process of identifying, measuring, recording and communicating economic transactions ... Accounting can be subdivided into “financial accounting” which is mainly concerned with the legal aspects of the subject and reporting to parties external to an organization, and “management accounting” which is mainly concerned with providing information helpful to managers in running a business. Accounting includes various activities, such as conducting audits, book-keeping and taxation. (p. 6).

In keeping with common usage, both definitions refer to the *accounting* profession, rather than the *accountancy* profession. Chua (2007) situates the transition to the gerund ‘accounting’, with emphasis on the ‘doing of accounting work’ from the noun ‘accountancy’ within the last century, but notes that in spite of accounting being positioned as more active, this has not been accompanied by a consistent research agenda on the ‘doing’ of accounting (p. 487). Instead, she notes that accounting research has tended to focus either on ‘highly abstract representations of accounting

technique ... largely founded on images of economic rationality and “scientific method” (in the North American tradition of accounting research), or on accounting as a “situated craft” drawing on the social sciences (in the European tradition) (p. 487). Schatzki et al. (2001) and others have documented a turn towards ‘practice’ within sociology and philosophy. Similarly, Chua (2007) reports an emerging ‘practice turn’ in accounting research that reflects its basis in the social sciences, grounding her discussion in the work of Schatzki et al (2001). The emerging recognition of accounting as a social practice represents a transition from earlier views of accounting as a ‘technical phenomenon’ (Burchell, Clubb, & Hopwood, 1985:381). A focus on *practice* in accounting research is evident in Whittington (2011), Ahrens and Chapman (2007), and Hopwood (1994). Whittington (2011) argues that a focus on practice in accounting research offers a ‘middle ground’ between the micro level of individual activity and the macro level of structures: one that recognizes that ‘accounting or strategizing [practices] always express larger, more enduring structures than just the activity observed in a particular moment’ (p. 184).

Relations between individual agents and structure are central to research that seeks to explain social life. As Danermark, Ekstrom, Jakobsen, and Karlsson (2001) explain, ‘[s]ociety consists of two separate phenomena, which are nevertheless related to each other: acting people and social structures’ (p. 178). Sociological theory understands the relations between the two in different ways, which have consequences for theory and practice in social science. Danermark et al. summarize these relations according to three paradigms: one that emphasizes structures, one that emphasizes agents, or one that emphasizes relations between the two. Giddens’ (1984) structuration theory aligns with the latter. Relations between agency and structure underpin a substantial body of accounting research, much of which is informed by Giddens’ structuration theory (Englund, Gerdin, & Burns, 2011). Englund et al. (2011) describe structuration theory as one of the ‘dominant alternative approaches’ in accounting research over the past twenty-five years (p. 494), although mostly in the area of management accounting rather than financial accounting and reporting. They identify three key conceptualizations of accounting within this body of research as follows:

1. Accounting as structure: Accounting is referred to as structuring properties of social systems (in terms of structures of signification, legitimation, and/or domination)

2. Accounting as artifact: Accounting is referred to as a formal system, including computerized systems, reports, formal rules, and/or specific techniques ...
3. Accounting as interplay between structures and artefacts: Accounting is interchangeably referred to as structuring properties and formal system. (Englund et al., 2011:499)

Although these conceptualizations of accounting represent only one section of accounting research, they provide a useful means of briefly reviewing aspects of research that are relevant to this study. As a structure then, accounting is variously regarded as a signification structure: a way of interpreting or constructing reality; a legitimation structure: reflecting the expectations of organizations and society or sanctioning forms of interaction; or a domination structure: a means of exercising control or ‘an ideological mechanism which is embedded in, and constitutive of, social relations’ (Englund et al., 2011:500). These three dimensions of structure are derived from Giddens (1984). Research that conceives of accounting as a signification structure includes G. Morgan (1988) who discusses the social construction of accounting ‘facts’, and the implications of this for the incomplete status of accounting representations. He claims that:

Accountants often see themselves as engaged in an objective, value-free, technical enterprise, representing reality ‘as is’. But in fact, they are subjective ‘constructors of reality’: presenting and representing the situations in limited and one-sided ways. They are not just technicians practising a technical craft. They are part of a much broader process of reality construction, producing partial and rather one-sided views of reality. (G.Morgan, 1988:477)

Research that is concerned with accounting as a legitimation or domination structure includes that of Miller (Miller, 1994, 2001; Miller & O’Leary, 1994; Miller & Power, 2013). Miller and Power (2013) describe accounting as ‘perhaps the most powerful system of representation for economic and social life’ (p. 1), arguing that the power of accounting derives from ‘the capacity of its representations to become stabilized as “facts” (p. 30). As such, accounting is a ‘mechanism by which the *economization* of organizational life becomes elaborated and institutionalized’ (p. 1). Miller and Power regard ‘the power of accounting [as] a joint function of a technology that seems to reveal and represent economic reality on the one hand, and a body of organized experts who prescribe and diffuse norms of best practice on the other’ (p. 3). Miller (1994) describes accounting practice as simultaneously a technology, a rationale, and a means for ‘constitut[ing] and reconstitut[ing]’ the economic domain (p. 4). As a

technology, accounting provides a means of quantification that not only renders events and processes visible, but in doing so has the capacity to transform them. Miller (1994) claims that the capacity of accounting to transform events into numbers is a source of its power, authority and legitimacy: despite the questionable objectivity of accounting figures, they allow government of individuals and activities. As a rationale, Miller argues that calculative accounting practices are often rationalized with reference to discursive representations drawn from different 'bodies of expertise', including various discourses and values of economic and social life such as efficiency, competitiveness and responsibility (pp. 3–4). He argues that rationales 'come to constitute truths' that justify the deployment of accounting practices in governing economic and social practices (p. 4). Finally, Miller regards calculative practices as a means of construing concrete entities in economic terms. In doing so, accounting 'creates a particular realm of economic calculation of which judgement can be made, actions taken or justified, policies devised and disputes generated and adjudicated' (p. 4). The single figures generated through accounting practices can be used to in measuring and comparing entities and are a means of governing these entities (Miller, 1994). Miller argues that:

Whether this single figure takes the form of a Return on Investment, a Net Present Value of an investment opportunity, Earnings per Share, Profit or the labour efficiency variance of a department, accounting draws much of its social authority from the objectivity and neutrality accorded to the single financial figure. (p. 3)

Beyond legitimating the work of professional accountants, techniques such as standard costing that create, reproduce and maintain order within organizations, also legitimate and maintain 'the status quo in society ... even though the precise form that order takes might be different over time and across space' (Ezzamel, 2012:4). Accounting practices themselves are transformative in that they 'accord a particular kind of visibility to events and processes, and in doing so [help] to change them' (Miller, 1994:2). To some extent, quality standards themselves have their origins in accounting practices, as development of standard costing techniques in the early 1900s in conjunction with the emergence of scientific management practices, made the concept of efficiency 'visible and calculable' (Miller & O'Leary, 1994:100). Abbott (1988) considers the development of standard costing practices as an achievement that established a firm basis for the legitimation of cost accounting as a profession.

Legitimation in accounting can be seen to extend beyond the activities of individual accounting professionals in accounting organizations, to standard setting and regulation. West (2003) notes that accounting standards are a concept ‘devised and legitimated by the accounting profession’ (p. 95). West observes that the ‘propriety of *process*’ of standard setting in accounting is a source of authority and validity in those standards rather than their ‘technical fitness for use’ (p. 96). Cooper and Robson (2006) examine the role of professional firms in the construction of professionalization in accounting, arguing that top tier accounting firms play a role in setting benchmarks for internal management practice within accounting, and an indirect role in international systems of regulation within the accounting profession, but also a role in ‘diffusing concepts of efficient organization and rational behaviour ... in multiple sectors and economies (p. 434). As a result of the latter, Cooper and Robson argue that ““transparency”, “accountability”, “performance” and “responsibility”” derive meaning from concepts and practices in accounting.

Abbott (1988) uses the term legitimation to describe strategies for ‘justif[ying] what professions do and how they do it’ (Abbott, 1988:184). The mechanism for this is through establishing links between professional services and wider cultural values, lending ‘cultural authority’ to both the results of professional work and how those results are produced (p. 184). As cultural values shift towards ‘rationality, logic and science’ (p. 54), professionals exact leverage from their ability to justify their scientific rigour through a grounding in disciplinary knowledge, and can defend the cultural value of their work. Similarly, Cooper, Puxty, Robson, and Willmott (1994) argue that the discourses that shape professional accounting practice and that are at the same time ‘promoted’ by practitioners ‘form an integral part of the social practices that facilitate, maintain and promote the occupation’ (p. 272). Cooper et al. claim that accountants in particular legitimate their activities with reference to discourses of regulation.

Englund et al. (2011) argue that a major contribution of accounting research informed by structuration theory is to recognize that the three structuring properties of accounting are interrelated—that is, that accounting practices simultaneously signify, legitimate and dominate, as explained by Baxter and Chua (2006):

accounting rules and resources shape the relevance of, and meanings ascribed to, organizational events; comprise a moral order by embedding reciprocal obligations in an accounting system (i.e. who is responsible for whom and

who is responsible for what); and inform power relations through the overt control and coordination of organizational actors and processes. (p. 54)

In terms of the second of the three conceptualizations listed above, Englund et al. (2011) argue that accounting research informed by structuration theory needs to recognize the role of artefacts in accounting practice, noting that an alternative body of accounting research based on Actor Network Theory offers a basis for this. An example of the latter is work by Lowe and Koh (2007) who, with reference to Latour (1994) among others, describe accounting representations as ‘the means by which we are able to represent the workings of an organization in simplified form’. These representations are made possible by ‘substituting symbols, paper inscriptions and other devices, such as tools and computer controls, for direct involvement of the human body and its senses’ (p. 953). According to Lowe and Koh, the use of accounting representations within economic and management models and processes in organizations enables management accountants to deploy various means of control including standard costing. Accounting practices, along with those of other professional groups in organizations, produce ‘models, maps, numbers and formulae which represent that environment and their organizations’, and these become the basis for the practices of ‘bureaucrats and managers’ (Lowe & Koh, 2007:953). While Lowe and Koh point to the organizational processes within which management accounting practices such as standard costing gain meaning and power, they also describe competing systems of representation within organizations and between different networks in that organization. Their research describes tensions between the accounting network and the ‘quality’ network. These networks and their representations are in competition, but are also interconnected. In the case study examined by Lowe and Koh for example, managers favoured representations that assisted them in meeting external demands for quality over more accurate accounting and costing representations.

Englund et al. (2011) suggest that another contribution of accounting research that draws on structuration theory, and more generally, a contribution of Giddens’ approach, is to introduce a duality perspective on structure that overcomes a focus on either structures or individual agents. As summarized by Englund et al., this duality perspective treats structures and systems as separate concepts: social structures are abstract from time and space, and provide the medium for, and are the outcome of,

social systems. Social systems consist of the situated practices in which agents participate. In this way, Giddens (1984) argues that agents and structures are not separate phenomena but ‘two sides of the same coin’ (Englund et al., 2011:496). Giddens’ concept of structuration takes into account that social activity is ongoing, which involves the continuity of and change in social systems (Englund et al., 2011), although his theorization of this change over time has been criticized (Barnes, 2001). Barnes argues that Giddens’ approach, in insisting on the dependence of individuals on the ‘existing repertoire of practices’ (p. 27) implies that this system of practices will reproduce itself by virtue of its own existence, which does not account for change in practice over time. Further, his approach implies that structures and agents cannot be understood separately, but only in relation to one another (Danermark et al., 2001). Archer (1982) provides a critique of Giddens’ model of structuration, offering instead her morphogenetic perspective on action. This model also deals with ‘endless cycles of—structural conditioning/social interaction/structural elaboration’ (p. 458), but expands on Giddens’ structuration theory. Archer regards relations between agency and structure as dialectical, rather than perceiving these as inextricably bound, as in the work of Giddens. In Archer’s model, expanded in Archer (1988, 2000, 2002, 2003), structures both enable and constrain the activities of agents, and at the same time, agents both reproduce structures and transform them (Danermark et al., 2001). Archer’s model will be drawn upon in discussion of the seminar data in Chapter 7.

3.2 Educational practices in accounting

According to Bernstein (2000) the processes of regionalization weaken the boundaries or classification between discourses, meaning that identities of a region are shaped by greater dependence on forces external to the region (‘projected’ identities) rather than by forces internal to the discipline—that is, knowledge (‘introjected’ identities) (Bernstein, 2000: 52). In the case of singular disciplines that face inwards toward the knowledge, identities are shaped by the strength of their discipline boundaries, and socialization into the discipline centres around loyalty to the discipline (Beck & Young, 2005). The situation is different in knowledge regions, but this is not to say that the identity of regions, or professions is less specialized (Bernstein, 1990:156) or diffuse, given that the development of professions is also dependent on establishing and maintaining boundaries (Fournier, 2000). The influence of the profession and

professional bodies on Australian accounting education is a feature of the outward facing, regionalized nature of the accounting discipline. Their role is subject to ongoing negotiation, as evident in the discussion and recommendations from the Accounting Education Forum in February 2010, subsequently published in the ICAA report, *Accounting education at a crossroad in 2010* (E. Evans et al., 2010). This forum was designed with the dual aims of bringing academics, practitioners and educators together to strengthen the relationship between the professional accounting bodies and accounting academics, and to discuss issues and challenges for accounting education, particularly in relation to the skills needed by accounting graduates (Burritt, Evans, & Guthrie, 2010). Participants at the forum recommended stronger links between the accounting profession, the accounting discipline and industry, perceiving the profession as a ‘conduit between academics and the industry’ (Burritt et al., 2010:13). Burritt et al. conclude that the future of accounting education rests on the strength of relations between the accounting academy and the profession and their joint influence on government policy.

Tensions between the perceived demands of the accounting profession and the discipline are frequently played out in literature on accounting education. The role of the profession and the academy as providers of accounting education in Australia is contested, and has recently been described as being at a crossroads whereby the relatively recent role of universities as providers of accounting education in Australia may be diminishing (Poullaos, 2010). This is not simply a question of provision, but of scope and purpose, hinging on whether preparation for accounting practice is about ‘[academic] education or specialist [vocational] training’ (E. Evans, 2010:80). At the centre of this ‘crossroad’ in accounting education lies a tension between the accounting profession and the discipline, with an academic approach to accounting education characterized by Ryan (2010:25–26) as making ‘broad social and intellectual contributions’ and an approach which has more ‘utilitarian’ technical goals, being more responsive to the demands of the profession and oriented towards compliance with accounting rules. The difference between these two approaches can be clearly seen in the distinction between more academically oriented accounting programs designed and taught by research academics, and conversion and other more professionally oriented programs that are explicitly oriented towards the profession (Hopper, 2013). The program on which this study is based falls in the latter category,

as can be seen in the program description provided in Appendix 25 in Volume 2. The difference between these two approaches has contributed to a segmented academic labour market in accounting, between professional and academic accountants (Hopper, 2013).

Debates in the literature between traditional and critical approaches to accounting education are fueled by a changing political environment that has contributed to the ubiquity of accounting practices (Francis, 1990; Watkins & Arrington, 2005). Such debates also take place in the context of a changing business environment that has created new and expanded roles for accountants as knowledge workers (Howieson, 2003; Tempone et al., 2012) who have a key role to play in the evolution of sustainable business practices (Boyce, Greer, Blair, & Davids, 2012; Hopwood, Unerman, & Fries, 2010). Boyce et al. (2012) argue that graduates need to complement their technical proficiency with an appreciation of the ‘socio-political significance as well as the cultural and social breadth of accounting’ (p. 50). Their paper contributes to ongoing discussion in accounting literature regarding the limits of conventional approaches to accounting education (Amernic & Craig, 2004; Ravenscroft & P.F. Williams, 2004) and the limits of treating accounting as a technical discourse (P. F. Williams, 2002). The recent introduction of alternative, non-academic pathways to the accounting profession (E. Evans & Poullaos, 2012:24) means a shift away from the disciplinary anchor of the university, putting the link between the discipline and the profession at risk. While this risk may be seen as immaterial in a technologized and commercialized world, where the knowledge basis of the professions may be questioned (Beck & Young, 2005), Beck and Young would argue that knowledge provides structural integrity that affords the profession some degree of protection from ‘mundane considerations of profit [and] the demands of powerful clients’ (p.188) and a firm basis for ethical conduct.

Accounting academics point to a long-standing lack of agreement between accounting academics and the profession regarding core knowledge and skills in accounting (Poullaos, 2010). The source of this disagreement could be attributed to the transition of accounting from a vocation to a discipline, and consequent disputes over the way in which the discipline legitimates its emerging body of theoretical knowledge as academics respond to deeper divisions between positivism and hermeneutics (Elzinga, 1990). Although accounting made the transition to universities in the early twentieth

century, Boyce (2004) drawing on Parker (2001), argues that the ‘technicist, vocational approach’ to accounting education that emerged at that time still dominates accounting education (p. 570). In Chau’s view, top tier journals in accounting continue to subscribe to positivism, ‘so that accounting research appears trapped in a time capsule chained to a philosophy of the early 1900s’ (2011:35). Sin, Reid, and Jones (2012) associate this type of approach to accounting education with a student conception of accounting as routine ‘recording and reporting of financial information’ (p. 9) which is at odds with the expanding nature of professional accounting practice as described by Parker (2001). Burns and Moore (2007, 2008) chart a growing awareness of the importance of professional communication skills in accounting practice. Burns and Moore (2007) cite work by Chua (1996), noting that she argues that traditional images of accountants need ‘to be redrawn ... to include “human sciences” which value “the voice” of the professional and the cultural and historical contextualization that would be capable of exploring the political ideas and values expressed by quantification’ (Burns & Moore, 2007:184).

West (2003) acknowledges the regional nature of accounting, although does not use the term region: rather, he cites its ‘proximity to other disciplines’ (p. 74). West argues that accounting ‘confounds’ specialized knowledge from other disciplines, particularly arithmetic (p. 74). In general he claims there is a lack of coherence in the use of abstract concepts in accounting rules, and is also critical of the formalized conceptual frameworks that underpin accounting rules. West (2003) and Carnegie and West (2011) see accounting education as limited by a focus on technical rules and procedures which are treated as ends rather than means, and as constituting the substance of both accounting practice and accounting education. West (2003) argues that technical accounting rules do not provide a firm basis for practitioners’ professional judgement. Rules are often regarded as undermining the judgement of practitioners, or their independence and authority (T. A. Lee, 2013). In the context of accounting education, Carnegie and West (2011) argue that rules are often taught in favour of theory, a situation which T.A. Lee (2013), drawing on West (2003), notes is a problem given that accounting rules are ‘effectively arbitrary and inconsistent ... mandating calculations dependent on subjective selections, classifications, separations and exceptions’ (T.A. Lee 2013:144). West (2003) claims that the dominance of

accounting rules does not justify the professional jurisdiction of accounting, or provide an indicator of progression towards professionalism in accounting.

Beyond debates in the literature, the accounting curriculum is shaped by State policy imperatives, mediated through both institutional policy and through the accreditation guidelines for university programs set by the accounting professional bodies. An example of this can be seen in the operationalization of a discourse on generic attributes and capabilities in both university policy and the accreditation guidelines for accounting degree programs. More recently, the State has intervened more directly in the accounting curriculum through the introduction of a set of State mandated standards in accounting, through which a discourse of generic attributes and capabilities has resurfaced.

Accreditation standards for accounting degree programs in Australia are set by the two accounting professional bodies: the Institute of Chartered Accountants in Australia (ICAA) and CPA Australia (CPAA), and published in the form of a set of accreditation guidelines for degree programs. These guidelines have been revised several times in the last decade (CPA Australia and the Institute of Chartered Accountants in Australia, 2005; Institute of Chartered Accountants in Australia and CPA Australia, 2009), with the most recent edition published in 2012 (CPA Australia and the Institute of Chartered Accountants in Australia, 2012). Each edition of the guidelines specifies degree program content and standards for program delivery and assessment. A significant development in 2011 that bears directly on the accounting curriculum was a change in the higher education regulatory environment that led to the formation of the Tertiary Education and Quality Standards Agency (TEQSA) (Freeman & Hancock, 2012). As a new body responsible for evaluating the performance of higher education providers, TEQSA will monitor the performance of institutions against a standards framework including a set of *Learning and Teaching Academic Standards*. Towards this end, the Australian Learning and Teaching Council (ALTC) has developed the *Learning and Teaching Academic Standards Statement for Accounting* which includes a set of learning outcomes termed the *Threshold Learning Outcomes for Accounting* (Hancock & Freeman, 2010), in addition to academic standards statements in other discipline areas. Although the *Threshold Learning Outcomes in Accounting* are yet to be endorsed by TEQSA (Freeman & Hancock, 2012:82), Australia's accounting professional bodies

responded quickly to this change in the higher education policy environment by incorporating the *Threshold Learning Outcomes in Accounting* within their accreditation guidelines (CPA Australia and the Institute of Chartered Accountants in Australia, 2012), giving these status as the profession's current decree on the scope of the accounting discipline.

Drawing on the theoretical framework introduced in Chapter 2 it can be seen that *Learning and Teaching Academic Standards Statement for Accounting* is not ideologically neutral, but rather, an instrument in the reproduction of social order, linking the micro level of the classroom with the macro level of society and shaping prospective student identities through their role in defining the scope of what is to be learned. The *Learning and Teaching Academic Standards Statement for Accounting* positions accounting professionals as able to 'exercise judgement ...to solve ... accounting problems ... using social, ethical, economic, regulatory and global perspectives'; 'integrate theoretical and technical accounting knowledge'; 'critically apply theoretical and technical accounting knowledge'; 'justify and communicate accounting advice and ideas'; and reflect on performance and feedback' (Hancock & Freeman, 2010:10). The *Statement* thereby contains some vision of professional practices in accounting that shapes professional learning.

The official accounting curriculum can be seen as framed around requirements of professional bodies, employer demands for professional, 'work ready' graduates who can apply (technical) knowledge, have good communication, critical thinking and problem solving and team work skills and a global perspective (Nettleton, Litchfield, & Taylor, 2008), and State imperatives for active lifelong learners who can contribute to a knowledge society. Consequently, the Master of Accounting program in this study can be described as having 'contextual coherence' (Muller, 2009), being based around the demands of an external context. Evidence for this can be seen in the subject descriptions and weekly seminar topics for management accounting, information systems and auditing provided in Appendices 25 and 26 in Volume 2. Although the official accounting curriculum sits within these various constraints, there remains scope, and a need, for reforms to the accounting curriculum (Boyce, 2004; Boyce & Greer, 2013), and in particular reforms that address the practical implications of 'the philosophical, theoretical, moral and ethical assumptions of accounting' (Hopper, 2013:129).

3.3 Chapter summary

This chapter has examined the nature of professional accounting practices, firstly with reference to a definition of accounting that has a direct bearing on the accounting curriculum, and then with reference to interpretations of accounting practice informed by Giddens' (1984) structuration theory. The latter have emphasized accounting as a structure, interpreting the activities of individual agents only in relation to structure, rather than separately. It has been suggested that Archer's work provides an alternative perspective that reveals dialectical relations between agency and structure, and hence the possibility that the 'causal powers of social forms' can be understood as 'mediated through social agency' (Archer, 2003:2). This is important to a study of professional learning, because it opens the way to considering the role of reflexivity as will be discussed further in Chapter 7. The second part of this chapter considers educational practices in accounting, extending the discussion of knowledge regions from Chapter 2. It has outlined some of the implications of the regional identity of accounting for research and practice in accounting education, noting a range of influences on the accounting curriculum. These provide both a context for analysis and discussion in this study, and a rationale for future research directions as outlined in Chapter 8.

Chapter 4: The structure of professional knowledge

This chapter continues the discussion of Bernstein's theory of pedagogic discourse in Chapter 2. It begins with an examination of Bernstein's conceptualization of knowledge production, and evaluates this with reference to accounting knowledge and the curriculum as discussed in Chapter 3. It considers the question of how to understand knowledge from the field of accounting practice as it is recontextualized in the curriculum by examining knowledge as it is understood within literature both in the sociology of the professions and the sociology of education. The latter introduces a model of professional knowledge and curriculum developed by Shay (2012a), and Maton's (2009) research in the area of professional education. This part of the review will provide an explanation of the concepts of semantic gravity and semantic density as they are used in Legitimation Code Theory. Research on practice-based education that draws on Bernstein's work on recontextualization will also be discussed, leading into a consideration of recontextualization within both the systemic functional model and critical discourse analysis.

4.1 Knowledge production and professional fields

Although Bernstein (2000) could be interpreted as regarding knowledge as distinct from social practice in his separation of instructional and regulative discourse as discussed in Chapter 2, Maton and Muller argue that Bernstein's 'conceptualization aims to *make visible* knowledge as an object' (2007:25, italics in original), with knowledge structures representing only the 'symbolic dimension' of fields of production, which are otherwise 'social fields of practice' (p. 27). They argue that Bernstein 'brings to light the ways in which the structuring of knowledge itself works to shape social practices, identity, relation and consciousness' (p. 25). Bernstein's model conceptualizes the fields of knowledge production (practice) and reproduction (pedagogic practice) as separate. As defined by Maton and Muller, typical sites for the production of knowledge in Bernstein's model of pedagogic discourse include research papers, conferences and laboratories (2007:18). The separation between education and the production of knowledge is a dimension of Bernstein's model explored by Tyler (2004) in his quest to develop a socio-semiotic framework that could complement Bernstein's work. Tyler notes that the strong classification or

boundaries between the fields of production of knowledge and the fields of reproduction of knowledge (curriculum and the classroom) that were features of twentieth century capitalism have been weakened as education becomes ‘more directly accountable to the productive order’ (Tyler, 2004:24) that is, to the fields where knowledge is constructed (Bernstein, 2000:113), as in regionalization.

Young and Muller argue that ultimately Bernstein’s model of ‘knowledge progression’ is more suited to the natural world rather than the social (p. 190), pointing to a lack of clarity in the distinction between objectivity in ‘natural facts’ and ‘social facts’ in the work of Durkheim, one of Bernstein’s primary sources (p. 194). Durkheim (1982) defines social facts, on which sociology is based, and consisting of ‘representations and actions’, as follows:

A social fact is any way of acting, whether fixed or not, capable of exerting over the individual an external constraint; or

which is general over the whole of a given society whilst having an existence of its own, independent of its individual manifestations. (p. 54, italics in original)

Social facts according to Durkheim are those facts which do not fit into either category of ‘organic phenomena’ and ‘psychical phenomena’, the latter existing in individual consciousness (p. 52). While social facts may be manifested in individuals, this manifestation is shaped by the ‘psychical and organic constitution of the individual’ (p. 55), and hence regarded by Durkheim as outside the domain of sociology. Luckett (2010) argues that while Bernstein’s typology fits the study of ‘material and natural objects’, it ‘misrecognises knowledge claims based on a constructivist (or post-structuralist) epistemology where the object of study is usually textual or semiotic, i.e. where the object of study is already an interpretation of empirical reality’ (p. 4).

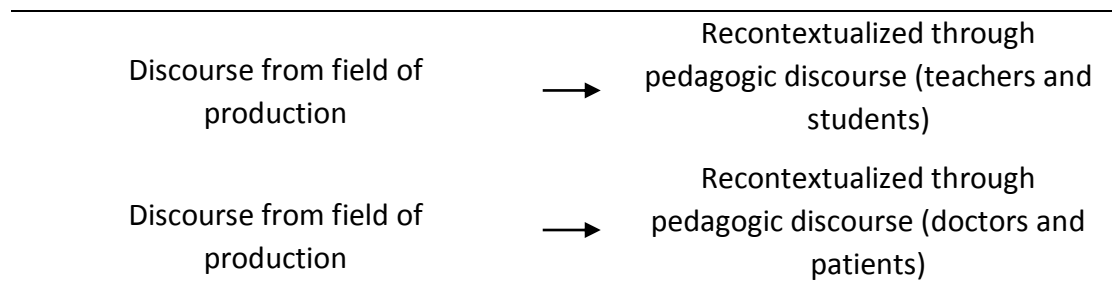
In contrast to ‘natural facts’, Fournier (2000) argues that professional knowledge

translates a disorderly world made of complex relationships and heterogeneous materials into homogenous, isolated and ordered patterns; it inscribes complex phenomena into categories and laws allegedly governing their operations and relationships. This process of isolation, homogenization and inscription in natural laws is not “given” in the order of things, but is an achievement contingent upon cultural, historical and economic conditions. (p. 71)

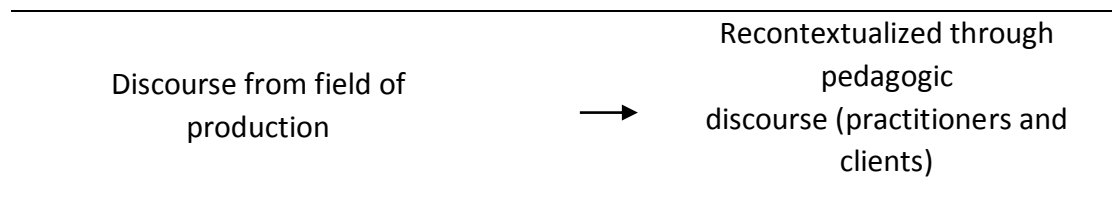
Rather than seeing the development of professional knowledge as revealing more about the ‘truth of the object it claims to know about’, Fournier regards professional knowledge as expanding through ‘a self-perpetuating, self-producing circle of emerging practice’ (p. 72). Here, Fournier recognizes professional practice as a site of knowledge production. Professional practice is unlike an academic discipline in terms of knowledge production, in that the purpose of knowledge production is more aligned with everyday social activity (Wheelahan, 2010). Wheelahan argues that the purpose of knowledge production in academic disciplines is ‘to create knowledge about the objects [of] study’ (p. 76). She notes that the process of knowledge production in disciplines is shaped by the systematic methods of inquiry particular to a discipline. From a social realist perspective, these methods of enquiry are distinguished from and shaped by ‘social, political and ideological mechanisms [that] co-determine the production of knowledge’ (Wheelahan, 2010:77). By contrast, ‘everyday knowledge is not gained for its own sake but as part of our “strategies” in pursuing things that are important to us, in which we are often guided by a “practical consciousness”’ (Wheelahan, 2010:76). While professional knowledge is by no means the same as everyday knowledge, the distinction made by Wheelahan between academic disciplines and everyday life as sites of knowledge production points to an important difference between professional practice and academic disciplines as sites of knowledge production.

This leads to consideration of Bernstein’s conceptualization of knowledge production as it applies to knowledge regions. As discussed in Section 2.4, Bernstein regards knowledge regions as created by the recontextualization of knowledge singulars, a process that he regards as inherently ideological. However, at the same time, Bernstein appears fixed in the view that knowledge is generated within knowledge singulars. That he does not invite the possibility that knowledge may be generated in practice is suggested in his discussion of regionalization: ‘any regionalization of knowledge implies a recontextualising principle: which singulars are to be selected, what knowledge within the singular is to be introduced and related?’ (Bernstein, 2000:9). In Bernstein’s examples of pedagogic relationships (doctor–patient, psychiatrist–patient, and architect–planner), he likens professional–client relationships to teacher–student relationships, in that they can be described in terms of selective acquisition on the part of the pedagogic subject, within a context of ‘cultural

reproduction–production’ (2000:3), with professionals acting as agents of symbolic control. In this process, discourses or knowledge from fields of production are recontextualized as they are distributed by agents—doctors, psychiatrists, architects. The recontextualization of discourses from fields of production in classrooms and medical consultations (as one example) as modelled by Bernstein can be seen as parallel:



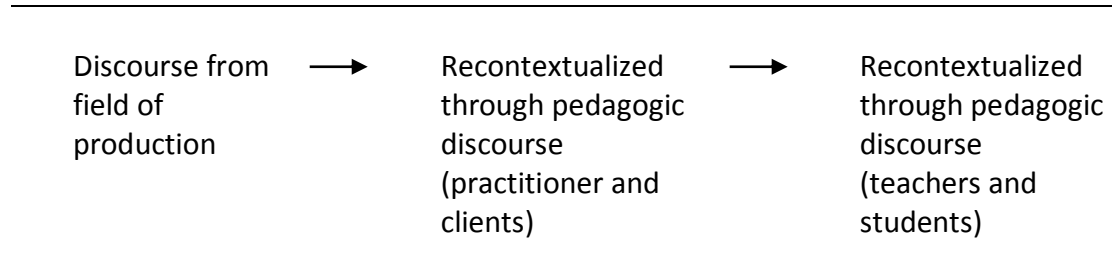
In the professional context, this pedagogic relationship could be generalized to that between practitioners and clients:



While Bernstein, as noted above, gives some consideration to professional practice in terms of pedagogic relationships (e.g. doctor–patient), his intention is to examine processes of transmission rather than the nature of professional discourse in general. At the same time, it appears slightly inconsistent that he uses the pedagogic device to interpret 1) the recontextualization of knowledge in pedagogic discourse, 2) the pedagogic relationship between a professional and client, and 3) the regionalization of knowledge, but does not appear to link 2) and 3) together in considering the implications for the recontextualization of professional knowledge in 1).

The agent–subject (e.g. doctor–patient) relationships described above clearly represent only one dimension of social relations within professional domains. This study is concerned with how social relations in professional practice including, but not limited to, pedagogic relationships between practitioners and clients are transmitted through pedagogic discourse. While to some extent lecturers are recontextualising discourse from ‘intellectual fields of production’ (Maton & Muller, 2007:27), they are also

recontextualising professional accounting practices, in the process of preparing students to participate in professional discourse communities. This includes, but is not limited to, further recontextualization of practitioner–client discourse, as shown in the following:



As noted in Chapter 1, the lecturers who participated in this study are, or have in the recent past, practiced as professional accountants and often draw on their own professional practice in the classroom. While practitioner–client relationships are one feature of their professional practice, their fields of practice include a much broader range of social practices as discussed in Chapter 3. In that chapter, it was noted that accounting education literature is divided over the value of more traditional, technical or rule-oriented curricula, regarded by some as undermining practitioners’ exercise of professional judgement (Carnegie & West, 2011), and approaches that develop a broad range of employability skills that assist students not only to obtain work but to make a broader social contribution by developing their ‘capacity for citizenship and the ability to contribute towards a well-functioning society’ (Tempone et al., 2012:42). The recently released *Learning and Teaching Academic Standards for Accounting* (Hancock & Freeman, 2010) takes the latter approach, being oriented towards the development of professional capabilities including ‘judgement, ... application skills, communication and team work, and self-management’, as well as ‘knowledge’ (Hancock & Freeman, 2010:2). Wheelahan (2010) presents professional capabilities as being in competition with knowledge in the curriculum, reflecting a broader ‘dethroning’ of knowledge resulting from the changing role of knowledge in society (pp. 87–97). At a curriculum level, Wheelahan, drawing on Bernstein (2000), associates a focus on the capabilities of ‘knowers’ rather than knowledge with a ‘competence’ pedagogic mode: one that emphasizes ‘providing the conditions for self-actualization’ rather than the acquisition of ‘a body of knowledge that is (initially) external to the student’ (pp. 99–100). Wheelahan’s views are consistent with others in the sociology of education who are concerned with ‘knowledge

blindness' in educational research and practice (Maton, 2013:9) as noted in Chapter 1. Wheelahan appears to conceptualize capabilities as separate to knowledge, making a clear distinction between knowledge and the (social) conditions of its construction. At the same time, critical accounting literature tends to judge the knowledge basis of accounting against the standards of singular disciplines, arguing that the knowledge basis of accounting is inferior (Carnegie & West, 2011; Chambers, 1955, 1987, 1999; West, 2003), and segmented, in that it draws from a range of other disciplines (J. F. Moore & Gaffikin, 1994; West, 2003).

The question that arises then for this study is how to understand knowledge from the field of accounting practice as it is recontextualized in classroom discourse. To find answers to this question, the following section examines the structure of professional knowledge, looking first at conceptualizations of knowledge in literature from the sociology of professions and then within the sociology of education. Methodological tools from Legitimation Code Theory will be then be introduced, with a view to developing an analytical framework for examining professional knowledge in educational practice.

4.2 The structure of professional knowledge

Knowledge is generally regarded as the basis of professional work, thus distinguishing professional work from other occupations. Scanlon (2011a) identifies professionals as 'practitioners who work in knowledge-based service occupations ... [that] require tertiary education followed by formal credentialing, and have an agreed standard of ethical behaviour' (p. 17). T. Lee (1995) defines professional occupations as those in which practitioners are institutionally organized and provide services based on knowledge, while at the same time being committed to serving the public interest (p. 48). Lee documents the emergence of professions as distinct from other occupations in the 1800s as a means of control over knowledge and services: with accreditation, training and professional bodies designed to exclude others from an occupational domain as well to induct new practitioners, and, he argues in the case of accounting, to protect the self-interest of its membership as well as the public interest. As noted, Bernstein's analysis of regions shows professions to face both inwards towards knowledge and outwards towards fields of practice, although they are increasingly under pressure from the latter (Young, 2007). As Young observes, these

conditions are different from those in which professions emerged. While on the one hand market pressures have the potential to erode the knowledge basis of professions, Young also notes that markets do not exist in isolation: ‘professionalism produces the new knowledge that markets rely on’ (p. 158). Like Wheelahan (2010) he emphasizes the importance of knowledge for the growth and continuity of professional fields. Young also echoes Bernstein’s warnings of the dangers of generic modes of pedagogic discourse, as in an orientation towards generic skills and capabilities, which undermine specialist knowledge and hence professions themselves.

There are strong arguments for the inclusion of disciplinary knowledge in the professionally oriented curriculum. Muller (2009) links the strength of professional identity with academic identity, arguing that a weak professional identity in ‘new’ or ‘fourth generation’ professions such as tourism or business studies, is a function of weak academic identity (p. 214). By the latter he means the lack of a firm disciplinary foundation that provides stability and conformity, as well as a means for recognition, in the sense of paradigmicity discussed in Section 2.1. In the context of practice-based education (discussed further in Section 4.4), Higgs (2012) describes ‘higher’ education as concerned with ‘education as opposed to technical training’ that is grounded in relevant disciplinary knowledge (p. 4). Similarly, Shay argues that a higher education curriculum must include conceptual as well as procedural knowledge, citing Wheelahan’s (2010) argument that ‘social access without epistemic access ... reproduce[s] social inequality’ (Shay, 2012a:319).

As in educational research, literature on the sociology of professions tends not to focus directly on knowledge or knowledge structure, but rather examines knowledge through an interpretive lens, focussing on ‘behavioural issues [including] ...the construction of power relationships, and notions of legitimacy and norms’ (Bisman, 2010:14). Common themes include professional claims for jurisdiction (Abbott, 1988; Leicht & Fennell, 2001) and authority (Fournier, 2000). Further, the literature is characterized by inconsistent use of terminology. These inconsistencies stem from different philosophical approaches within the literature on the sociology of professions, as well as a tendency towards idiosyncratic use of abstract terms. Abbott (1988) argues that professions use abstract knowledge as a means for ‘cognitive expansion’ of territory and for increasing ‘jurisdictional strength’ (p. 102) in the

process of professionalization. Drawing on Abbott, Fournier (2000) argues that professionals establish and maintain ‘an appropriate level of “mysteriousness” and esotericism within professional systems of knowledge’, such that professional knowledge is ‘resistant to codification and standardization’ (p. 75), therefore rendering professional knowledge inaccessible to others, and protecting a domain of expertise. Similarly, professional knowledge is sometimes regarded as abstract and ‘uncodifiable’ (West, 2003:3).

A lack of precision in defining professional knowledge could be seen as a feature of sociological discourse which tends to be abstract rather than technical, and may also be characterized, as Martin (1993a) characterizes history, by the ‘non-technical nature of its classification’ (p. 228). The term codification is used widely and in a fairly general sense in literature on professional learning and professionalism, to mean knowledge that can be represented symbolically, as opposed to practical or tacit knowledge. Practical knowledge is often described as uncodifiable. Eraut (1994) notes Oakeshott’s (1962) Aristotelean distinction between practical and technical knowledge, where practical knowledge is ‘expressed only in practice and learned only through experience with practice’ and technical knowledge is ‘capable of written codification’ (Eraut, 1994:65). Similarly, codified knowledge is often defined as that which is not tacit (Polanyi, 1964), or ‘unverbalized’ (Friedson, 2001:25). Where Fournier regards professional knowledge as resistant to codification, her definition of professional knowledge is apparently separate from abstract knowledge, although Abbott regards the latter as central to professional work. Further, ‘abstract’ knowledge is sometimes positioned in contrast to ‘technical’ knowledge, as in the work of Francis (1994), M.K Power (2003) and (Robinson, 2003).

Friedson (2001) offers a more systematic conceptualization of the nature of professional knowledge, providing a typology of different kinds of knowledge that constitute ‘working knowledge’. He argues that while a basis in abstract knowledge is characteristic of professions, it ‘cannot be applied directly to the problems of work’ (p. 29). Friedson regards work as the ‘practice of knowledge’ (p. 27), and claims that working knowledge is a composite of four different types of knowledge: everyday, practical, formal and tacit. These four types of knowledge are proportioned and used according to the nature of work, being influenced by the ‘social and economic organization of practice’ (p. 27). ‘Formal’ knowledge, is defined by Friedson as

‘composed of bodies of information and ideas organized by theories and abstract concepts’ (p. 33). Although Friedson’s approach to professional knowledge is systematic, it still lacks the specificity needed to apply it to the analysis of research data. An alternative is available within Legitimation Code Theory (Maton, 2013, 2014), which offers tools that can be directly applied to analysis of the seminar data, as outlined in the following section.

4.3 Semantic gravity and semantic density

Within literature on the sociology of education, Shay (2012a) provides a framework for conceptualizing the differences between different kinds of knowledge in singulars and regions, applying Maton’s constructs of semantic gravity and semantic density from Legitimation Code Theory to compare the structure of theoretical, practical and professional knowledge (Shay, 2012b) and the recontextualization of professional knowledge in curriculum (Shay, 2012a). Following a brief introduction to semantic gravity and semantic density as they are used in Legitimation Code Theory, Shay’s work is introduced and evaluated here as it offers a potential tool for understanding the relationships between disciplinary and professional knowledge as they are recontextualized in classroom discourse.

As noted in Chapter 1, two key of the dimensions of Legitimation Code Theory are semantics and specialization (Maton, 2014). Only the first of these two dimensions is considered here. The semantic dimension of Legitimation Code theory ‘constructs social fields of practice as *semantic structures* whose organising principles are conceptualized as semantic codes, comprising strengths of *semantic gravity* and *semantic density*’ (Maton, 2013:11). Maton (2011) uses the term semantic gravity to refer to the ‘external’ relations of knowledge practices (Shay, 2012a:6), or:

the degree to which meaning relates to its context, whether that is social or symbolic. Semantic gravity may be relatively stronger (+) or weaker (–) along a continuum of strengths. The stronger the semantic gravity (SG+), the more closely meaning is related to its context; the weaker the gravity (SG–), the less dependent meaning is on its context. (Maton, 2011:65)

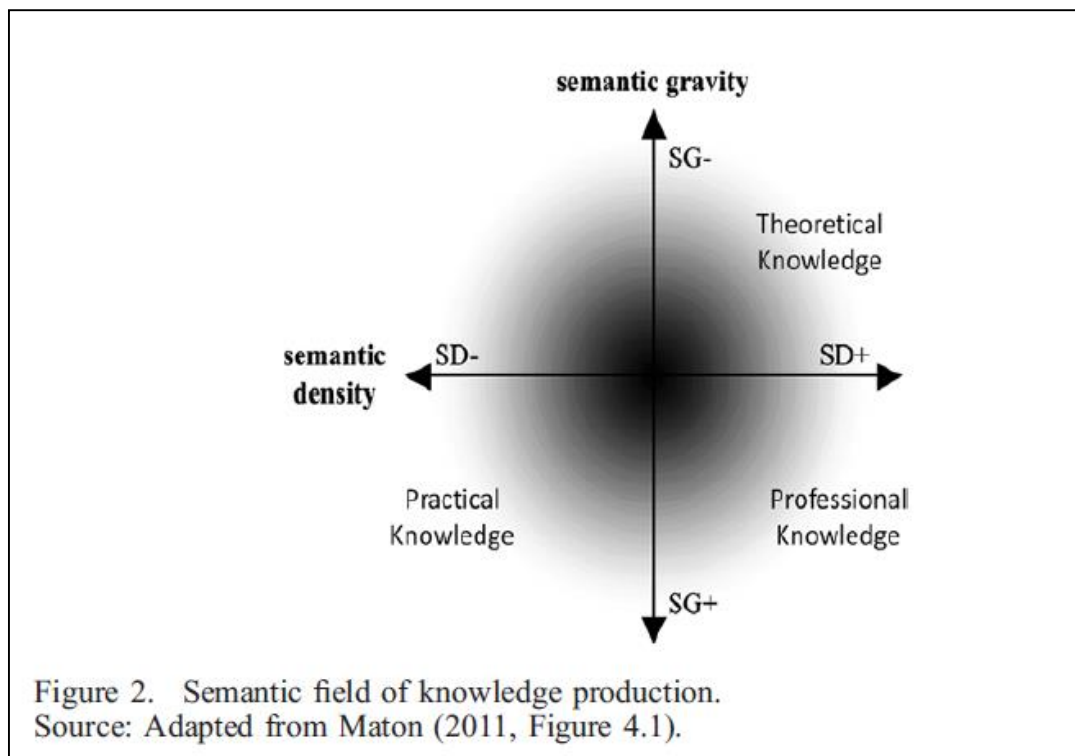
Semantic density on the other hand refers to the ‘internal’ relations of knowledge practices (Shay, 2012a:6), and is defined by Maton (2011) as:

the degree of condensation of meaning within symbols (terms, concepts, phrases, expressions, gestures, clothing, etc). Semantic density may be

relatively stronger (+) or weaker (–) along a continuum of strengths. The stronger the semantic density (SD+), the more meaning is condensed within symbols; the weaker the semantic density (SD–), the less meaning is condensed. (p. 66)

In Shay (2012a), practical knowledge practices are regarded as being context embedded but less condensed, where theoretical knowledge practices are seen as context independent and more condensed, although these are best understood on a continuum of density and gravity rather than as absolute, such that both practical and theoretical knowledge have the capacity for both density and gravity. Shay argues that these two kinds of knowledge are separate to the extent that one does not become the other. She describes professional knowledge as both context dependent and condensed, in that ‘principles are derived from theory but strongly embedded in practice’ (p.9). Here, Shay adopts Friedson’s (2001) definition of professional knowledge as knowledge and skill of a particular specialization require(ing) a foundation in abstract concepts ... and necessitate(ing) the exercise of discretion’ (Friedson, 2001:35, cited in Shay, 2012a:9). The three kinds of knowledge practices can be placed in quadrants to show the characteristics of each as in Figure 4.1 below.

Figure 4.1 Shay’s model of semantic fields of knowledge production (Shay, 2012a:7)



Shay suggests that there is a ‘knowledge-building “ceiling” on procedural knowledge’, and that while it ‘can be applied in increasingly complex contexts of

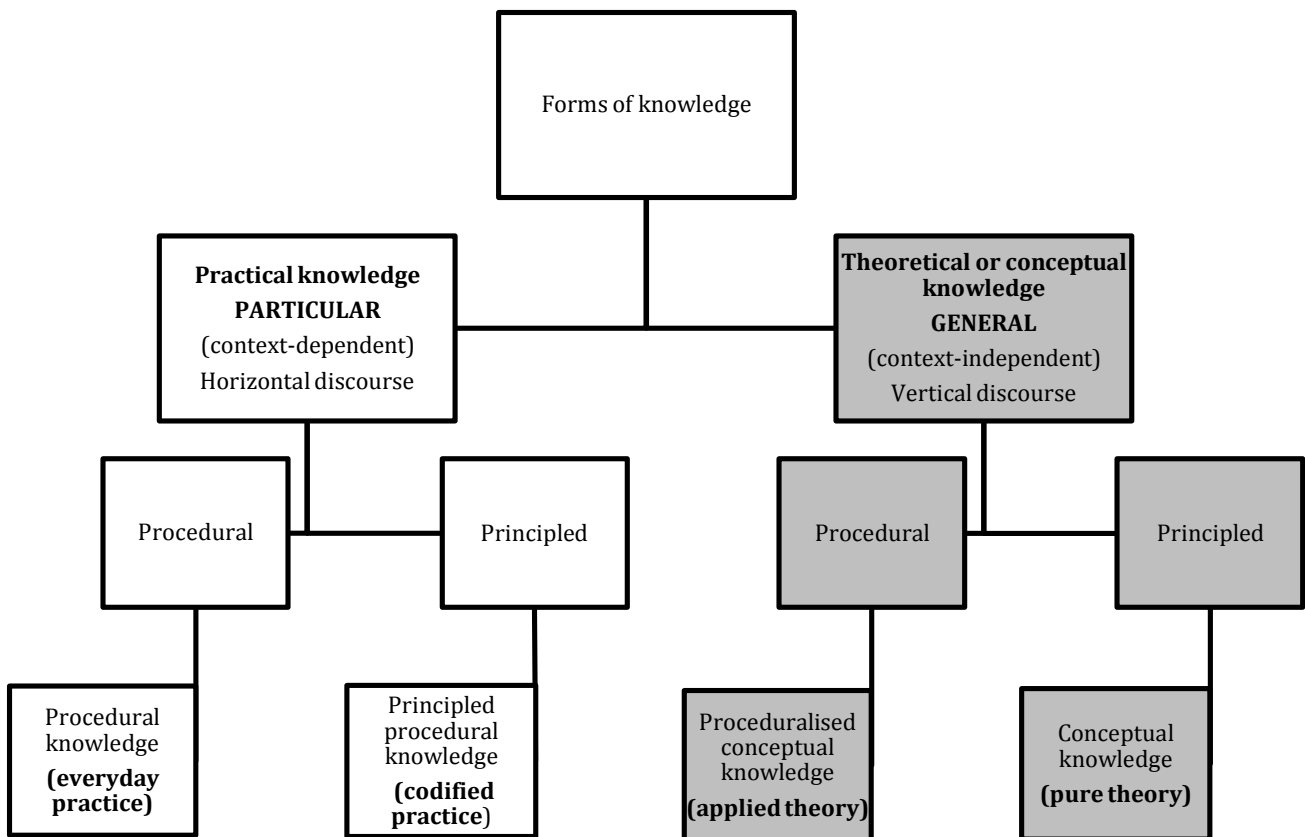
application' it remains context-dependent (Shay, 2012b:319). In other words, it has high semantic gravity (Maton 2009, 2013). Maton's concept of semantic gravity differentiates between context-dependent and context-independent meanings. The difference between these two meanings is explained by Gamble (2006): where context independent meanings, or 'general knowledge' is 'generated in a "context of thought"', context dependent meanings, or 'particular knowledge' is 'generated in a "context of human action"' (p. 89). Where the former '[exist] in abstract form', the latter 'refer to meanings that derive from concrete events or experiences that have actually happened in a specific time and place'. In Gamble's model of forms of knowledge, both general and particular knowledge consist of principled and procedural kinds of knowledge, as illustrated in Figure 4.2.

Gamble describes the relationship between procedural and principled as the relationship between 'parts' and 'wholes'. In teaching either theoretical knowledge or practical knowledge, parts and wholes may be separated, such that procedures can be taught without reference to principles: a situation that Gamble likens to 'rote learning' of procedural theoretical knowledge without reference to meaning (principled knowledge). As Gamble's discussion relates specifically to the context of vocational education, she describes the separation of parts and wholes in learning practical knowledge with reference to apprenticeships, where principled knowledge may be taught in vocationally oriented programs, and its application (procedural knowledge) learned in the context of an apprenticeship. This separation has emerged in the vocational curriculum in response to changes in the nature of work: for example 'artisans can no longer open machines to figure out how they work; they require an understanding of scientific and mathematical principles to understand the logic on which advanced technology is based' (Gamble, 2006:95). Gamble extends this to an example of the curriculum structure of accounting based courses at post-secondary level: '[accounting] students need to be able to grasp the general rule of principle on which calculations are based' (p. 95).

As shown in Figure 4.2, Shay aligns Gamble's particular and general knowledge with Bernstein's 'horizontal' and 'vertical' discourse (Bernstein, 1999). She terms the principled and procedural forms of each as conceptual knowledge (general, principled knowledge); proceduralized conceptual knowledge (general, procedural knowledge); principled procedural knowledge (particular, principled knowledge); and procedural

knowledge (particular, procedural knowledge), adapting the layout of Gamble’s typology to show progression from left to right.

Figure 4.2 Gamble’s forms of knowledge (Gamble, 2006:92) adapted to include Shay’s terminology and layout (Shay, 2012b)



In making these distinctions, Shay argues for a fundamental difference between procedural and conceptual knowledge: that while both can be principled, in the case of particular knowledge, principles ‘emerge from the codification of practice’ where in general knowledge, principles ‘emerge from the conceptual domain’ (Shay, 2012b:317). Shay uses this distinction to argue for a ‘firm dividing line between conceptual knowledge and procedural knowledge’, that is, that ‘procedural knowledge does not lead to conceptual knowledge and conceptual knowledge does not lead to procedural knowledge’ (Shay, 2012b:317).

4.4 Recontextualising professional knowledge in educational practice

This section will review a number of frameworks for examining the recontextualization of professional knowledge in educational practice, beginning with a review of different accounts of recontextualization within the sociology of education

and critical discourse analysis. The review then moves on to discussion of various analytical frameworks for examining the recontextualization of knowledge from the sociology of education, beginning with Shay's (2012b) work, which suggests implications of different forms of knowledge (theoretical, practical and professional) for the curriculum, then moving on to more specific applications of Legitimation Code Theory in the analysis of semantic gravity in educational practice (Maton 2009) and semantic waves in classroom practice (Maton, 2011, 2013). Next, work on the recontextualization of knowledge in the field of practice-based education is briefly summarized. This work takes a broadly sociocultural approach but draws on the sociology of education by referencing Bernstein's (2000) account of recontextualization. The final part of this section examines recontextualization as it is interpreted in critical discourse analysis, which likewise references Bernstein's work in this area (Fairclough, 2003:22).

Professional knowledge recontextualized in the curriculum

Where knowledge practices are differentiated according to the field of production, they can also be differentiated according to their field of recontextualization, which in Shay's (2012b) model extends to curriculum. According to Shay, theoretical, practical and professional knowledge have different consequences for curriculum, with each recontextualized in a different type of curriculum—theoretical, practical or professional. Shay sees the professional curriculum as drawing its logic from practice, that is, it has 'contextual coherence' (Muller, 2009), and its principles from theory, although the precise relation between the two varies between different academic programs. Where the goal of a program is practice with a theoretical basis, she argues that the context dependence of practical problems requires greater 'integration *across* and ... abstraction *of* theoretical principles' (p. 16, italics in original), acknowledging that this presents an area of future research in order to understand the 'challenges of epistemological access'. Shay's model suggests the need to more closely examine the relationship between practical and theoretical knowledge in professional knowledge, and implications of this relationship for recontextualization in classroom discourse.

An issue to be considered in this analysis will be the nature of practical knowledge, which forms the unshaded portion on the left hand side of the diagram in Figure 4.2,

also termed ‘particular’ knowledge by Gamble (2006) or *horizontal* knowledge, using Bernstein’s terminology, by Shay (2012b). Gamble refers to Bloch (1998) who describes practical knowledge, or that generated in practice, as ‘not only non-linguistic but also non-language like’, in that it ‘does not follow the logic of words in sentences but is organized into multistranded networks of meaning’ (Gamble, 2006:96), or ‘schemas’ (Bloch, 1998:46). Drawing on cognitive psychology and, in particular, an individual, connectionist approach, Bloch describes the way in which individuals draw on schemas as needed in the context of practice, noting that they are generally unable to explain their actions, providing instead a ‘*post hoc* rationalization’ (Gamble, 2006:96).

Shay leaves the precise nature of practical knowledge unspecified, claiming simply that codified practice, in the form of principled procedural knowledge has ‘no conceptual or theoretical underpinnings’ (Shay, 2012b:318). She refers to Gamble’s definition of practical knowledge, which also draws from an approach aligned with cognitive constructivism (Derry, 1996), although her own position is aligned with social realism which rejects constructivism. The risk here is that in making up for the shortcomings of an underdeveloped concept of ‘knowledge’ in curriculum, the relationship between theory and practice may be under-theorized, and the complexities of practice may be overlooked, which is precisely the same criticism that has been made of performativity (Landri, 2012). Landri emphasizes the importance of understanding professional practice as more complex than the ‘*causal model of professional action*’ (2012: 88, italics in original) that is embedded in instrumental conceptualizations of practice.

Knowledge practices in Legitimation Code Theory

As described above, Shay (2012b) examines the structure of practical, theoretical and professional knowledge using the concepts of semantic density and semantic gravity from Legitimation Code Theory to consider the recontextualization of different kinds of knowledge in curriculum. In foundational work in Legitimation Code Theory, Maton (2009) examines semantic gravity in the written work of instructional design students. The language of description used in this work has been adapted to a number of other research contexts including (Kilpert & Shay, 2012). In more recent work, Maton (2011, 2013) examines the relationships between context-dependent and

context-independent meanings in classroom discourse using the concept of ‘semantic waves’. These two approaches will be reviewed in turn.

Maton’s research on professional education settings includes an investigation of semantic gravity in the written work of instructional design students (Maton 2009). In that study he documents a language of description developed by Bennett (2002) for analysing the strength of semantic gravity in students’ written responses to a case study task as shown in Figure 4.3. The case study task required students to analyse the experience of instructional designers engaged in the process of product design, based on the designers’ reports of their experience as documented in interview transcripts. Students had a number of questions to respond to regarding the design process, design issues and project management issues, and were required to relate their written responses to literature on the design process and their own experience. The written work of twelve students was broken down into units of meaning, which were coded according to strength of semantic gravity, from reproductive description (highest semantic gravity) to abstraction (lowest semantic gravity). It was found that around half of the total units of meaning in student responses were at the level of ‘interpretation’, and around a third were at the level of ‘summarising description’, with less than one sixth at the level of generalization or abstraction. Maton argues that ‘authentic learning environments’ such as the instructional design course are often characterized by constructivist approaches to teaching, with a focus on the ‘learner’s role in constructing their own understandings of practice’ (2009:51), meaning that teaching is often oriented towards students interpreting their own experience, rather than moving them towards generalization and abstraction.

Figure 4.3 Maton’s language of description for semantic gravity in the written work of instructional design students (adapted from Maton, 2009:49)

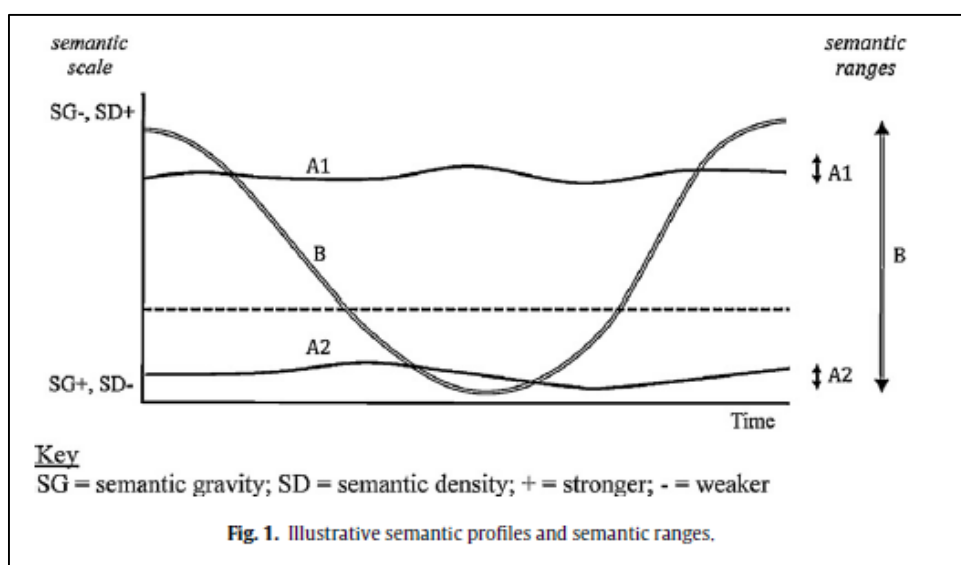
Semantic gravity	Coding of response	Form taken by student response
<p style="text-align: center;">weaker</p> <p style="text-align: center;">↑</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">stronger</p>	Abstraction	Presents a general principle or procedure that moves beyond the cases to address wider or future practice.
	Generalisation	Presents a general observation or draws a generalizing conclusion about issues and events <i>in</i> the case.
	Judgement	Goes beyond re-presenting or interpreting information to offer a value judgement or claim.
	Interpretation	Seeks to explain a statement by interpreting information from the case or adding new information. May include use of other literature or personal experience.
	Summarising description	Descriptive response that summarises or synthesizes information presented in the case, including re-wording and re-structuring of a number of events into one statement. Does not present new information from beyond the case.
	Reproductive description	Reproduces information directly from the case with no elaboration (i.e. quotations).

In addition to the definition of abstraction provided in Figure 4.3, Maton also explains that abstraction ‘embodies the weakest semantic gravity: meanings are decontextualized from the specific case to create abstract principles for use in other potential contexts’ (p. 48). This definition appears synonymous with Shay’s ‘procedural conceptual knowledge’ (Shay, 2012a). Maton (2013) does not clarify his use of the term ‘abstraction’, but notes that definitions of ‘abstract’, as it is used in opposition to ‘concrete’ are contested, and warns of difficulties in using a dichotomy between abstract and concrete knowledge in theorising about knowledge building. Maton defines semantic waves as the movement between context-dependent (high semantic gravity, low semantic density) and context-independent, (low semantic gravity or more condensed meanings in educational practice. He regards an understanding of, and explicit attention to semantic waves as enabling cumulative

learning in classrooms, or in other words, the type of learning ‘where new knowledge builds on and integrates past knowledge’ (2009:44). This is in contrast to segmented learning, ‘where students learn a series of ideas or skills that are strongly tied to their contexts of acquisition, problematizing transfer and knowledge building (p. 44). Maton argues that cumulative learning is facilitated through explicit attention to developing meanings that transcend specific contexts, in other words, more abstract meanings with low semantic gravity and high semantic density. Cumulative knowledge building relies on students’ capacity for generalization and abstraction, which are also privileged in assessment. Maton’s empirical work on cumulative learning based on semantic waves in educational practice to date is limited to examining disciplinary knowledge, with a particular focus on school settings (e.g. Maton, 2013).

Maton (2013) provides a model for examining the semantic profile of an instance of educational practice. This model, shown in Figure 4.4, places semantic gravity and semantic density together on the y-axis, and time on the x-axis, so that semantic waves, or shifts between different strengths of semantic gravity and density are shown through time (in the case of classroom discourse) or in the progression from beginning to end (in the case of a text). Maton acknowledges however that while this diagram shows ‘the two strengths moving together inversely’ it is possible that ‘the two strengths may change independently (p. 13).

Figure 4.4 Illustrative semantic profile from Maton (2013:13)



Maton has not examined the relationship between semantic gravity and semantic density in professional knowledge. As discussed above, and illustrated in Figure 4.1, Shay (2012a) suggests that professional knowledge is characterized by high semantic gravity and high semantic density, which is consistent with Maton's argument that the two are not always found in an inverse relationship. Where Maton's representation of semantic waves shown in Figure 4.4 relies on the inverse relationship between semantic gravity and semantic density on the y-axis, this suggests that some adaptation is needed to examine the semantic profile of professional knowledge in classroom discourse. Further, this raises the question as to whether Maton's definition of cumulative knowledge building applies to professional knowledge, given that he sees attention to the development of abstract meanings as the goal of knowledge building in disciplinary contexts.

Knowledge in practice-based education

'Practice-based education' is defined by Higgs (2012) as 'an approach to education that is grounded in the preparation of graduates for occupational practice' (p.3). As an approach, practice-based education is informed by a sociocultural perspective, as evidenced in Higgs' definition of practice as 'the activities, models, norms, language, discourse, ways of knowing and thinking, technical capacities, knowledge, identities, philosophies and other sociocultural practices that collectively comprise [an] ... occupation' (p. 3). While the literature on professional learning in accounting is often focussed on skills, and is concerned with bridging a gap between theory and practice (K. Evans & Guile, 2012), a number of researchers within practice-based education (K. Evans & Guile, 2012; K. Evans, Guile, Harris, & Allan, 2010; Guile, 2012) take an approach that focuses on the recontextualization of knowledge in curriculum, pedagogy and the workplace, drawing on Bernstein's (2000) work on recontextualization that was introduced in Section 2.2. They argue that where theories of professional learning are often concerned with relating theory to practice, these tend towards typologising knowledge and do not take account of the way knowledge is differentially codified according to context.

As an alternative, K. Evans and Guile (2012) refer to Bernstein's (2000) notion of recontextualization, which they see as capturing the idea that 'concepts and practice change' as 'knowledge generated and practised in one context [is] ... put to work in

new and different contexts' (p. 116). They relate the different logics of codified theoretical and practical knowledge to Bernstein's (2000) horizontal and vertical discourse, defining codified knowledge as that which has been 'organized in accordance with the rule, procedures and systems of particular, sometimes competing, disciplines, schools of thought and practices' (p. 117). Vertical knowledge logics are associated with 'move[s] towards greater degrees of abstraction', and horizontal knowledge logics are associated with 'move[s] towards making a series of practical, operational connections' (K. Evans et al., 2010:246). These different logics offer different resources for recontextualization. While codified disciplinary knowledge offers its own internal principles for recontextualization in the curriculum, that is a basis for 'selection and recombination', they argue that 'codified procedural and work-place knowledge' do not offer these principles to the same extent, because codification is limited to processes and procedures rather than relationships between knowledge (p. 246). Likewise they argue that uncoded or 'personal, tacit forms of knowledge' lack principles for recontextualization given that these are by definition uncoded (p. 246). These different logics of each form of knowledge and their implications for recontextualization are addressed at the level of curriculum and classroom discourse by explicit attention to recontextualization itself, or to 'actions that assist people to move knowledge from context to context' (K. Evans & Guile, 2012:128).

Guile notes that work on professional curricula often draws on Schön's (1987) notion of reflective practice to resolve the challenge of applying theory to practice, following Schön's (1983) argument that universities teach knowledge 'as axioms (i.e. rules stipulating what is the case) which practitioners were then supposed to somehow apply to practice' (Guile, 2012:95). According to Guile, the development of the professional curriculum is guided by Schön's assumptions that '(i) professional practice is individual and profession specific and (ii) theoretical and practical reasoning are separate and different to one another' (Guile, 2012:96). Guile argues however that conceptualising professional learning as recontextualization overcomes the split between theoretical and practical reasoning. At the level of pedagogic recontextualization, he suggests that learners be 'encouraged to consider the way in which ... theoretical concepts are an embodied feature of both their theoretical and practical reasoning and in the process [be] help[ed] to appreciate that the two modes

of reasoning are both different and related' (p. 96). In Chapter 7 it will be shown that the language of description developed in this study provides a practical tool for applying these ideas in classroom practice.

4.5 Recontextualising social practices: A critical discourse perspective

Christie (2002) and others (e.g. Martin, 2007) have provided extensive illustrations of the ways in which systemic functional linguistics and the notions of instructional and regulative register can be used in examining the recontextualization of disciplinary knowledge in the physical and biological sciences. However, as noted by Martin in Christie, Martin, Maton and Muller (2007:255), 'social semiotic systems are more complicated than these, having evolved out of them' suggesting the need for an analytical framework that is suited to the analysis of objects in the social world as well as to the physical world. As indicated by Young and Muller (2007), a resolution to this issue can be found within the framework of critical realism, as discussed further in Chapter 5.

As well as being perhaps better suited to the recontextualization of knowledge of objects in the physical world, studies drawing on Bernstein's model of pedagogic discourse tend to assume a separation between fields of knowledge production (practice) and reproduction (pedagogic practice), and further, to limit sites of knowledge production to (singular) academic research settings. As noted by Maton and Muller (2007), the fields of production, recontextualization and reproduction in Bernstein's model stand in hierarchical relationship to one another: 'production precedes recontextualization, which precedes reproduction' (p. 19). This model then suggests a linear and finite process—from production to recontextualization and finally to reproduction as an end point. In the context of professional practice (or perhaps any context), it is argued that recontextualized knowledge has almost unlimited potential for further recontextualization, and through this, great potential for transformation. Applying the notion of recontextualization in a broader sense, as in critical discourse analysis, allows for the possibility of recognising and understanding other forms of knowledge other than those produced in universities, the importance of which has been highlighted by Goodyear and Zenios (2007) and Kemmis (2005). Changes in knowledge production in late modernity (Chouliaraki & Fairclough, 1999)

including the ‘increasing contextualization of knowledge’ (Nowotny, 2000:14) and possibly the socially distributed nature of knowledge production (Nowotny, 2000), have implications for what counts as sites of knowledge production and what counts as ‘knowledge’, as well as for ways of working.

Martin’s comment about the complexity of social semiotic systems above also highlights the limits of systemic functional linguistics as an analytical tool for examining links between language and social context. These limits relate to the conceptualization of field in systemic functional linguistics, as outlined in Section 2.3. The limits of the systemic functional model for examining links between language and social context have been discussed by Fairclough (2003) and Meurer (2004), and earlier identified by Halliday (1978b:35). A specific limit identified by Chouliaraki and Fairclough (1999) is a ‘narrow understanding of what textual processes involve ... [i]n particular ... missing the weaving together of different texts, discourses and genres’ (p. 153). Chouliaraki and Fairclough see *representation* as playing an important role here, as also dealt with in van Leeuwen (1993a).

Like Bazerman (1998), whose conceptualization of field was introduced in Section 2.3, van Leeuwen (1993a) also expands on the term as it is used in the systemic functional model. van Leeuwen defines field structure as a ‘structure which ... realizes the knowledge of some field as it is constructed in the context of a given institutional domain’ (p. 194). In his view, field is ‘an artefact of analysis, the representation of a discourse, of a knowledge’, or ‘in other words ... a recontextualization ... of the structure of a social practice, or set of interrelated social practices’ (p. 204). van Leeuwen conceives of discourse as representation, and of representation as ‘recontextualized social practice’ (van Leeuwen, 2008:3), recognising that ‘representation is ultimately based on practice, on “what people do”’ (2008:4). van Leeuwen (1993:204–5) argues that “the practical knowledge of a social practice, the knowledge of how to perform as a participant of this practice, is knowledge in an “unrepresented” state. As soon as the practice is represented (taught, described, discussed) it is recontextualized’.

An account of recontextualization within Bernstein’s sociological model of pedagogic discourse is provided in Section 2.2. Within critical discourse analysis, Chouliaraki and Fairclough (1999), with reference to van Leeuwen (1993a), understand recontextualization as ‘a condition for the constitution of any practice in discourse’ (p.

109). Fairclough (2003) defines recontextualization as ‘the appropriation of elements of one social practice within another, placing the former within the context of the latter, and transforming it in particular ways in the process’ (p. 32). Fairclough (2001b) uses the term ‘practices’ to encompass the various elements of life embodied within social interaction, including: ‘activities, subjects and their social relations, instruments, objects, time and place, forms of consciousness, values [and] discourses (p. 3). Discourse is regarded as just one of these elements or ‘moments’ (Chouliaraki & Fairclough, 1999:21) of practice, although that which is most central to social interaction and to representations of that practice (the latter being generated through practice (op. cit.:37)). It is the project of critical discourse analysis to examine discourse in relation to these other elements of social practice (Fairclough, 2001b). Fairclough identifies three ways in which discourse and other moments of social practices can be interrelated: discourse can be ‘part of the social activity’; part of a social actor’s representation of other practices or ‘(“reflexive) representations of their own practices’; or part of the ‘constitution of identities’ (Fairclough, 2001b:233). Discursive practices then provide the means by which ‘social actors constitute knowledge, situations, social roles as well as identities and interpersonal relations among various interacting social groups’ (Wodak, 2000:189). Further, discursive practices are ‘socially constitutive’ in that they play a role in constructing, perpetuating, transforming or destroying social conditions (ibid.).

Fairclough (2003) notes that representations of social events can be categorized according to the extent to which they are represented as concrete or abstract:

- i. Most concrete: representations of social events
- ii. More abstract/generalized: abstraction over series and sets of social events
- iii. Most abstract: representation at the level of social practices or social structures. (Fairclough, 2003:137–138)

In analytical terms, and drawing on a critical realist philosophy, as will be discussed in the following chapter, Fairclough (2004a) argues that both concrete social events and abstract structures are real, and need to be analysed separately and in relation to each other. Maton (2010a, 2011, 2013) conceptualizes semantic gravity as a continuum with more concrete meanings at one end and more abstract meanings at the other. Critical discourse analysis thus offers an alternative perspective on the relationship between concrete and abstract meanings. From this perspective the two

can be seen as closely interrelated: the relationship between abstract meanings as representations of social structures on the one hand, and social events on the other is mediated through social practices. This suggests a ‘dialectical relationship between a particular discursive event and the situation(s), institution(s) and social structure(s) which frame it: the discursive event is shaped by them, but it also shapes them’ (Fairclough & Wodak, 1997:258). The implications of this for the analytical framework of this study will be discussed further in the following chapter.

4.6 Chapter summary

The first part of this chapter has examined accounting knowledge in the curriculum with reference to Bernstein’s work on pedagogic discourse, extending on the point made in Chapter 2 that his work is more suited to the natural sciences than the social sciences. The review has considered tensions between a focus on professional capabilities and a focus on knowledge in the curriculum, noted in Chapter 1 as being part of the rationale and context for this study. Shay’s (2012a) model of professional knowledge has been described as a means by which professional knowledge can be differentiated from and understood in relation to, disciplinary knowledge, employing Maton’s concept of semantic gravity, a measure of context-embeddedness. As described in this chapter, Shay’s model is shaped around the relationship between practical and theoretical knowledge. This relationship will be considered further in discussion in Chapter 7. Research in practice-based education by Evans and Guile (K. Evans & Guile, 2012; K. Evans et al., 2010; Guile, 2012) has highlighted the role of recontextualization in professional learning, suggesting a way forward that takes into account sociological and systemic functional perspectives on pedagogic discourse. The final section of this chapter has considered how recontextualization is understood within critical discourse analysis, citing the work of van Leeuwen (1993a) and Fairclough (Chouliaraki & Fairclough, 1999; Fairclough, 2003) that connects recontextualization with the concept of *practices*. This will inform the analytical framework for this study as discussed in Chapter 5, and will be considered further in discussion of the representation of professional accounting practices in the seminar data in Chapter 7.

Chapter 5: Methodology

This chapter draws the theoretical framework developed in Chapters 2–4 into a methodological framework for analyzing the representation of professional practices in postgraduate accounting classrooms, in order to address the three research questions stated in Chapter 1:

1. How are professional accounting practices represented in university classroom discourse?
2. What are the implications of this for professional learning theory?
3. What are the implications of this for professional learning practice?

This chapter will start out by locating the methodological approach taken in this study within the case study tradition. Following an overview of data collection and participants, the identification of topical Themes in the data will be explained. Topical Themes are used to identify analytical units within the seminar data as reported in Chapter 6.

5.1 A case study

This study adopts an intensive research design (Sayer, 1992): one that examines the workings of a process within a case, and is intended to produce ‘a causal explanation of the production of certain objects or events, though not necessarily representative ones’ (Sayer, 1992:243). In this study, the case is intended to show relationships between different forms of meaning in the representation of professional practices in the postgraduate accounting classroom. The study has an instrumental purpose (Stake, 2005) in that it seeks to examine the representation of professional practices in classroom discourse within the context of professional learning, building on existing studies that examine knowledge practices in disciplinary learning as discussed in Chapters 2 and 4.

A case study examines theoretical principles underpinning events (Mitchell, 2009) or phenomena within a specific context (Casanave, 2010). This case study is framed by two interrelated social practices, and hence two sets of social relations: those of classroom practices and those of professional practices, within three subjects of the Master of Accounting program at Macquarie University. The analysis centres on ‘social events’, that is, weekly seminars as discursive events, as these ‘constitute what

is actual' (Fairclough, 2003:223). Fairclough describes the relationship between events and practices as follows: 'Social structures define what is possible, social events constitute what is actual, and the relationship between potential and actual is mediated by social practices' (2003:223).

Although language is sometimes described in general terms as a social practice (Rogers, Malancharuvil-Berkes, Mosley, Hui, & O'Garro Joseph, 2005), the term 'social practice' refers more specifically within critical discourse analysis (and systemic functional linguistics) to the level of practices such as classroom teaching, or more generally, semiosis. Where Hicks (1995: cited in Christie, 2002:9) represents Fairclough as including 'discourse' as a social practice, Fairclough (2003) refers more specifically to discourse as an element of social practice. He uses the term 'orders of discourse' to refer to the different social elements that work together at the level of social practices, including 'action and interaction'; 'social relations'; 'persons' 'the material world'; and 'discourse' (p. 25). These elements work together in the social practices of both the classroom and professional practice to define and shape social events, although as Fairclough notes, social events may be influenced by a range of social practices and 'the causal powers of social agents' (p. 25). As noted by Sayer (2000), social practices and social structures are 'concept-dependent' but 'usually most dependent on concepts of actors in the past, not today' (p. 35).

As discussed further in Section 5.2, this study takes a social realist approach, based on the philosophy of critical realism. Within critical realism, the term 'actual' has a precise meaning: a distinction is made between the domains of real, actual and empirical (Sayer, 2000). The domain of real is natural and social reality and natural and social objects within it (for example social actors). Within critical realism, social objects are regarded as having 'certain structures and causal powers ... and causal liabilities or passive powers', the latter including susceptibility to change (Sayer, 2000:11). These are real as opposed to theoretical: as causal powers, they generate events (Wheelahan, 2010:56). A social actor who learns a language has the causal power to communicate in that language, whether or not they choose to (Fairclough, Jessop, & Sayer, 2003:25). Language and other semiotic structures and systems are within the domain of real, and have an autonomous existence as real objects (Fairclough et al., 2003). Events are within the domain of actual, and are produced when the causal powers of generative mechanisms are activated: by the 'interaction of

generative mechanisms and their casual powers’ (Wheelahan, 2010:59). The empirical domain is the ‘subset of the real and the actual that is experienced by actors’ (Fairclough et al., 2003:25). Wheelahan (2010) explains that ‘our experience of the effects of generative mechanisms or events’ is conditional on an event generated in the domain of the real and occurring in the domain of the actual (p. 59). Bhaskar (1978: cited in Collier, 1994:44) refers to mechanisms, events and experiences as levels of depth, and sees each associated with particular domains: where structures and mechanisms, events and experiences are all in the domain of real, only events and experiences are in the domain of actual, and only experiences are in the domain of empirical as shown in Figure 5.1.

Figure 5.1 Relationships between three domains and three kinds of depth

	Domain of Real	Domain of Actual	Domain of Empirical
Mechanism	✓		
Events	✓	✓	
Experiences	✓	✓	✓

(From Bhaskar, 1978: cited in Collier, 1994:44)

Within Fairclough’s framework, social practices mediate between structures (or mechanisms in Figure 5.1 above) and events as shown in Figure 5.2. Social practices are understood to be networked together in ways that shift with reference to structures.

Figure 5.2 Fairclough’s schematic representation of social events, practices and structures

Social structures: languages

Social practices: orders of discourse

Social events: texts

(Fairclough, 2003:24)

Rogers (2004) argues that critical discourse analysis can contribute to an understanding of learning, providing ‘insight into aspects of learning that other theories and methods may have missed’ (p. 246), as well as the potential for critique

and social transformation. The relationship between texts, and social practices and structures in relation to learning is explained by Fairclough (2004b) as follows:

Texts are shaped by two sets of causal powers and by the tension between them: on the one hand, social structures and social practices, and on the other hand, the agency of people involved in the events of which they are a part. Texts are the situated interactional accomplishment of social agents whose agency is enabled and constrained by social structures and social practices.

[T]exts are involved in processes of meaning making and ... have causal effects ... that are mediated by meaning making. Most immediately, texts can bring about changes in our knowledge, beliefs, attitudes, values, experience and so forth. We learn from our involvement with and in texts, and texturing (the process of making texts as a facet of social action and interaction) is integral to learning. (p. 229)

When used as a methodological tool for case study analysis, critical discourse analysis can 'show how the actions and beliefs of people in particular situations are shaped by wider Durkheimian social structures, which exist separately from individuals (Travers, 2001:123). When informed by critical discourse analysis, tools from Legitimation Code Theory offer a framework for identifying aspects of social events and structures and relations between them as these are represented within classroom discourse. The approach taken here is necessarily different to that taken in Maton (2011, 2013), in that the analysis considers not only professional practices as they are represented in classroom 'texts', but also takes into account lecturers' agency in texturing representations of practice. Where a Bernsteinian sociological account of pedagogic discourse as discussed in Chapter 2 regards ways of being and acting as within the realm of regulative discourse, and limited to the scope of the classroom 'text', it tends not to extend outwards toward abstract social structures. Bernstein's model of pedagogic discourse is drawn on here to describe a relation between professional and institutional discourse that connects professional practices with the wider social system. This relation parallels that described by Bernstein (2000), in that between instructional and regulative discourse in the professional classroom.

As noted by Stake (2009), a case is made distinctive by its boundaries, although importantly cases are also situated within a broader context (Mitchell, 2009). Interpersonal exchange in professional classrooms examined in this case are embedded within a postgraduate accounting program which in turn is located within broader networks of practices which determine the properties of classroom teaching and knowledge practices (Chouliaraki & Fairclough, 1999:23). Similarly,

interpersonal exchange within professional practices represented in classroom discourse are also located within a broader social system, as will be reflected in analysis and discussion of professional practices in classroom discourse in Chapters 6 and 7.

5.2 Epistemology, ontology, validity

The methodology adopted here provides a way of examining the relations between abstract knowledge and social events in the representation of professional practices in university classroom discourse, assuming that abstract structures and social events ‘are real parts of the social world that have to be analyzed separately as well as in terms of their relation to each other’ (Fairclough, 2004b:120). Two of the forms of analysis used in this study, the first drawing on tools developed within Legitimation Code Theory (Maton 2011, 2013) and the second drawing on tools from critical discourse analysis, are grounded in critical realist ontology. As such, this study assumes, consistent with critical realist philosophy, a position that is based on principles of “‘ontological realism”, “epistemological relativism” and “judgemental rationality”” (Maton & Moore, 2010a:4). These three principles are defined by Maton and Moore (2010) as follows:

[T]he principle of *ontological realism* involves the recognition that knowledge is about something other than itself: there exists a reality beyond our symbolic realm. This “otherness” of independently existing realities, both natural and social, provides an independent, external limit not on what we can believe ... but what we can know. ...

Secondly, *epistemological relativism* acknowledges that this knowledge is not necessarily universal, invariant, essential Truth—we can know the world only in terms of socially produced knowledges which change over time and across socio-cultural contexts. Thus, the nature of knowledge as an object, its forms and their modes of change, is crucial for understanding our subjective knowledge and what we can say we “know” about the world ...

Lastly, epistemological relativism does not imply judgemental relativism, the view that we cannot judge between different knowledges. Rather *judgmental rationality* holds that there are rational, intersubjective bases for determining the relative merits of competing knowledge claims. (p. 4)

A critical realist ontology has potential in overcoming the gap between natural and social facts by creating a ‘continuity between the natural and social sciences’ (Dean, Joseph, Roberts, & Wight, 2006:10). Unlike objects in the natural world which are ‘naturally produced’, social phenomena are ‘socially produced’ (Danermark et al.,

2001:31) and have intrinsic meaning which constitutes, as well as describes, social objects (Sayer, 2000:17), and this has implications for the interpretation of social objects. Where natural objects are interpreted at one level, involving a 'simple hermeneutics', the interpretation of social objects involves a 'double hermeneutics', with 'other people's interpretations' being inseparable from the object of study (Danermark et al., 2001:32). Bhaskar (1989) draws analogies between natural and social events, noting a number of ontological limits for this analogy in the social sciences that will be outlined in Chapter 7. With reference to Bhaskar, Wheelahan (2010) also notes an epistemological limit to this analogy: where in some natural systems it is possible to create a closed system, this is not possible in social systems. Bhaskar (1989:49) argues that the ability to create a closed system is a central assumption of positivism. As an alternative, critical realism offers the 'possibility of an explanatory critique of human practices', a critique that can focus on the gap between reality and our experience of it: a gap that 'tends to promote systemic misunderstandings regarding the nature and significance of everyday experiences' (Dean et al., 2006:2–3). Situated within the critical epistemological tradition (Travers, 2001), critical realism can be used to show relations between 'social institutions' or structures and social action, with a view to 'emancipatory action' (Geuss, 1981:89, cited in Travers, 2001:115).

While the underlying philosophical position of this study is grounded in critical realism, it adopts a social realist position, being concerned with issues that are more substantive than philosophical (Maton & Moore, 2010a). Social realism is an applied form of critical realism that considers the social basis of knowledge (R. Moore, 2013). It stands in contrast to social constructivism in that it is 'emergentist and objectivist', where constructionism is 'reductive and subjectivist' (R. Moore, 2013:340). These two positions are described by Moore (2013) as follows:

Constructionism is reductive in the sense that it attempts to account for knowledge by tracing it back to its point of origin in social relations of power, and it is subjectivist in that it grounds knowledge in the experience of those held to be producing or contesting the knowledge. Realism is emergentist in that it locates knowledge within enduring sociocognitive networks that are extensive in time and space and relatively independent from any particular social (experiential) base. It is objectivist in that it sees such networks as modes of symbolic production realized through collective procedures for the independent evaluation of knowledge claims. (p. 340)

While a single grand theory of learning is neither desirable nor realistic, despite increasing interdisciplinarity, theories of learning could often be regarded as ‘endotropic’ in that they are ‘centred on their own object of study, isolating it from all else’ (Hasan, 1999:13). That is, the object of study in many theories of learning is either founded on an ontological theory (of being or existence) or an epistemological theory (of knowledge). This is apparent in Wheelahan’s (2010) comparison of three different models of curriculum—conservative, technical–instrumentalist and constructivist, each founded on different theories of learning. Scott (2005) argues that this is overcome in critical realism, which assumes that ‘an ontological theory presupposes an epistemological theory’ (p.634). Social realism, being the arm of critical realism applied to knowledge and education, is regarded as an exotropic theory ‘par excellence’ (Martin, 2011:55). Exotropic theories are by Hasan’s definition, ‘cosmoramaic’, viewing objects of study within open and dynamic systems consisting of different kinds of interrelated processes: thus they are theories that put their ‘[object] of study in relation to phenomena which though relevant are by definition, different in kind’ (1999:13). According to Maton and Moore the social realist position overcomes a difficulty in choosing between 1) an approach to knowledge that is concerned with the formal properties of knowledge (‘positivist absolutism’ (Maton & Moore, 2010a:5) and associated with a constructivist attention to knowledge structure at the level of curriculum and pedagogy; and 2) an approach that it is concerned with ‘the play of power among actors in the social contexts of its production’ (Maton & Moore, 2010a:5) and focuses on social relations of knowledge at the level of curriculum and pedagogy.

Analysis within this study relies on transcriptions of audio recordings of spoken texts, as data. Within critical discourse analysis, spoken and written texts are treated as both representations and interactions, that is, discourse can be seen as part of action/interaction, as well as ‘in the Foucauldian sense ... as a way of representing social practice(s), as a form of knowledge, as the things people say about social practice(s)’ (van Leeuwen, 1993a:193). As stated earlier, van Leeuwen (2008) argues that ‘representation is ultimately based on practice, on “what people do”’ (p. 4). As noted in the previous section, and documented further in Chapter 2, much of the research literature that examines pedagogic discourse from a Bernsteinian sociological perspective draws on methodological tools from systemic functional

linguistics. As outlined in Chapter 2, the systemic functional model is concerned with the interrelationships between meaning in a text—as expressed through a combination of ideational, textual and interpersonal metafunctions—and the contexts of language use. In other words it is a ‘language-theoretical ... conception of text’ (Chouliaraki & Fairclough, 1999:50). Critical discourse analysis on the other hand is concerned both with the ways in which different types of meanings are realized in texts that are part of social events, and the connections between social events and ‘more abstract social practices’ Fairclough (2003:28). This provides an expanded perspective on the practices represented in classroom discourse. Rather than treating these as immutable and asocial ‘facts’, this study acknowledges the ideological transformation of knowledge as it is relocalized (Pennycook, 2010) by lecturers in classroom discourse.

Hammersley et al. (2009) note that an aim of case studies within a critical realist approach is to examine causal mechanisms within a case, but that this raises ‘the question of whether causal explanations rely on or imply theoretical ideas about universalistic relations among types of phenomena’ (p. 238). They argue that critical realism deals with this through a lack of concern with the generalizability of causal mechanisms, instead ‘treating causality in terms of powers possessed by particular agents and objects, rather than in terms of relations among categories of phenomena’ (p. 238). This resolution leads Hammersley et al. to question the validity of these powers, given that it is the generalizability of claims of causality ‘that allows us to check what caused what in a particular situation’ (p. 238). Sayer (2000) notes that a realist analysis ‘deals with the necessary conditions and powers of its chosen structures, abstracting from the particular historical contingencies which brought those conditions into being’ (p. 141). Further, he notes that while realism is aimed empirically at the ‘explanation of concrete circumstances’ (p. 142), the explanation of those circumstances involves the risks of incorrect identification or attribution of causes, reductionism, and functionalist errors (assuming that whatever is functional in a situation was ‘created to fulfil that function’ (p. 142)). Sayer regards these issues as points to consider rather than obstacles to analysis. Further, realism is based on the assumption that ‘our knowledge is always a work-in-progress towards the truth, and that it is fallible and revisable in the light of new evidence (Young and Muller 2007)’ (Wheelahan, 2010:10–11).

Fairclough (2005) regards critical realist ontology as “‘transformational’”: human agency produces effects through drawing on existing structures and practices, which are reproduced and/or transformed in action’ (p. 922). Measures of interpretive rigour are not necessarily applicable to research within critical theory, which aims to critique and transform. Guba and Lincoln (2000) state that the value of research in critical theory can be measured by the ‘historical situatedness’ of the research (the extent to which it takes ‘social, political, cultural, economic, ethnic’ factors into account), and the ‘extent to which the enquiry acts to erode ignorance ... and [provide] a stimulus to action’ (p 213). Similarly, McTaggart (1997) suggests that validity in participatory/transformational research ‘might be reconceptualized in terms of the efficacy of research in changing relevant social practices’ (in Gergen & Gergen, 2003:586). This is consistent with the aims of critical discourse analysis, which is problem oriented (Fairclough, 2001a) and ultimately directed towards facilitating change (Hammersley 2003). At the same time however, the principle of working with a range of different tools from critical discourse analysis is one recommended within critical discourse analysis in order to reduce bias as outlined in Wodak (2001).

5.3 Limitations

The limitations of this study can be seen as stemming from the choice of case study approach as discussed in the previous section, the particularities of the case, and the choice of analytical tools to examine the case. Two related aspects of faculty recruitment policies at the time of data collection have a bearing on the data collected in this study, and ultimately on the findings of this study. Firstly, in keeping with these policies, the majority of lecturers on the Master of Accounting program at the time of data collection were employed on a sessional basis, meaning that they were not ‘academic’ accountants. Secondly, and also in keeping with faculty recruitment policies, all lecturers who participated in this study have extensive and current experience in their field of professional practice. As a result, they might be considered more particularly oriented towards professional practice than their academic colleagues, which in turn could be considered to shape their use of language in the classroom in particular ways. The particularities of the case mean that this study has drawn together a novel combination of methodological tools in order to address the research questions, and therefore does not replicate any previous studies. As noted by

Paltridge (2012), a lack of replication studies may be regarded as a weakness of research in applied linguistics, given that replication studies ‘provide both the accumulation and consolidation of knowledge over time’ (p. 209). This potential limitation can be countered with the claim that this is a case study of particular instances that seeks to explore theoretical and methodological issues, and generate theoretical propositions (Casanave, 2010) rather than seeking to discover specific ‘facts’ about classroom discourse in professionally oriented programs that can be applied to other research settings. As such, the particularities of the research setting are regarded as important contextual features (Casanave, 2010) that will be used as a reference point in data analysis, following principles of triangulation recommended by Wodak (2001).

As part of any research endeavor a researcher is faced with theoretical and methodological choices, and, as noted in the previous section, seeks to align these with the aims and topic of the research. Critical discourse analysis has been criticized for a focus on *explanation* rather than *interpretation*, thus overlooking the role of cognition in reading and understanding texts (Machin & Mayr, 2012:212). Unlike the approach taken by Fairclough which is applied in this study, Van Dijk argues that ‘no direct link should be made between discourse structures and social structures, because these are mediated by the interface of personal and social cognition’ (Machin & Mayr, 2012:213). The mediating role of cognition is taken up in van Dijk’s (2008) ‘socio-cognitive’ framework. This suggests an interesting area for future research, and perhaps one approached from the perspective of the ‘interpersonal first’ principle (Painter, 2004) that will be introduced in Chapter 7.

Another criticism that could be made of critical discourse analysis is that it makes partial selections of data (Machin & Mayr, 2012), selecting on the basis of the research problem rather than providing a comprehensive and systematic linguistic analysis of the entire text. As noted by Hammersley et al. (2009:238), any case is ‘descriptively inexhaustible’. Data selected for analysis and discussion in this case study are indeed selected for illustrative purposes and to answer specific research questions. One means of avoiding this issue as suggested by Kwon, Clarke, and Wodak (2009) is to support critical discourse analysis with a corpus analysis of the data. The decision was made not to incorporate a corpus analysis within this study, not only for practical reasons, given limitations of space and time, but also because a

corpus analysis would imply an interpretation of knowledge as ‘things’ that could be recognized at word level and quantified in some way, which is counter to the approach taken here.

While Christie emphasizes the importance of analyzing classroom discourse with reference to the ‘whole text’, by which she means ‘a complete unit of curriculum activity’ (2002:23), the aims of this study are somewhat different to Christie’s. Christie looks towards understanding the development of curriculum macrogenres in terms of logogenesis, or ‘unfolding’ (Martin & Rose, 2007:318) of the classroom text as it stands in relation to larger units of curriculum activity, where this study focuses on the longer time frame of phylogenesis, or ‘evolution of the culture’ of the accounting profession. As such, while analysis is at the level of classroom texts, the analytical categories applied are broad and to some extent, sociological. While coding is based on consideration of linguistic realization of analytical categories within the seminar data, discussion of findings focuses on the aggregate of ways in which lecturers represent professional practices rather than individual lecturers and classroom texts, and seeks to find patterns common to representation of professional practice in the three seminars. In this way, analysis is directed towards answering the question of how professional accounting practices are represented in university classroom discourse, as posed in the research questions at the beginning of this chapter.

5.4 Data collection

The set of data that forms the basis of this case study includes digital recordings of three seminars presented by three different lecturers in three subjects of the Master of Accounting program at Macquarie University in 2006–2007: management accounting, accounting information systems and auditing and assurance. Transcripts of each seminar are provided in Appendices 1, 2 and 3. The management accounting seminar from which the transcript in Appendix 1 was drawn was approximately 1 hour and 20 minutes in duration, although, as noted on the transcript, just under 40 minutes of the seminar included group work which was not transcribed. The information systems seminar from which the transcript in Appendix 2 was drawn was also approximately 1 hour and 20 minutes in duration, although 16 minutes of class administration at the beginning of the seminar and 20 minutes of seminar discussion at the end have not

been transcribed. The auditing seminar transcribed in Appendix 3 was approximately 48 minutes in duration. A summary of the data is provided at the beginning of Chapter 6. Transcripts in Volume 2 include the analysis and are explained in more detail later in this chapter and in Chapter 6. An overview of the Master of Accounting program, including information about program structure and class sizes is provided in Appendix 25 in Volume 2.

The intensive analytical approach taken to the data places a limit on the quantity of data that could be examined. The intention of the study was to develop a language of description that would answer the research questions at the beginning of this chapter, and the range and quantity of data examined provided a strong basis for achieving this purpose. Sayer (1992) notes that a limitation of intensive research approaches such as case studies is their lack of generalizability. With a view to strengthening the validity of this study it is acknowledged here and in discussion chapters that the observations made in this study are particular to the case under investigation (Paltridge, 2012), although the analysis serves to develop a framework that has applicability beyond this study. The analytical work in building this framework is fine-grained and detailed, and it will be seen in the findings reported in Sections 6.5.1, 6.5.2, 6.5.3 and 6.5.4 that this means analyzing and reporting on low frequencies in some analytical categories and subcategories.

Hammersley, Gomm, and Foster (2009) note that while case study research is often criticized for a lack of generalizability, this claim can be countered with the argument that case studies yield generalizations that are analytical rather than empirical (Yin, 1994, cited in Hammersley et al., 2009). It is interesting to evaluate the case study ‘tradition’ (Casanave, 2010) in educational research in light of Maton’s (2013) comments on knowledge building and semantic gravity discussed in Chapter 4. Maton argues that conceptual knowledge building involves a shift away from ‘concrete particulars of a specific case’ (p. 11), or meanings with high semantic gravity, towards abstract meanings with low semantic gravity, suggesting that case studies may be of limited value in knowledge building until links are made between concrete events of the case and more abstract meanings. This is consistent with Casanave’s (2010) recommendation that ‘a good analysis could [proceed] from concepts at a higher level of abstraction—a conceptual framework—that helps readers see the connections’ between the case and other cases, and can be ‘used to help build

or modify theoretical concepts' (pp. 70–71). Flyvbjerg (2011) on the other hand argues that social science has not shown itself capable of producing generalizations in the form of context-independent theory, but rather can only produce context-dependent meanings which case studies are well placed to do.

As noted above, the aims of the study were to yield analytical rather than empirical data, hence the selection of data was oriented towards the quality, rather than the quantity of data. The three different subjects were chosen as they include a range of interrelated professional practices, and provide scope for investigating a range of entities represented in the data. Lecturers provided copies of subject outlines distributed to all students in the first week. A brief description of each of the three subjects based on these is also given in Appendix 25 in Volume 2. Weekly seminar schedules for each subject are provided in Appendix 26.

Throughout the study, the term 'seminar' is used as this is how classes are described in course materials. Each class is generally a mix of seminar discussion and lecture. Seminars took place in small, tiered teaching spaces with seating for approximately 60 students and were recorded using a small digital recorder placed on a desk at the front of the room. Observation notes were taken during seminars to assist with transcription.

5.5 Participants

As noted above, the lecturers who participated in this study were all sessional staff members at the time of data collection, and each has had extensive experience in her area of professional expertise. As part of the *Teaching Project* introduced in Section 1.1, lecturers at the time of data collection were expected to have some level of commitment to developing the generic attributes of their students, and in particular communication skills. The *Teaching Project* was designed to assist lecturers to shift their focus beyond technical accounting content to consider skills required to understand and communicate that content, in response to the new accreditation requirement that degree programs address generic skills. These skills were addressed through specific assessment tasks and learning outcomes within each subject as outlined in Appendix 25 in Volume 2.

In the trimester in which data collection was undertaken there were 5-10 classes for each subject, with an average of 35 students in each class. Like other programs within Macquarie's Division of Economics and Financial Studies (now the Faculty of Business and Economics), the Master of Accounting attracts a significant proportion of Macquarie's international non-English background students. In 2007, more than 72% of full-time enrolments in the Master of Accounting were international non-English background students. More than 65% of international students were from non-English speaking backgrounds, predominantly from mainland China. Program enrolments also include a number of local non-English background students.

As a graduate conversion program, the Master of Accounting attracts students from a diverse range of undergraduate programs. As an example, of 28 students who completed participant information forms for student focus groups for a research project in the program in 2005, 8 students had previously completed a degree with an accounting major, another 8 had completed degrees in business, finance, financial management, commerce or economics, 2 students had degrees in computer science or information technology, and the remaining 10 students had degrees in mathematics, electrical engineering, civil aviation, law, English literature, Japanese, architecture and landscape architecture (Tindale, 2005).

5.6 Preparation of data for analysis

In keeping with the topic of this case study, transcription itself is recognized as an act of representation (Green, Franquiz, & Dixon, 1997), and recontextualization (Bernstein 2000). This recontextualization is achieved through processes of entextualization (Jones, 2011), by which spoken language becomes accessible as an object for analysis. In this section, the transcription of data for this study will be described in terms of these processes of entextualization—framing, selection, summarization, and resemiotization, which collectively shape the authority of a transcript (Jones, 2011).

With reference to Scollon and Scollon (2004), Jones (2011:12) notes that the process of framing in the entextualization of research phenomena involves decisions regarding the “timescales” that shape an understanding of the action at the centre of analysis. Within Fairclough's theoretical framework as described in Section 5.1, the

discursive events that are examined here within the frame of weekly seminars are shaped by various elements of the social practice of classroom teaching, on a scale that Halliday and Matthiessen (1999) might term the ontogenetic timeframe. The technology of recording enables the identification of activities on a shorter timescale, or the logogenetic timeframe: in this case, the movements between more context-independent and more context-dependent meanings in the seminar data (Jones, 2011).

In preparation for the first stage of analysis, transcription involved selection and summarization of aspects of classroom discourse for analysis. The polyvocality (Jones, 2011:14) of the original interactions has been lost, as students' voices were not selected for transcription. Lecturer 'turns' within seminars were transcribed following standard conventions for 'denaturalized' transcriptions: that is, 'idiosyncratic' features of speech were not transcribed, as is common in critical discourse analysis (Oliver, Serovich, & Mason, 2005). For practical and theoretical reasons, this process of selection and summarization involved the omission of features of linguistic expression from transcripts, and hence from analysis. Given that the analysis in this study seeks to connect classroom texts with broader social practices, with a focus on ideological dimensions of discourse (Cameron, 2001:123), rather than understanding relationships between form and function within these texts, features of linguistic expression such as overlaps, hesitations, pauses, and emotional aspects of the recording (e.g. laughter) were not considered relevant to the analysis. Discourse markers such as *okay* and *you know* were not transcribed, as an examination of these did not contribute to the analysis. False starts, where the speaker "rethinks" out loud and rephrases what they were saying' (Eggins & Slade, 1997:3) were transcribed as these were relevant to the analysis.

Relevant paralinguistic and non-verbal information, untranscribed student utterances and false starts were indicated in the transcripts as shown in the following key. This key is also provided in the front matter of Volume 2, and is adapted from Eggins and Slade (1997). The key includes information about thematic patterns at clause level that will be explained in Section 5.8.

Key to transcripts

<i>^Words in italics in carets^</i>	Paralinguistic and non-verbal information.
<i>(Words in italics in parentheses)</i>	Student utterances, including untranscribed student utterances
—words following em rule	Speaker restarts after false start
Words in bold	Theme
<u>Words underlined and in bold</u>	Topical Theme
[Words in square brackets]	Ellipsed words and contractions within Theme (e.g. ‘that’s’ transcribed as ‘that [is]’)
[[Words in bold in double square brackets]]	Postmodification of nominal groups within Theme (e.g. The key [[with this slide]] (MA99).

Although not transcribed, speaker intonation was relevant to the analysis, and was used as a reference point in checking the identification of analytical units within transcripts by listening to recordings. As will be described in later in this chapter, the system of Theme from systemic functional grammar has been used in the identification of analytical units within each transcript. The system of Theme is ‘complemented by the operation of the information unit’ in spoken language (Christie, 2002:17). Information units in spoken language are realized through intonation, which is part of the phonological system as distinct from the grammatical system. The structure of information units in spoken language can be described in terms of Given and New information, with New information marked by ‘tonic prominence’ or emphasis as discussed by (Halliday, 2002:32). Although not synonymous with clause structure, the structure of the information unit in spoken language has some correspondence with Theme and New within the clause, where in unmarked cases, given information tends to be ‘thematized’ at the beginning of a clause, and new information comes at the end of a clause (Christie, 2002). For this reason, the identification of analytical units within each transcript was reviewed through listening to audio recordings of seminars to ensure that Themes identified in the written text corresponded with the speaker’s intended meaning as realized through their intonation.

Although omitting student voices and features of linguistic expression has rendered transcripts a partial representation of classroom events, Ochs (1979) argues that principled selection of features for transcription with reference to research goals makes for a more useful transcript. It is also acknowledged that entextualizing the discursive events of seminars has involved resemiotization, transforming the complexity of classroom interaction to a more durable and less negotiable object (Iedema, 2001) and at the same time reducing the polyvocality of interaction into a seemingly linear, narrative form. Similarly, the multimodality of classroom events has been reduced to the ‘mono-materiality’ (Jones, 2011:14) of the written transcript. Multimodality is a term used within discourse analysis to ‘take into account the meanings carried by image, sound and gesture as well as by language (Iedema 2003)’ (Tindale 2005:18). Lecturers’ meanings communicated through gesture and use of space were not relevant to the analysis, so the choice was made to limit recording to audio rather than include those additional meanings that may be captured in video recordings. Although multimodal meanings carried through PowerPoint presentations may influence Thematic structuring of university classroom texts, the text on PowerPoint slides is often not connected with thematic choices in lecturers’ spoken text (Blackwell, 2011). Multimodal meanings of this kind were not considered in this study partly for this reason, but more importantly, because the intention here is to develop a language of description to account for shifts in lecturers’ choice of topical Theme, rather than to examine influences on individual lecturers’ choice of topical Theme. Further, the resemiotization of classroom discourse through transcription allows the researcher to treat spoken language as a relatively more durable research object that can be examined and recontextualized in data analysis and discussion, and potentially recontextualized in a more abstract form (Iedema, 2001) as research findings. In this way, the entextualization of spoken data provides a means by which a community of researchers can ‘transpose and reif[y] its knowledges’ (Iedema, 2001:36).

5.7 Developing a language of description

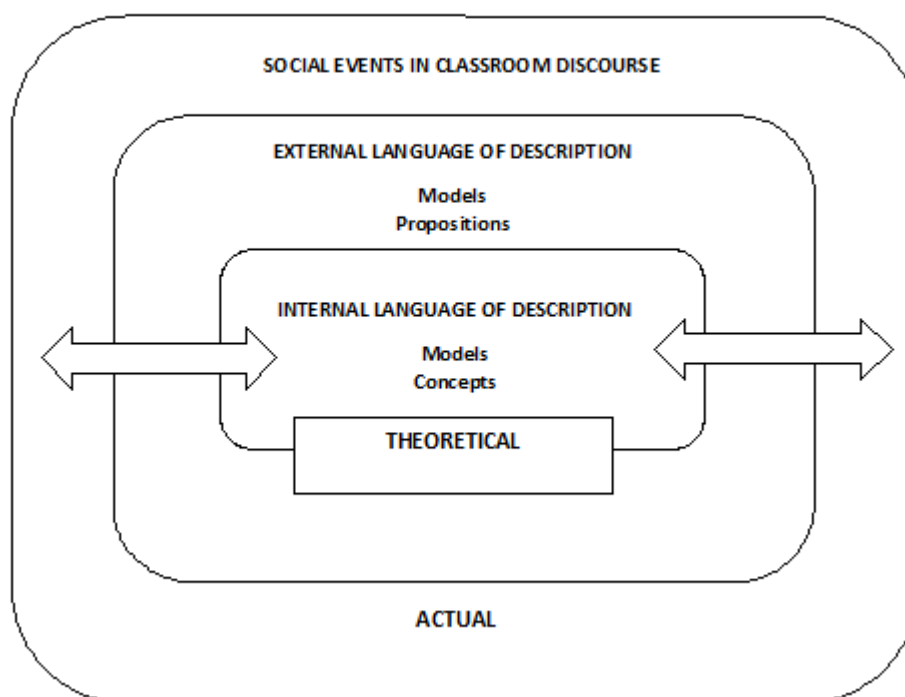
In the first stage of data analysis, documented in Chapter 6, an external language of description, or set of analytical categories to describe representations of professional practice within each seminar was developed. The remainder of this chapter prepares

the ground for this first stage. Firstly, the value and purpose of Bernstein's (2000) concept of languages of description is explained. The language of description was used in the second stage of analysis to identify movements between more context-dependent, congruent meanings, and more context-independent, condensed meanings in the seminar data: in other words movements between high semantic gravity and low semantic density meanings on the one hand, and low semantic gravity and high semantic density meanings on the other. In order to develop a language of description, the seminars were first divided into analytical units as explained in the final sections of this chapter.

Bernstein (2000) develops the concept of 'languages of description' to provide a means for linking empirical data and theory. He makes a distinction between 'internal' and 'external' languages of description, which together define 'empirical referent[s]' and the relationships between them (pp. 132–133). Following Morais (2002), an internal language of description relates to theoretical concepts and models at 'a high level of abstraction'. This internal language of description is activated (Bernstein, 2000:133) by an external language of description, which consists of 'propositions and models' based on these theoretical abstractions that can be applied to empirical data (Morais, 2002). Following the distinction made between the domains of real, actual and empirical within critical realism outlined earlier in this chapter, the term 'actual' is used here rather than empirical. Relations between actual social events and the languages of description in this study are illustrated in Figure 5.3, which is adapted from Morais (2002).

Starting at the centre of Figure 5.3, the internal language of description in this study is framed around theoretical perspectives on knowledge in pedagogic discourse and professional practices, as developed in the theoretical framework in Chapters 2–4. In the middle ring of Figure 5.3, the external language of description draws from this theoretical framework or internal language of description and is designed to examine representations of professional practice. The outer ring of Figure 5.3 indicates the social events that will be analyzed using the external language of description. The relationship between the social events that are investigated here and the abstractions in the internal language of description are mediated by the social practice of research (Fairclough, 2003:223).

Figure 5.3 Relations between empirical data and languages of description



(Adapted from Morais, 2002:564)

As indicated by the arrows in Figure 5.3, relations between internal and external languages of description are dialectical (Morais, 2002): an external language of description is a tool for ‘translating theoretical concepts into empirical descriptions and empirical descriptions into theoretical concepts’ (Maton, 2011:72). Morais (2002) argues that an approach that allows for this dialectical relationship between theory and practice overcomes a common dichotomy between quantitative and qualitative research, or between an emphasis on theory (as in quantitative research) and an emphasis on practice or the empirical (as in qualitative research). Further, this approach is consistent with a critical discourse perspective on the relationship between social events and abstract structures in the representation of social events as described by Fairclough (2003), the language of description developed here being a representation of the representation (in classroom discourse) of the social practices in accounting.

External languages of description take different forms according to the nature and context of the practice under investigation. The external language of description for this study is a set of analytical categories that provide a framework for examining the

representation of professional practices in the postgraduate accounting classroom. The language of description, or set of analytical categories has been used to code analytical units within each transcript. The criteria for identification of analytical units in this study draws on the systemic functional concept of ‘periodicity’ (Martin & Rose, 2007). This concept also informs work by Maton (2013) on semantic waves in educational practice, and research by Macnaught et al. (2013) on semantic waves in classroom discourse in particular. It will be discussed in more detail in relation to the identification of analytical units, which formed the basis for developing the language of description. The process of identifying analytical units in the seminar data is described in the following section.

5.8 Identifying analytical units

Analytical units were identified in seminar transcripts through examining Theme patterns within the text, and identifying topical Themes. Within a systemic functional model of language, Theme is the speaker’s (or writer’s) ‘point of departure’ for the message’ (Halliday 1985:53). As documented by Fries (1995), Halliday’s conceptualization of Theme in systemic functional linguistics was influenced by the notion of Theme as developed within the Prague School—a group of early 20th century European linguists. Although there is some theoretical debate over the nature of Theme (M. Berry, 1996; Fries, 1995; Huddleston, 1992; North, 2005) and how it is identified (M. Berry, 1996; Forey, 2002; Fries, 1995), it is generally agreed that choice of Theme indicates a speaker’s (or writer’s) choices in ordering information at clause and text level (North, 2005).

The basic information structure of a clause or larger unit of text is Theme followed by New, or Theme^New (Martin & Rose, 2007), or in Halliday’s terms, Theme followed by Rheme (Theme^Rheme). This pattern provides a way of describing the information flow or ‘periodicity’ at clause level within discourse, dividing it into what is (in the unmarked form) ‘given’ information, and what is ‘new’ information (Martin & Rose, 2007). Theme patterns can be analyzed at clause, paragraph or text level depending on analytical purpose (Forey, 2002; Martin, 1992). In this study, Theme patterns are examined at clause level to identify analytical units.

Themes at clause level always include an ideational element, which marks the final element of the Theme (Halliday 1985:53). The ideational metafunction within a systemic functional model of language, as noted in Chapter 2, relates to the ‘meaning base’ of the clause, being concerned with ‘construing experience’ (Halliday & Matthiessen, 1999:2, 7). Halliday terms the ideational element of a clause the topical Theme (1985:54). Topical Themes indicate ‘what the message is about’ (Christie, 2002:17), and are usually the subject of the clause. Topical Themes often follow textual and/or interpersonal Themes, in which case they appear in the order shown in part a) of Figure 5.4 and are collectively marked as Theme as shown in part b) of Figure 5.4. The topical Theme is highlighted in bold in part a) of Figure 5.4 to indicate that as the only obligatory part of the Theme, it marks the division between Theme and New. Textual Themes are ‘text creating meanings’ (Butt et al. 2000:137) that connect messages within a text, and often include conjunctions such as *or* in part b) of Figure 5.4. Textual Themes also include conjunctive adjuncts and modal adjuncts of various kinds. Lists of these are provided in Halliday (1985:50). Interpersonal Themes realize interaction between participants and can also indicate a speaker’s position, as in *of course* in part b) of Figure 5.4.

Figure 5.4 Theme structure

a) Sequence of Themes

textual Theme^interpersonal Theme^**topical Theme**

b) Sequence of Themes in unit 246 of the information systems seminar

Unit	Text			
246	Or	of course	you	can talk to a consultant.
	textual Theme	interpersonal Theme	topical Theme	
	Theme			New

Further examples of Theme and New are shown in parts a), b) and c) of Figure 5.5. Each shows the Theme marked in **bold**, with the topical Theme underlined, as this is how both are indicated in the seminar transcripts in Appendices 1, 2 and 3 in Volume 2 and elsewhere in Volume 1. In part a) the topical Theme *transfer price* marks the end of the Theme in unit 15. In part b), the topical Theme marking the end of the Theme in unit 19 is *it*. In part c), the topical Theme marking the end of the Theme in unit 32 is *you*.

Figure 5.5 Examples of Theme and New from the seminar data

a) Theme and New in unit 15 of the management accounting seminar

15	Now so	<u>the transfer price</u>	is the price that department B will pay for this material.
		topical Theme	
	Theme		New

b) Theme and New in unit 19 of the information systems seminar

19	So	<u>it</u>	introduces a process, a framework into an organization for control of systems development, especially in medium to large organizations.
		topical Theme	
	Theme		New

c) Theme and New in unit 32 of the auditing seminar

32	So often	<u>you</u>	can identify if the error is a presentation error.
		topical Theme	
	Theme		New

As will be shown in Figure 5.9 below, analysis in the seminar transcripts in Appendices 1 to 3 divides Theme into two columns, with all components of the Theme before the topical Theme in Column B, and topical Themes shown at the beginning of Column C.

Ellipsed participants

As is accepted practice within systemic functional analyses of discourse, participants that have been ellipsed in the spoken English as documented in transcripts were ‘filled in’ (Martin & Rose, 2007:190) so that Themes could be identified. An example is shown in Figure 5.6, where the square brackets around [you] indicate the filling in of an ellipsed participant. The square brackets around [us] indicate that the contraction *let’s* has also been expanded during analysis. Information about ellipsed participants is provided in column D of each transcript.

Figure 5.6 Filling in ellipsed participants in unit 1 of the management accounting seminar

A	B	C	D
1	Okay	[you] let [us] look at transfer pricing.	Ellipsed subject = you [listeners]

Marked and extended Themes

‘Marked’ Themes are ‘atypical’ Themes that may contain ‘circumstantial elements such as places or times, or ... may be participants that are not Subject of the clause’ (Martin & Rose, 2007:191–192). Following Forey (2002), where two clauses in a clause complex are paratactic or equal in status, Theme patterns were identified in each independent clause. Themes in dependent clauses were not considered when identifying analytical units. Where a dependent clause precedes an independent clause, then the dependent clause (marked Theme) and those elements of the independent clause that constitute topical Theme were together identified as ‘extended’ Themes (Forey, 2002:64) as in the example in Figure 5.7. Components of extended Theme beyond topical Themes were beyond the scope of analysis in this study.

Figure 5.7 Example of extended Theme from unit 39 of the information systems seminar

39	On a medium to large project	<u>analysis and design</u>	can be very time consuming,
	Circumstantial adjunct	<u>Topical Theme</u>	
	Extended Theme		New

In some instances, lecturers made false starts, interrupting themselves mid-sentence. As indicated in the key to transcripts in Section 5.6, these are marked in the transcript with the em rule (—) as seen in unit 142 in Figure 5.8. In the example in part a) of Figure 5.8, the information systems lecturer shifted mid-sentence from the generic *you* in unit 142 to *I* in unit 143, to a recount of her own experience. In these cases, analytical boundaries were identified on the basis of topical Themes if sufficient information was available in the New component. Where insufficient information was

available as in unit 54 from the information systems seminar in part b) of Figure 5.8, the incomplete clause was included in Column B and marked with a footnote.

Figure 5.8 Example of changing Subject mid-sentence in the information systems seminar

a)

142	Same thing here if you don't have the expertise in your company,	you can use—	you=generic actor(s) [practitioner]	you [generic practitioner]	GE
143		I used our auditors, KPMG,	I=speaker recounting experience	I [lecturer recounting experience]	SE

b)

54	And you covered—	we covered some of those at the end of week three.	we=speaker plus listeners	we [lecturer and students]	LE
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5.9 Explanation of seminar transcripts in Volume 2

As outlined the previous sections, analysis of thematic patterns at clause level was used as the basis for identifying analytical units in each transcript. Analysis of thematic patterns is shown in columns A to F of each of the three transcripts in Appendices 1 to 3 in Volume 2. Each part of the analysis is shown in the various columns of the seminar transcripts as explained in Figure 5.9.

Figure 5.9 Parts of preliminary analysis shown in transcript columns A–F

A	Analytical units are numbered in sequential order throughout each transcript in this column.
B	Columns B and C contain the text of the seminar transcript and are shaded. Column B includes any components of Theme before the topical Theme in each analytical unit. It includes textual and interpersonal Themes and extended Themes. Text is shown in bold to indicate that it is part of Theme.
C	Columns B and C contain the text of the seminar transcript and are shaded. Column C begins with the topical Theme of the analytical unit, which is

	used as the basis for determining the analytical category. As shown in the key to transcripts provided in Section 5.6 and the front matter of Volume 2, the topical Theme is shown in bold and <i>underlined</i> .
D	Column D shows the basis for categorization of the analytical unit if this is not immediately obvious from the nominal group chosen as Theme. It includes: <ul style="list-style-type: none"> • A breakdown of speaker and other roles represented in pronouns. An explanation of this and further information about categorization of pronouns can be found in Chapter 6. • Identification of any WH-elements. Further information about the categorization of WH-elements can be found in Section 6.2.
E	Column E includes the topical Theme from each analytical unit only. Data in this column was coded separately in worksheets imported into NVivo and used to provide the lists of topical Themes in each analytical category provided in Appendices 4, 5 and 6.
F	Column F contains acronyms that refer to preliminary analytical categories. A key to these is provided on alternate pages of the transcript. Analytical categories are described in the following chapter.

The content of seminar transcript columns A to F is illustrated in Figure 5.10, based on an extract from the beginning of the management accounting seminar transcript. Figure 5.10 shows how this extract from the transcript is set out in Appendix 1 in Volume 2. This extract shows the first six columns of the transcript only. A key to reading the text of the transcript as it is presented in columns B and C in Figure 5.10 is provided below. This key includes transcription information relevant to Figure 5.10 only, and is drawn from the key to transcripts provided in Section 5.6 and the front matter of Volume 2.

Analytical units 3 and 7 shown in Figure 5.10 include WH-elements. As noted in Figure 5.9, information about the categorization of WH-elements will be provided in Section 6.2. Information contained in columns D and E of Figure 5.10 is explained in Figure 5.9. The preliminary category codes used in column F of Figure 5.10 are listed below the Figure, and are also provided in the footer of alternate transcript pages in

Volume 2. These preliminary categories are described in Chapter 6. An explanation of the remaining transcript column (G) included in the transcripts in Volume 2 will be provided in Chapter 6.

Key to text of transcript in shaded columns B and C of Figure 5.10

^Words in italics in carets^	Paralinguistic and non-verbal information.
—words following em rule	Speaker restarts without hesitation after a false start.
Words in bold	Theme
<u>Words underlined and in bold</u>	Topical Theme
[Words in square brackets]	Ellipsed words and contractions within Theme (e.g. ‘that’s’ transcribed as ‘that [is]’)

Figure 5.10 Identification of Theme in the management accounting seminar

Transcript:

Okay [you] let [us] look at transfer pricing. Okay, what is transfer pricing? Transfer pricing is a way—or a transfer price is the internal selling price that is used when goods or services are transferred between profit centres and investment centres in decentralized organizations. Now there [is] lots of words there. Where did my pen go? ^Talks to self^. Okay, [I] found my pen.

Unit	Transcript		Basis for preliminary coding	Topical Theme	Preliminary category
A	B	C	D	E	F
2	Okay	[you] let [us] look at transfer pricing.	Ellipsed subject = you [listeners]	[you] [students]	LE
3	Okay,	what is transfer pricing?	WH-element (abstract participant)	WH-abstract participant [what] RHET	WH
4		Transfer pricing is a way—		transfer pricing	AE
5	or	a transfer price is the internal selling price that is used when goods or services are transferred between profit		a transfer price	AE

Unit	Transcript		Basis for preliminary coding	Topical Theme	Preliminary category
		centres and investment centres in decentralized organizations.			
6	Now	there [is] lots of words there.	there	there	TH
7		Where did my pen go?	WH-element (local circumstance)	WH- local circumstance [where] RHET	WH
8	<i>^Talks to self^.</i> Okay,	[I] found my pen.	I=speaker	I [lecturer]	LE

Preliminary category codes

E	LOCAL ENTITIES
SE	SPECIFIC ENTITIES
GE	GENERIC ENTITIES
AE	ABSTRACT ENTITIES
TR	TEXT REFERENCE
WH	WH- INTERROGATIVES
INT	OTHER QUESTIONS
TH	EXISTENTIAL <i>THERE</i>
ES	EMPTY SUBJECT

5.10 Chapter summary

This chapter has presented a methodological framework for analyzing the representation of professional practices in the seminar data in order to address the research questions of the study. The study combines a range of methodological tools in an innovative way, extending existing models of pedagogic discourse in order to overcome the limitations of these for examining the recontextualization of knowledge of the social world in classroom discourse. These limitations were discussed in detail in Chapters 3 and 4 and summarized in Sections 3.6 and 4.6.

As indicated in Chapter 1, this thesis presents a case study of the representation of professional practice. Sections 5.1 and 5.2 in this chapter locate the case study within a critical realist ontology, and Section 5.3 outlines limitations that stem from the case

study approach, the particularities of the case and analytical tools used to examine the case. Fundamental to the intensive research design is the intention to show relationships between different forms of meaning in the representation of professional practices, yielding generalizations that are analytical rather than empirical. This has implications for the selection and quantity of data for analysis as explained in Section 5.4, which in turn has a bearing on the interpretation research findings to be presented in the following chapter. Following information about the research participants in Section 5.5, Section 5.6 explains the selection and summarization of aspects of classroom discourse through the transcription process, and provides a key to the transcripts in Appendices 1, 2 and 3 in Volume 2.

Analysis of the seminar data in Chapter 6 will proceed through two stages. The first stage develops a preliminary language of description based on an analysis of topical Theme within the seminar data. Section 5.8 prepares the ground for developing this preliminary language of description, and details the processes for identifying analytical units in the seminar data, based on the foundational concept of ‘periodicity’ or information flow from systemic functional linguistics. As reported in the following chapter, this preliminary language of description will be used in the first stage of analysis to track the representation of abstract, generic, specific and local entities in the seminar data, as well as a range of other features of textual and interpersonal meaning. This will provide the foundation for expanding on the preliminary language of description in the second stage of data analysis, as described in detail in Sections 6.7 and 6.8. The final section of Chapter 5 provides an explanation of the seminar transcripts in Volume 2.

Chapter 6: Analysis and findings

This chapter summarizes findings from the two stages of data analysis outlined in Chapter 5. Section 6.1 provides an overview of the seminar data. Sections 6.2 and 6.3 describe the criteria for developing nine preliminary analytical categories.

Findings from the first stage of analysis based on these preliminary categories are summarized in Section 6.4. The content of the preliminary categories is described in more detail in Sections 6.5 and 6.6. Section 6.7 provides criteria for redistributing data in the preliminary analytical categories into eight categories that constitute a language of description for describing movements between context-independent and context-dependent meanings throughout each seminar. The content of each of these categories is summarized in Section 6.8. Reference is made throughout this chapter to the analysis supplied in various appendices within Volume 2.

6.1 Overview of the seminar data

Analytical units in the seminar transcripts were identified following the procedures described in Chapter 5. As noted in that chapter, analytical units are numbered in Column A of the seminar transcripts in Appendices 1, 2 and 3 found in Volume 2. The transcripts varied in word length and in number of analytical units, as shown in the summary of each transcript in Figure 6.1. Based on totals in Figure 6.1 it can be seen that the average word length of each analytical unit is fairly consistent across each seminar, with an average of 13.4 words per unit in the management accounting seminar, 14.6 words per unit in the information systems seminar and 14.2 words per unit in the auditing seminar. To accommodate differences in transcript size when comparing transcripts throughout this chapter, any counts of analytical units are shown relative to the number of analytical units in each transcript and word counts are shown relative to the word length of each transcript.

Figure 6.1 Number of analytical units in each transcript

Subject	Word length	Number of units
MA Management accounting	3696	275
IS Information systems	5681	389
AUD Auditing	6240	439

The acronyms MA, IS and AUD shown in the left hand column of Figure 6.1 are used to refer to each seminar in tables and charts throughout this chapter as follows:

MA	Management accounting seminar
IS	Information systems seminar
AUD	Auditing seminar

These acronyms are also used to identify extracts from the seminar data throughout the following chapters. Two conventions will be followed:

- 1) Where examples appear within a sentence these will be followed by a letter and a number in parentheses:

An example of this can be seen in the management accounting seminar: *So **ROI** is a very effective tool (MA182).*

Here, MA refers to the management accounting seminar and the number 182 refers to the analytical unit within the transcript. The information systems seminar will be referred to as IS and the auditing seminar as AUD. Examples of this type are formatted in *italics*, with Theme marked in **bold** and topical Theme underlined.

- 2) Where longer or several extracts appear as block quotes the same identification system is used:

So ROI is a very effective tool (MA182)

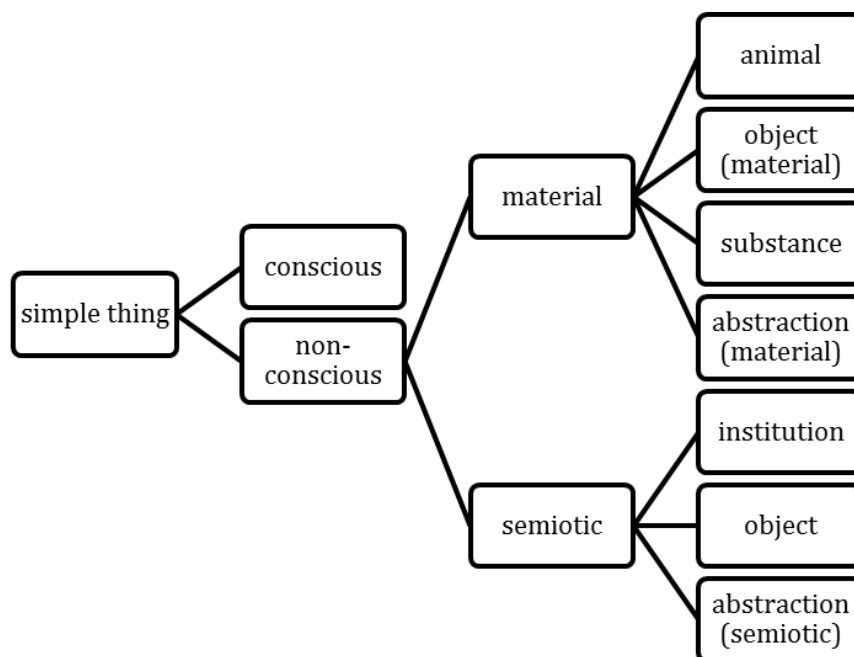
Block quotes are indented and formatted in sans serif font, with Theme marked in **bold** and topical Theme underlined.

6.2 Stage 1: Categorization of nominal groups chosen as topical Theme

Patterns in topical Themes in each transcript were examined in order to generate a preliminary set of analytical categories. The first step in developing this set of categories involved differentiating between two broad categories of topical Themes: abstract (non-conscious) entities and those consisting of conscious entities and material or semiotic entities. These initial distinctions were made on the basis of Halliday and Matthiessen's (1999) typology of different kinds of 'things' shown in Figure 6.2. This categorization of participants as conscious or non-conscious reflects

their ‘inherent potential for bringing about change: that is their ability to initiate processes and to affect other participants’ (1999:190). Working from left to right across the diagram, non-conscious entities are further categorized by Halliday and Matthiessen as material or semiotic. Figure 6.2 shows further sub-categories within these two categories on the far right.

Figure 6.2 First steps in the taxonomy of simple things (Halliday & Matthiessen, 1999:190)



This typology was used to identify conscious entities and non-conscious entities in the data. A single preliminary category ABSTRACT ENTITIES was established to include various kinds of semiotic abstract entities. Names of preliminary categories will be referred to from here on in SMALL CAPITAL letters. Conscious entities, and various kinds of material and semiotic entities were categorized as GENERIC ENTITIES, SPECIFIC ENTITIES, or LOCAL ENTITIES. These categories will be described in Section 6.5. In summary, four preliminary categories were established:

Preliminary categories

1. Abstract entities
2. Generic entities
3. Specific entities
4. Local entities

Topical Themes in each of these categories within each seminar are listed in Appendices 4.1 to 4.4 (management accounting), 5.1 to 5.4 (information systems) and Appendices 6.1 to 6.4 (auditing), following the methodological approach taken by Forey (2002). The distribution of these will be described in the next sections. Further distinctions were made within the four preliminary categories in the second stage of data analysis and these are described in Section 6.6.

In developing the language of description, a number of other aspects of textual and interpersonal meaning within the seminar data needed to be considered. Aspects of textual meaning encountered in the data include ellipsed subjects, pronouns, and demonstratives. An aspect of interpersonal meaning to be considered was the use of WH-interrogatives and other questions. The treatment of each of these in the analysis is outlined below.

Ellipsed subjects

Where nominal groups chosen as topical Themes contained ellipsed subjects, pronouns, or demonstratives (e.g. this/these, that/those), these features of textual organization were examined in order to group topical Themes into the above categories. As noted in Chapter 5, where the subject in the nominal group chosen as topical Theme was ellipsed, these were ‘filled in’ (Martin & Rose, 2007:190) and coded according to one of the four preliminary analytical categories listed above. Filled in subjects are shown in square brackets in Column C of the seminar transcripts, and information used as the basis for coding these is given in Column D. An example can be seen in unit MA1 from the management accounting seminar:

A	B	C	D	E	F
1	Okay	[you] let us look at transfer pricing.	Ellipsed subject = you [listeners]	[you] [students]	LE

In this example, the initials in column F stand for the preliminary analytical category LOCAL ENTITIES as indicated in alternate footers in each transcript.

Halliday and Matthiessen (1999) note that ellipsed subjects are a common feature of dialogue, particularly in ‘adjacency pairs such as question and answer’ (p. 531).

Ellipsed subjects are often found in the ‘evaluation’ move of *Initiation, Response, Evaluation* sequences (Mehan 1979). These sequences, also known as IRE sequences describe a pattern of interaction that frequently characterizes classroom discourse, a

pattern that is also sometimes referred to as an *Initiation, Response, Feedback* sequence based on Sinclair and Sinclair and Coulthard (1975) (Christie, 2002). An example of an IRE sequence from the management accounting seminar is shown in Figure 6.3. In the *Initiation* move in unit 24 the lecturer asks a question. In the *Response* move (shown in Column B of unit 25), the student responds. In the *Evaluation* move in unit 25, the lecturer evaluates the student's response (*yep*), and repeats it (*from the sales to department B*). In doing so, the subject *their revenue* is ellipsed. As explained above, information about ellipsed subjects is shown in Column D of the transcripts in Appendices 1, 2 and 3. The 'filled in' subject is shown in Column E.

Figure 6.3 IRE sequence from the management accounting seminar

A	B	C	D	E	F
24		<u>Where</u> is their revenue coming from?	WH element (specific circumstance)	WH specific circumstance [where]	WH
25	(Student answers) Yep	<u>[their revenue]</u> is coming] from the sales to department B.	Ellipsed subject=their revenue	[their revenue]	SE

Pronouns

Where nominal groups contained pronouns, these were examined to identify participant roles. Information about participant roles is given in Column D as shown in units 142 and 143 from the information systems seminar in Figure 6.4. This information was used to code topical Themes containing pronouns into the four preliminary categories above.

Figure 6.4 Example of information about participant roles in column D of information systems transcript

A	B	C	D	E	F
142	Same thing here if you don't have the expertise in your company,	<u>you</u> can use,	you=generic actor(s) [practitioner]	you [generic practitioner]	GE
143		I used our auditors, KPMG,	I=speaker recounting experience	I [lecturer recounting experience]	SE

When categorising nominal groups containing personal pronouns, reference was made to Halliday's (1985) distinction between speech roles and other roles in the context of a speech exchange (p. 167). Speech roles are the roles of the participants within the speech exchange (*I* and *you*), and other roles are the roles of participants outside the exchange between speaker and listener (*he, she, it, they*) (Halliday, 1985:167). The various options as summarized by Halliday are shown in Figure 6.5. Two adaptations have been made to Halliday's diagram and are marked with an asterisk in Figure 6.5:

Original	Adaptation
More than one <i>they</i>	One or more <i>they</i>
Speaker plus listener <i>we</i>	Speaker plus listener(s) <i>we</i>

Several other distinctions are generally made between pronouns. Distinctions between first, second and third person, and possessive determiners will be referred to in discussion of preliminary categories. Examples of each are shown in Figure 6.6 adapted from R. Berry (2013).

Figure 6.5 The English person categories (adapted from Halliday, 1985:168)

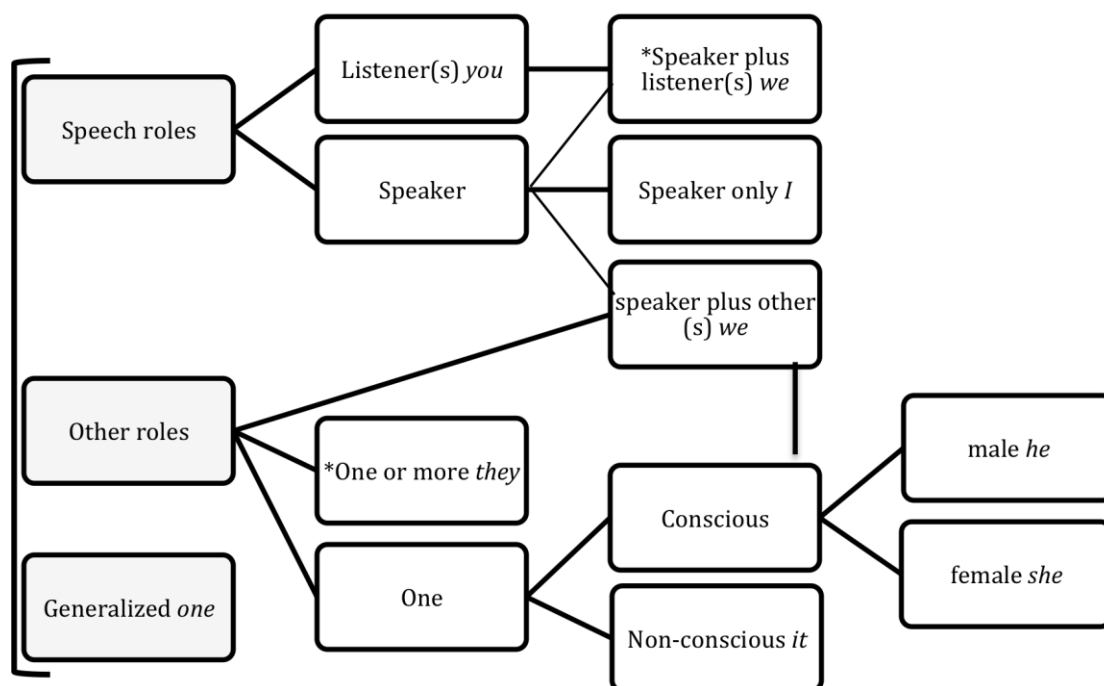


Figure 6.6 Extended version of basic pronoun paradigm (adapted from R. Berry, 2013:236)

	Singular			Plural		
	First	Second	Third	First	Second	Third
Subjective	I	You	He, she, it	We	You	They
Objective	Me	You	Him, her, it	Us	You	Them
Possessive determiner	My	Your	His, her, its	Our	Your	Their
Possessive pronoun	Mine	Yours	His, hers, its	Ours	Yours	Theirs

Generic pronouns: Topical Themes containing I or we or you

Pronouns are used extensively in English for generic reference, although this tends not to be reflected in grammatical descriptions of the pronoun system such as that

shown in Figure 6.6 (R. Berry, 2013). In the data, *I*, *you* and *we* are all used to refer to generic participants, as well as to specific or local participants. The treatment of pronouns used for generic reference in preliminary analytical categories is summarized in Figure 6.7 and explained below.

Figure 6.7 Pronouns used to refer to conscious participants in preliminary analytical categories

<i>Local entities</i>	<i>Specific entities</i>	<i>Generic entities</i>
I=speaker	I=speaker recounting experience	I= generic actor [practitioner]
we=speaker plus listeners	we=speaker plus specific others [practitioners]	I= generic actor [not practitioner]
we=speaker plus local others	I=specific actor [practitioner]	you=generic actor(s) [practitioner]
you=listener(s)	I =specific actor [not practitioner]	you=generic actor(s) [not practitioner]
	you=specific actor [practitioner]	we=speaker plus generic others [practitioners]
	you=specific actor [not practitioner]	they=one or more generic others [practitioners]
	he= specific actor	they=one or more generic others [not practitioners]
	they=one or more specific others [not practitioners]	

As shown in Figure 6.7, the pronoun *I* is used in the category LOCAL ENTITIES to refer to the speaker. In the category SPECIFIC ENTITIES, it refers to the speaker in recounts of their own experience: *you know fifteen years ago I could buy process manufacturing software* (IS386). *I* is also used in a more generic way in the category SPECIFIC ENTITIES, in reference to specific participants in an example, as in: *Now imagine there's only two departments in this company, so I need to share that million dollars between my two managers* (MA40). The pronoun *you* is used generically in the category SPECIFIC ENTITIES, referring again to participants within specific examples: *You might get an expert in to give you a valuation of that* (AUD372). Where *you* in unit AUD372 refers to a practitioner in a more context-

dependent setting, the pronoun *you* is also used generically in the category GENERIC ENTITIES. This use of *you* is differentiated from that in the category SPECIFIC ENTITIES by the scope of the intended meaning. In the following example from the information systems seminar, *you* refers to practitioners in general, rather than practitioners in a specific example: ***you*** *want your return on investments sooner rather than later* (IS44).

The pronoun *we* can include the speaker and listener(s), that is, participants present in the speech exchange, or the speaker and other(s), that is the speaker and others not present in the speech exchange. In the category LOCAL ENTITIES, lecturers use *we* to include themselves and listeners present in the room. The meaning of *we* here is limited to the immediate context of the classroom.

The difference between specific or generic reference in the pronoun *we* was determined by the scope of the process represented. In part a) of Figure 6.8 the scope of the activities of the auditing practitioner (*we*) in units AUD257 and 258 is limited to the context of the example introduced in AUD254 (*So let's say inherent risk is high*), and the state of affairs specified in AUD255–266. The specific entities in the example are indicated in AUD 257 and AUD258 by the use of possessive determiners (*our client, their controls*). In part b) the scope of *we* is broader, referring to generic practitioners.

Figure 6.8 **Categorization of nominal groups containing *we***

a) *We* coded SPECIFIC ENTITIES in the auditing seminar

So let's say inherent risk is high (AUD254). **There** [is] you know, government, maybe government has changed legislation (AUD255) **or, as I said, there** could be something overseas that's affecting our company so we assume inherent risk is high (AUD256). **And then we** go and we talk to our client (AUD257) **and we** find out that their controls are poor (AUD258).

b) *We* coded GENERIC ENTITIES in the auditing seminar

We [are] not there to test everything (AUD26) **so we** need to work efficiently (AUD27).

Demonstratives

Where nominal groups chosen as Theme contained demonstratives (*this/these, that/those*), these were also examined. Demonstratives can serve a nominal deictic function, pointing to entities present in the speech situation as in part a) of Figure 6.9,

or for tracking discourse referents or ‘what people say’ (Martin & Rose, 2007:164) in a text. Halliday and Matthiessen explain the meaning of these as ‘this = “about to be mentioned (by me)”’; that = “mentioned earlier”’ (1999:179). It is typical of the casual nature of spoken language however that these terms are used interchangeably throughout the seminar data. An example is shown in part b) of Figure 6.9. Here, *that* refers to what the lecturer has previously said. Instances of nominal deixis pointing to entities present in the classroom were coded into the category LOCAL ENTITIES. Where nominal deixis was used to track discourse referents, this was coded into an additional category headed TEXT REFERENCE (Martin & Rose, 2007:164), to be examined further in the second stage of analysis. As will be seen in the following section, text reference is referred to by Halliday and Matthiessen as ‘textual reference’ (1999:102).

Figure 6.9 Examples of nominal deixis in the management accounting seminar

a) Nominal deixis referring to concrete entities coded as LOCAL ENTITIES

60		[<u>This</u> is] my profit.	Ellipsed subject = this=nominal deixis= word on the whiteboard	[this] [word on the whiteboard]	LE
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b) Nominal deixis coded as TEXT REFERENCE

89	So	<u>that</u> [is] the basic principles of why we set transfer prices.	that= nominal deixis	that [mentioned earlier]	TR
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WH-interrogatives

Where demonstratives are a feature of textual meaning, that is, a form of textual reference, WH-interrogatives are a feature of interpersonal meaning. The relationship between textual reference and WH-interrogatives is shown in Figure 6.11 below. Halliday (1985) describes WH-interrogatives as ‘a search for a missing piece of information’ with the thematized WH-element realising the request for that information and expressing the ‘nature of the missing piece’ (p. 47). The WH-elements *who*, *what*, *when* and *how* request information about *person*, *thing*, *time* and *manner* respectively (Halliday, 1985).

WH-interrogatives in the seminar formed another additional category—WH-interrogatives, to be dealt with in the second stage of analysis. This was established as an additional category separate to other questions as WH-interrogatives were the most frequent form of questions in the data. This feature of interpersonal meaning in the seminar data includes instances where the Theme is constituted by the WH-element as in *what* and *how* in part a) of Figure 6.10, and instances where the WH-element is part of a nominal group chosen as Theme, as in *what type of behaviour* in part b) of Figure 6.10 (Halliday, 1985). The notes in Column D in Figure 6.10 are explained below.

Figure 6.10 Examples of WH-elements from the management accounting seminar

a) Topical Theme constituted by WH-element

A	B	C	D	E	F
2	Okay,	<u>what</u> is transfer pricing?	WH element (abstract participant)	WH abstract participant [what] RHET	WH
62	Okay I need to increase my profit, so	<u>how</u> can I do that?	WH-element (specific circumstance)	WH specific circumstance [how]	WH

b) Topical Theme constituted by nominal group including WH-element

76	and	<u>what type of behaviour</u> do you think that should drive?	= <i>What type of behaviour should that drive?</i> WH-element (abstract participant)	WH- abstract participant [what]	WH
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As shown in Halliday and Matthiessen's (1999) summary of various kinds of WH-elements in Figure 6.11, a distinction can be made between those seeking information about participants (conscious or non-conscious) and those seeking information about circumstances (time, place, distance, duration, manner, and cause).

Figure 6.11 WH-elements and textual reference (Halliday & Matthiessen, 1999:102)

			interpersonal	textual
			WH- type	REFERENCE
participant	conscious		who?	s/he/they
	non-conscious	animal	what? [which?]	it/they
		institution		
		object		
		substance		
abstraction				
circumstance	time		when?	now/then
	place		where?	here/there
	distance		how far?	
	duration		how long?	
	manner		how?	thus/this way
	cause		why?	

For the purposes of analysis, some further distinctions were made regarding the nature of participants or circumstances, in line with the four preliminary categories. This produced the following subcategories of WH-elements: generic, specific and local conscious participant; abstract, generic, specific or local entity; and abstract, generic, specific or local circumstances. These are shown in Figure 6.12 with examples from the management accounting and information systems seminars. In the first stage of analysis the nature of the participant or circumstance was noted in Column D of the transcript. This was then used to determine the redistribution of units coded as WH-element in the second stage of analysis as explained in Section 6.6.

Figure 6.12 Further distinctions in WH-elements for analytical purposes

		Examples
Participants	Generic conscious participant	So you need to be clear as to <u>who</u> [is] buying (MA19)
	Specific conscious participant	<u>Who</u> is going to be happy? (MA46)
	Local conscious participant	<u>Yes, who</u> hasn't? (MA246)
	Abstract entity	<u>What</u> do I need to influence?
	Generic entity	<u>What</u> happens if you don't have access to that? (IS237)
	Specific entity	<i>No examples in the data</i>
	Local entity	<u>What</u> [is] this again? ^points to whiteboard^ (MA59)

Circumstances	Abstract circumstance	So can anyone think why, why I even, <u>why</u> we're even talking about this? (MA73)
	Generic circumstance	Okay now let's work through what that actually means from ah <u>how</u> do I work out what the transfer price actually is (MA97)
	Specific circumstance	I know that department manager A has received this great bonus, <u>how</u> can I change this for next year? (MA56)
	Local circumstance	<u>Where</u> did my pen go? (MA6)

As can be seen in unit 2 in part a) of Figure 6.10 above, each WH-element was also marked with RHET where the WH-interrogative was rhetorical. Where an answer was expected this was not marked. The nature of WH-elements is identified in Columns D and E of the seminar transcripts in Appendices 1, 2 and 3 as shown in Figure 6.10.

Remaining additional analytical categories

Less frequently used question types, including polar interrogatives, were grouped in a separate category of other questions, labelled INT (for interrogatives) in figures and seminar transcripts. As with WH-interrogatives, items in this category were dealt with in the second stage of analysis. The two remaining additional categories based on topical Themes in the seminar data were existential *there* and the empty subject *it*. Examples of existential processes with *there* as topical Theme from the data include: ***However there are the advantages of it being a very good performance measure (MA200); and or, as I said, there could be something overseas that's affecting our company so we assume inherent risk is high (AUD256).***

The function of an existential process is 'to construe being as simple existence' (Butt et al., 2001:58), and these processes are used to introduce new participants. The participant or Existent in an existential clause may be an event or a concrete or abstract entity (Matthiessen, Teruya, & Lam, 2010). These clauses often include references to time and place as circumstantial elements. The nature of the Existent was used to regroup items in this category in the second stage of analysis.

The empty subject *it* has a grammatical rather than a lexical meaning, and is often used to present a viewpoint in a way that appears to be more objective (Forey,

2002:185) as in the following examples: *So it [is] a matter of [you] understanding* (IS285); *it [is] actually management that has that responsibility of providing the accounts okay, not the auditor* (AUD15). The difference between the empty subject *it* and the pronoun *it*, which has a lexical meaning, can be seen in the following example: *So it [the bank rate of interest] sets an idea, a benchmark for what I expect the return on my business to be* (MA223). The topical Theme of MA223 is the pronoun *it*, which refers to *the bank rate of interest*. Items in the category Empty subject were dealt with in the second stage of analysis.

Building on the set of four preliminary categories then are five additional preliminary analytical categories: text reference; WH- interrogatives; Other questions; Existential *there*; and Empty subject.

Summary

The first stage of data analysis involved coding topical Themes into one of the following nine categories, being either

- a) One of the four **preliminary** categories: 1. Abstract entities (AE); 2. Generic entities (GE); 3. Specific entities (SE); or 4. Local entities (LE); or
- b) One of the five **additional preliminary** categories: 5. Text reference (TR); 6. WH-interrogatives (WH); 7. Other questions (INT); 8. Existential *there* (TH); or 9. Empty subject (ES). Items in these additional categories were redistributed in the second stage of data analysis.

Examples of topical Themes in each category are shown in the following tables.

Preliminary categories	Examples of topical Themes from the seminar data		
	Management accounting	Information systems	Auditing
1. Abstract entities (AE)	<u>transfer pricing</u> (MA101)	<u>the principles</u> (IS14)	<u>assertions</u> (AUD28)
2. Generic entities (GE)	<u>machinery</u> (MA168)	<u>the contract</u> (IS213)	<u>people</u> (AUD55)
3. Specific entities (SE)	<u>department A</u> (MA17)	<u>the CEO</u> (IS107)	<u>the client</u> (AUD231)

4. Local entities (LE)	<u>the textbook</u> (MA250)	<u>the text</u> (IS154)	<u>chapter five</u> (AUD1)
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Additional preliminary categories	Examples of topical Themes from the seminar data		
	Management accounting	Information systems	Auditing
5. Text reference (TR)	<u>that</u> (MA84)	<u>this</u> (IS28)	<u>that</u> (AUD46)
6. WH-interrogatives (WH)	<u>why</u> (MA177)	<u>what</u> (IS34)	<u>which</u> (AUD68)
7. Other questions (INT)	<u>is there</u> (MA148)	<u>does anybody</u> (IS35)	<u>are they</u> (AUD61)
8. Existential <i>there</i> (TH)	<u>there</u> (MA200)	<u>there</u> (IS74)	<u>there</u> (AUD49)
9. Empty subject (ES)	<u>it</u> (MA230)	<u>it</u> (IS109)	<u>it</u> (AUD171)

6.3 Stage 1: Further distinctions between entities

The typology of entities shown earlier in Figure 6.2 is further refined by Halliday and Matthiessen (1999) to include several ‘intermediate’ categories, addressing the fact that the boundaries between the categories of the typology are not clearly defined, and that ‘mixed, overlapping and intermediate’ kinds of entities are to be expected (p. 193). The intermediate categories established by Halliday and Matthiessen are ‘natural forces’, ‘human collectives’ and ‘discrete semiotic abstractions’ (p. 193). These intermediate categories, together with those from Figure 6.2 are shown in Figure 6.13, following Halliday and Matthiessen (1999). Only the third of these intermediate categories—discrete semiotic abstractions, was used in categorizing in topical Themes in the seminar data. Natural forces were excluded as they were not represented in the data. ‘Human collectives’ such as *my team* (IS134) were

considered as forms of institutional reference within the sub-category of conscious entities in each preliminary analytical category.

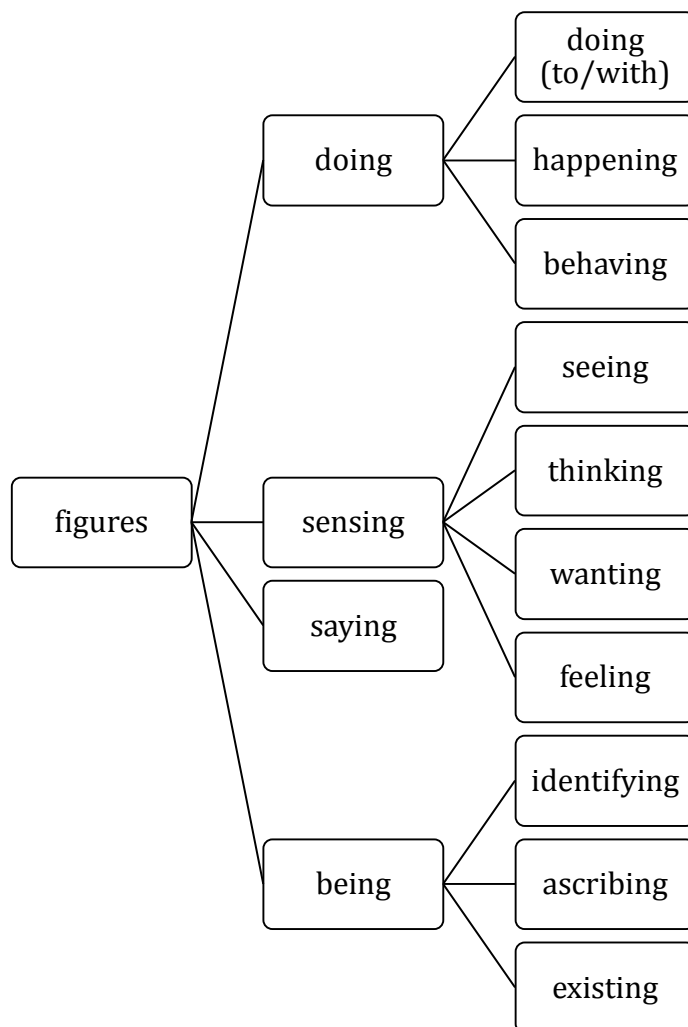
Figure 6.13 Ordering of things according to different criteria (Halliday & Matthiessen 1999:194)

			Role potential			Internal organization		
			Senser:	Sayer:	Actor (effective)	pron:	general noun:	number:
Conscious			✓	✓	✓		person & c	count
Non-conscious	Material	Animal			✓			
		Natural force			✓			count
		Object (material)					thing, object	count
		Substance					stuff	mass
		Abstraction (material)						mass
	Semiotic	Human collectives	✓	✓	✓			count
		Institution	✓	✓	✓		place, show, set-up	count
		Object (semiotic)		✓				count
		Abstraction (discrete)						count
		Abstraction (non-discrete)						mass

In addition to showing the various categories of entities, Figure 6.13 also summarizes participant roles in the grammar that are generally associated with each entity. These roles are Senser, Sayer, or Actor in figures of sensing, saying and doing respectively. As can be seen in Figure 6.13, natural forces and institutions can each take the participant role of (effective) Actor, institutions can also take the role of Senser and Sayer, and semiotic objects can also take the participant role of Sayer. As defined by Halliday and Matthiessen (1999), a figure is ‘a representation of experience ... consisting of a process, participants taking part in this process, and associated

circumstances' (p. 52). Within functional grammar processes are grouped into a number of semantic types, or figures: doing, sensing, saying and being. A summary of these from Halliday and Matthiessen (1999) is shown in Figure 6.14.

Figure 6.14 Types of figures (extracted from Halliday & Matthiessen 1999:67)



Processes related to doing and happening in the 'external, material world' are termed material processes, and those that 'encode physiological or psychological behaviour' are termed behavioural processes (Butt et al., 2001:51). Processes related to thinking, wanting and feeling are termed mental processes, and processes related to being are either relational (identifying or ascribing) or existential (existing). Reference will be made to these processes in describing aspects of the seminar data in Section 6.7. Reference was made to existential processes in outlining the preliminary analytical category Existential *there* above.

The framework shown in Figure 6.13 was applied to the data in a way that differs from a systemic functional perspective on entities, and is consistent with a broader

sociological perspective, aligned with critical discourse analysis (van Leeuwen, 2008) and critical realism (Archer, 2003; Bhaskar, 1991). van Leeuwen (2008) examines the sociosemantic rather than grammatical representation of social actors, arguing that ‘sociological agency is not always realized by linguistic agency, by the grammatical role of “agent”’ (p. 23). While the categories of entity as conceptualized in systemic functional linguistics relate to participant roles in the grammar, in this study, institutional abstractions will be regarded as ontologically separate to conscious entities. If a systemic functional approach were taken to grouping non-conscious entities into the categories shown in Figure 6.13, this categorization would be made on the basis of the entity’s participant role within the grammar of the text, meaning, as indicated in the previous paragraph, that (grammatical) agency can be attributed to non-conscious entities. From an ‘emergent’ sociological perspective (Archer, 2003; Bhaskar, 1991), cultural elements and structures are ontologically distinct from agents as noted in Section 3.1. This distinction, or analytical dualism (Archer, 1988, 2000, 2003) allows for an examination of the relations between agency and culture or structure, rather than conflating them. Hence, in this study, the construct ‘agency’ will be limited to conscious participants. This is discussed further in Section 7.6.

For the purposes of this study then, the various categories of non-conscious entities specified by Halliday and Matthiessen (1999) have been used, but in a sense consistent with critical discourse analysis rather than systemic functional linguistics, maintaining an ontological distinction between agency and culture/structure. Apart from this fundamental revision, one other change was made to the categories of non-conscious entities specified by Halliday and Matthiessen (1999:53). In addition to not including the intermediate categories of ‘natural force’ and ‘human collectives’: the category ‘animal’ was omitted as there were no entities of this type in the seminar data. Whether animals qualify as non-conscious entities as they are classified in Halliday and Matthiessen’s typology is an issue that is beyond the scope of this thesis.

Examples of conscious entities and the various categories of non-conscious entities from the seminar data are shown in the table below.

Examples of conscious and non-conscious entities in the seminar data

Types of entity		Management accounting	Information systems	Auditing	
Conscious		<u>they</u> (MA14)	<u>people with experience</u> (IS297)	<u>each individual auditor</u> (AUD197)	
Non-conscious	Material	Object (material)	<u>machinery</u> (MA168)	<u>a system</u> (IS139)	<i>No examples in the data</i>
		Substance	<i>No examples in the data</i>	<i>No examples in the data</i>	<i>No examples in the data</i>
		Abstraction (material)	<u>the net difference</u> (MA72)	<i>No examples in the data</i>	<u>something</u> (AUD182)
	Semiotic	Institution	<u>the transfer price</u> (MA15)	<u>joint application development</u> (IS56)	<u>the risk</u> (AUD76)
		Object (semiotic)	<u>it [this formula]</u> (MA260)	<u>key deliverables, deliverables, documents</u> (IS25)	<u>work papers</u> (AUD400)
		Abstraction (discrete)	<u>the key to a transfer price</u> (MA8)	<u>the problem</u> (IS38)	<u>the reason</u> (AUD267)
		Abstraction (non-discrete)	<i>No examples in the data</i>	<u>things [state of affairs]</u> (IS349)	<u>they [internal or external factors]</u> (AUD228)

6.4 Stage 1: Distribution of preliminary analytical categories in each seminar

A complete listing of topical Themes in each of the nine preliminary categories in each seminar is provided in Appendix 4 (management accounting), Appendix 5 (information systems) and Appendix 6 (auditing) in Volume 2. This data is summarized in Figure 6.15, which shows the number of topical Themes in each preliminary analytical category in each seminar. The relative size of each category is shown in the shaded columns—that is, the size of the category relative to the number of analytical units in each seminar. Any minor variations in total percentages in this and subsequent tables are due to rounding. The adjusted figures in the shaded columns are summarized in chart form in Figure 6.16.

Figure 6.15 Number of analytical units coded in each preliminary analytical category

Preliminary categories	MA	Adj	IS	Adj	AUD	Adj
Abstract entities	57	20.7%	61	15.7%	82	18.7%
Generic entities	37	13.5%	115	29.6%	165	37.6%
Specific entities	29	10.5%	59	15.2%	37	8.4%
Local entities	44	16.0%	54	13.9%	65	14.8%
Text reference	32	11.6%	43	11.1%	26	5.9%
WH-interrogatives	53	19.3%	23	5.9%	12	2.7%
Other questions	12	4.4%	6	1.5%	17	3.9%
Existential <i>there</i>	7	2.5%	14	3.6%	19	4.3%
Empty subject	4	1.5%	14	3.6%	16	3.6%
TOTAL NUMBER OF UNITS	275	100.0%	389	100.0%	439	100.0%

Figure 6.16 Chart showing number of analytical units in preliminary analytical categories relative to number of units in each transcript

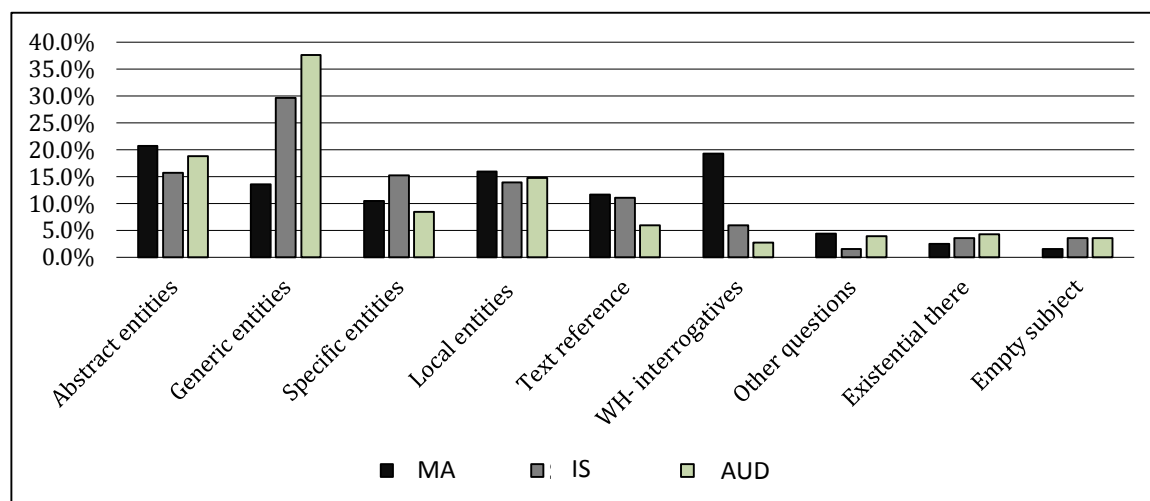
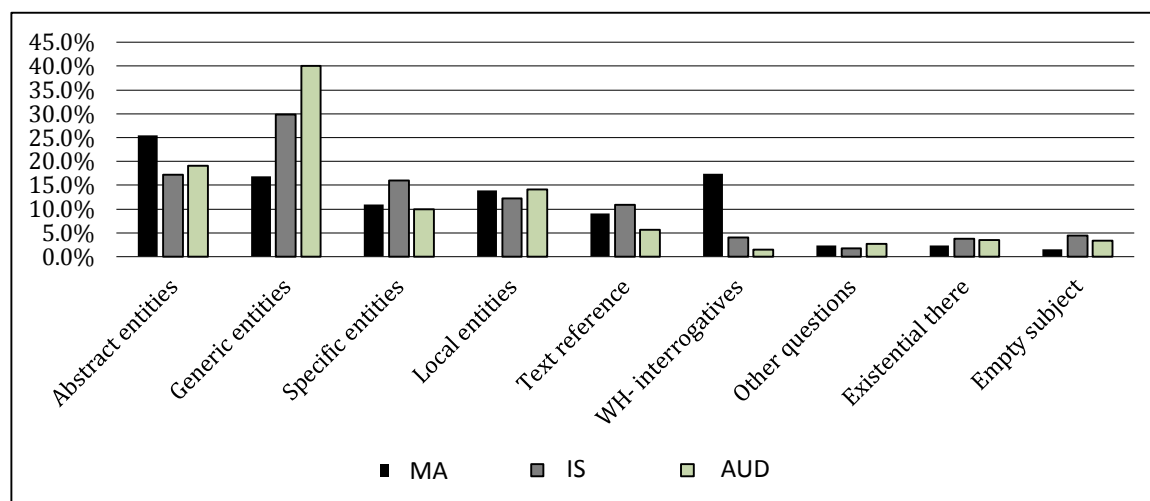


Figure 6.17 shows the size of each analytical category in each seminar in terms of numbers of words coded. Figures are expressed as a percentage of transcript length in the shaded columns. Any minor variations in total percentages are due to rounding. Figures are summarized in chart form in Figure 6.18.

Figure 6.17 Number of words in each in each preliminary analytical category

Preliminary categories	MA	Adj	IS	Adj	AUD	Adj
Abstract entities	944	25.5%	975	17.2%	1191	19.1%
Generic entities	628	17.0%	1695	29.8%	2504	40.1%
Specific entities	405	11.0%	909	16.0%	622	10.0%
Local entities	513	13.9%	694	12.2%	880	14.1%
Text reference	332	9.0%	621	10.9%	357	5.7%
WH-interrogatives	642	17.4%	227	4.0%	95	1.5%
Other questions	86	2.3%	98	1.7%	166	2.7%
Existential <i>there</i>	90	2.4%	213	3.7%	219	3.5%
Empty subject	56	1.5%	249	4.4%	206	3.3%
TOTAL NUMBER OF WORDS	3696	100.0%	5681	100.0%	6240	100.0%

Figure 6.18 Chart showing number of words in each in each preliminary analytical category relative to length of each transcript



Comparisons will be made between seminars and categories based on data in Figures 6.15 to 6.18 in Section 6.5.

6.5 Stage 1: Description and content of preliminary analytical categories

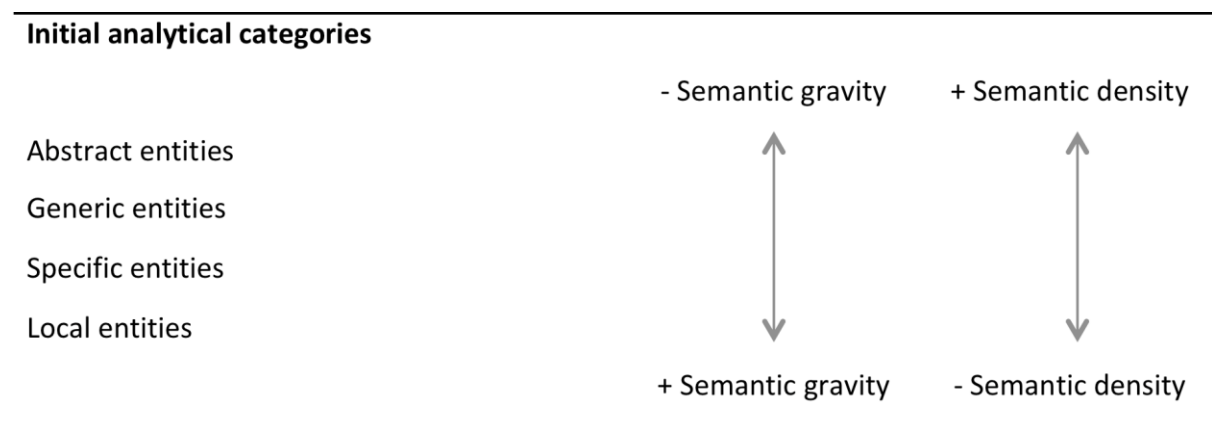
Nine preliminary analytical categories were introduced in the previous sections:

1. Abstract entities (AE)
2. Generic entities (GE)
3. Specific entities (SE)
4. Local entities (LE)
5. Text reference (TR)
6. WH-interrogatives (WH)
7. Other questions (INT)
8. Existential *there* (TH)
9. Empty subject (ES)

The spatial arrangement of the first four of these categories is important to later stages of analysis, as this will be used as a framework for further categories that will be used to show movement over time between different kinds of meaning within each seminar. The first four preliminary analytical categories are arranged hierarchically in Figure 6.19 with reference to strengths of semantic gravity and semantic density—

constructs from Legitimation Code Theory defined in Section 4.3. Figure 6.19 presents more abstract meanings towards the top and more concrete meanings towards the bottom as is conventional within Legitimation Code Theory (Maton, 2009, 2013, 2014). As illustrated in Figure 6.19, ABSTRACT ENTITIES realize meanings that are more context-independent and condensed, that is, having low semantic gravity and high semantic density, where LOCAL ENTITIES realize meanings that are more context-dependent and less condensed, that is, having high semantic gravity and low semantic density.

Figure 6.19 Preliminary analytical categories showing strengths of semantic gravity and density



Examples of topical Themes in each of these preliminary analytical categories provided at the end of Section 6.2 are reproduced here for reference.

Preliminary categories	Examples of topical Themes from the seminar data		
	Management accounting	Information systems	Auditing
1. Abstract entities (AE)	<u>transfer pricing</u> (MA101)	<u>the principles</u> (IS14)	<u>assertions</u> (AUD28)
2. Generic entities (GE)	<u>machinery</u> (MA168)	<u>the contract</u> (IS213)	<u>people</u> (AUD55)
3. Specific entities (SE)	<u>department A</u> (MA17)	<u>the CEO</u> (IS107)	<u>the client</u> (AUD231)
4. Local entities (LE)	<u>the textbook</u> (MA250)	<u>the text</u> (IS154)	<u>chapter five</u> (AUD1)

Topical Themes categorized in the lowest level, LOCAL ENTITIES, reflect meanings and activities involving participants present in the classroom. Beyond the local environment of the classroom, lecturers may represent specific entities in referring to

actual events from their own experience, case examples, or by naming participants or entities. These are coded as *SPECIFIC ENTITIES*, and the meanings relate to the activities of specific individuals and other entities ‘doing things in time and space’ (Wignell, 1998:302). In this category, meanings remain context dependent, although less so than at the level of *LOCAL ENTITIES*. At the next level in the language of description, *GENERIC ENTITIES*, moving progressively towards context independent meanings, lecturers represent entities generically, referring to ‘generic classes of people [and other entities] participating in general classes of activities set in time’ (Wignell, 1998:302). The remaining category of *ABSTRACT ENTITIES* includes more context independent, condensed meanings. Practices are nominalized, or represented as ‘things’: abstract entities of various kinds that will be categorized according to the typology shown in Figure 6.13 and summarized in Section 6.5.4. Each of these first four preliminary analytical categories will be described in more detail below, followed by a description of the remaining categories of topical Theme: *TEXT REFERENCE*; *WH-INTERROGATIVES*; *OTHER QUESTIONS*; *EXISTENTIAL THERE*; and *EMPTY SUBJECT*.

In sections 6.5.1, 6.5.2, 6.5.3 and 6.5.4, topical Themes within each analytical category in each seminar will be compared. As indicated in Section 5.4, the analysis is fine-grained and detailed, and as a result it will be seen throughout each of these sections that the frequency of topical Themes in the various analytical categories and subcategories within them are often quite low. These low frequencies reflect not only the breadth of the analysis but also the range of choices of topical Theme made by individual lecturers within each category—choices that will be discussed at length in the following chapter. While actual differences between the three seminars are not the primary focus of this study, comparisons between topical Themes in each seminar will be made for two reasons. Firstly, seminars will be compared as a means of describing the scope of each preliminary analytical category, which forms the basis for constructing a language of description to describe the representation of professional practices in the seminar data, addressing the first of the research questions in Section 1.2. Secondly, the detailed description of the range of topical Themes chosen by lecturers illustrates the ways in which individual lecturers exercise their agency in texturing representations of practice, as discussed further in Chapter 7. This illustration also demonstrates that the analytical categories are applicable to

seminar data drawn from three different areas of professional practice: management accounting, information systems and auditing, but more importantly, suggests the value of the language of description as a descriptive tool that has applicability beyond these areas of practice.

Findings reported in this first stage of analysis are limited to topical Themes. Other aspects of data in each category will be discussed in the second stage of analysis starting in Section 6.7, at which point the preliminary analytical categories will be broken down into further subcategories.

6.5.1 Local entities

Meanings coded in this category are highest in semantic gravity, being largely dependent on the participants and entities present in the immediate context of the classroom, and lowest in semantic density, being congruent with activity in the local setting of the classroom. At this stage of analysis, as shown in Figures 6.15 and Figure 6.16 above, the size of this category—in terms of the number of units coded LOCAL ENTITIES relative to the number of units in each transcript, was the most consistent across all three transcripts, accounting for 16% of topical Themes in the management accounting seminar, 13.9% of the information systems seminar, and 14.8% of the auditing seminar. Similarly, as can be seen in Figures 6.17 and 6.18, the size of the category as measured by total number of words coded relative to transcript length was also relatively consistent across the three transcripts, accounting for 13.9% of the total word length of the management accounting seminar, 12.2% of the information systems seminar, and 14.1% of the auditing seminar.

A complete listing of all topical Themes coded in this category can be found in Appendices 4.1 (management accounting), 5.1 (information systems) and 6.1 (auditing) in Volume 2. Topical Themes are grouped into further sub-categories in Appendices 7.1 (management accounting), 8.1 (information systems) and 9.1 (auditing). Appendices 7.1, 8.1 and 9.1 are summarized in Figure 6.20. Figures are adjusted relative to number of analytical units in each seminar in the shaded columns.

Figure 6.20 Types of local entities chosen as topical Theme in each seminar

Local entities		Management accounting		Information systems		Auditing	
		Actual	Adj	Actual	Adj	Actual	Adj
Conscious participants	Personal reference	0	0.0%	0	0.0%	0	0.0%
	Institutional reference	0	0.0%	0	0.0%	1	0.2%
	General nouns	0	0.0%	0	0.0%	0	0.0%
	Pronouns (conscious participants)	36	13.1%	31	8.0%	50	11.4%
	<i>SUBTOTAL</i>	36	13.1%	31	8.0%	51	11.6%
Non-conscious participants	Local entities	6	2.2%	17	4.4%	8	1.8%
	Pronouns (non-conscious participants)	1	0.4%	4	1.0%	4	0.9%
	Nominal deixis	1	0.4%	2	0.5%	2	0.5%
	<i>SUBTOTAL</i>	8	2.9%	23	5.9%	14	3.2%
	TOTAL	44	16.0%	54	13.9%	65	14.8%

Conscious participants

As can be seen in Figure 6.20, the majority of topical Themes in this category include conscious participants ‘grounded concretely in the speech interaction’ (Halliday & Matthiessen, 1999:179), that is, lecturers and students. When figures are adjusted for the number of analytical units in each seminar, the selection of conscious local participants as topical Theme is fairly consistent across two of the seminars, accounting for approximately 82% (36/44) of topical Themes in the category LOCAL ENTITIES in the management accounting seminar, and 13.1% of the 275 topical Themes in that seminar. In the auditing seminar, approximately 78% (51/65) of topical Themes in this category were conscious participants, representing 11.6% of the 439 topical Themes in that seminar. Conscious participants represented a smaller proportion of topical Themes in the information systems seminar, accounting for approximately 57% (31/54) of topical Themes in this category, and 8.0% of the 389 topical Themes in the seminar overall. The remaining topical Themes in this category consist of various kinds of non-conscious entities as listed in Appendices 7.1, 8.1 and

9.1. Both conscious and non-conscious participants chosen as topical Themes will be examined in more detail below.

As would be expected in this category, which is limited to participants and entities within the context of the speech interaction, pronouns are used to refer to conscious participants, with only one instance of institutional reference in the auditing seminar (*most students*). Pronouns ‘represent the world according to the speaker, in the context of a speech exchange’ (Halliday 1985:167), with pronouns in each seminar referring to the speech roles of participants present in the speech exchange within the classroom.

Figure 6.21 gives a breakdown of different types of pronouns in this category in each seminar, based on pronouns listed in Appendices 7.1.1, 8.1.1 and 9.1.1. As indicated in Figure 6.21, speech roles referred to in first person pronouns are the speaker *I*; and speaker and listeners *we*. The second person pronoun *you* refers to the speech role of listeners. The pronoun *we* (*speaker and listeners*) is sometimes referred to as ‘inclusive’ *we* (Hyland, 2005:182), in that it includes the participants in the context of the speech interaction. As in academic writing, inclusive *we* in classroom discourse constructs the speaker and audience as ‘participants with similar understanding and goals’ (Hyland, 2005:182). This can be contrasted with exclusive *we*, which includes the speaker plus others not present in the context of the speech interaction. Exclusive *we* appears frequently in the category GENERIC ENTITIES.

As can be seen in units AUD99–100, the auditing lecturer also used *we* to include herself and other lecturers: ***When we're looking at assertions we want you to identify what is the key assertion at risk (AUD99) and often we ask you to give a procedure to test that assertion (AUD100).*** Although this could also be considered as exclusive *we*, in that it excludes the listeners, instances have been coded in this category because their meaning relates specifically to the learning and teaching context. Apart from this use of *we* in the auditing seminar, Figure 6.21 shows that the use of *I* and *you* to refer to speech roles in the classroom setting is fairly similar across each of the three seminars, with *I* (*speaker*) accounting for 2.5% of topical Themes in the management accounting seminar, and 1.8% of topical Themes in the other two seminars, and *you* (*listener*) accounting for 5.5% of topical Themes in the management accounting and auditing seminars, and 4.1% of topical Themes in the information systems seminar. Slightly more variation in the use of pronouns to refer

Figure 6.21 Types of pronouns referring to local entities chosen as topical Theme in each seminar

Local entities		Management accounting		Information systems		Auditing	
		Actual	Adj	Actual	Adj	Actual	Adj
Speech roles	<i>First person</i>						
	I=speaker	7	2.5%	7	1.8%	8	1.8%
	we=speaker plus listeners	14	5.1%	8	2.1%	13	3.0%
	we=speaker plus local others	0	0.0%	0	0.0%	5	1.1%
	<i>Second person</i>						
	you=listener(s)	15	5.5%	16	4.1%	24	5.5%
	SUB TOTAL	36	13.1%	31	8.0%	50	11.4%
Other roles (non-conscious)	it= local entity	0	0.0%	3	0.8%	0	0.0%
	they = local entities	1	0.4%	1	0.3%	0	0.0%
	one = local entity	0	0.0%	0	0.0%	4	0.9%
	SUB TOTAL	1	0.4%	4	1.0%	4	0.9%
TOTAL ALL PRONOUNS		37	13.5%	35	9.0%	54	12.3%

to speech roles was found in the use of inclusive *we* (*speaker plus listeners*). Where inclusive *we* accounted for 5.1% of topical Themes in the management accounting seminar, this use of *we* was chosen in only 2.1% of topical Themes in the information systems seminar, and 3.0% of topical Themes in the auditing seminar. These variations reflect the different ways that lecturers choose to position themselves and students in building a relationship with students through their interpersonal exchange, although the limited range in variation reflects the classroom context.

Non-conscious participants

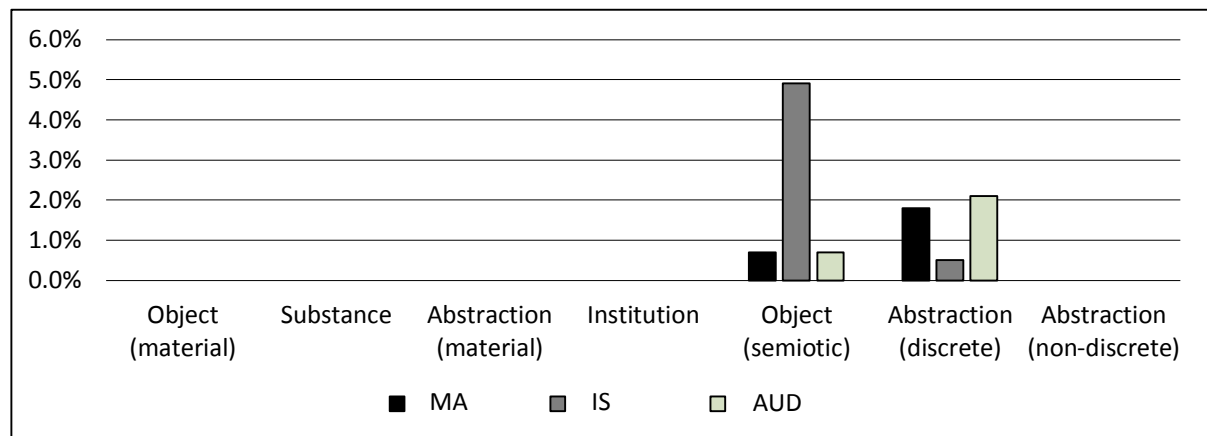
As shown in Figure 6.20, non-conscious participants accounted for approximately 18% (8/44) of topical Themes in the category LOCAL ENTITIES in the management

accounting seminar, approximately 43% (23/54) of topical Themes in the information systems seminar, and approximately 22% (14/65) of topical Themes in the auditing seminar. Appendix 10 in Volume 2 categorizes non-conscious entities in the category LOCAL ENTITIES based on categories defined by Halliday and Matthiessen (1999) as outlined in Section 6.3. Data in Appendix 10 is drawn from local entities listed in Appendices 7.1.1, 8.1.1 and 9.1.1 and includes entities, and pronouns used to refer to entities, but not instances of nominal deixis that refer to entities in the concrete context of the speech interaction (Halliday & Matthiessen, 1999:179). Appendix 10 is summarized in Figure 6.22. Adjusted figures in the shaded columns are shown in chart form in Figure 6.23.

Figure 6.22 Types of non-conscious local entities chosen as topical Theme in each seminar

Local entities	Management accounting		Information systems		Auditing	
	Actual	Adj	Actual	Adj	Actual	Adj
Object (material)	0	0.0%	0	0.0%	0	0.0%
Substance	0	0.0%	0	0.0%	0	0.0%
Abstraction (material)	0	0.0%	0	0.0%	0	0.0%
MATERIAL	0	0.0%	0	0.0%	0	0.0%
Institution	0	0.0%	0	0.0%	0	0.0%
Object (semiotic)	2	0.7%	19	4.9%	3	0.7%
Abstraction (discrete)	5	1.8%	2	0.5%	9	2.1%
Abstraction (non-discrete)	0	0.0%	0	0.0%	0	0.0%
SEMIOTIC	7	2.5%	21	5.4%	11	2.5%
TOTAL	7	2.5%	21	5.4%	12	2.7%

Figure 6.23 Chart showing types of non-conscious local entities chosen as topical Theme in each seminar



Figures 6.22 and 6.23 show non-conscious participants in this analytical category to be semiotic, including semiotic objects and discrete abstractions. Semiotic objects were most frequently chosen as topical Theme in the information systems seminar, with these accounting for 4.9% of topical Themes in the accounting information systems seminar overall. As shown in Appendix 10 these were mostly references to the text book or parts of it, as in: ***The text** talks about point scoring analysis for example* (IS156). The management accounting and auditing lecturers each also used *the text* as topical Theme, but less frequently. The nominal group *the rest of week three* in the information systems seminar was categorized as semiotic object rather than discrete abstraction because it functions as a participant in a figure of saying which is a criterion for the former category as shown in Figure 6.14 (***The rest of week three** talks about methods of developing systems* (IS248)). In contrast, *part one of systems development planning* in the information systems seminar was categorized as discrete abstraction as it does not function as a participant in a figure of saying (***Okay so last week, week three, part one of systems development planning** was all about um, an introduction to ah how organizations go about developing systems* (IS4)).

There are a number of entities in the sub-category discrete (semiotic) abstractions in each seminar: 5 in management accounting, 2 in information systems, and 9 in the auditing seminar. Although it might be expected that these entities would be coded in the preliminary analytical category ABSTRACT ENTITIES, these entities are ‘intermediate between semiotic objects and (non-discrete) semiotic abstractions’ (Halliday & Matthiessen 1999:193) as explained in Section 6.3. Each is countable, one of Halliday and Matthiessen’s criteria for discrete abstractions. They are coded to

this analytical category as each is limited to the scope of the pedagogic context. This is indicated through different forms of premodification, including the definite article, possessive determiners, comparative reference and/or ordinal or cardinal numeratives as shown in the examples in Figure 6.24. While the various forms of premodification in Figure 6.24 are also used in other preliminary analytical categories described below, the entities in those categories are not limited to the scope of the pedagogic context.

Figure 6.24 Premodification of discrete (semiotic) abstractions in LOCAL ENTITIES

Premodification	Example	Source	Explanation
Definite article (the); ordinal numerative (second)	<u>the second</u> <u>[method]</u>	MA111	The identity of the entity is presumed (Martin & Rose, 2007:168) and limited to the scope of methods selected for pedagogic purposes in unit MA105. In MA105, the lecturer introduces three methods to determine transfer pricing. As indicated on the transcript these three methods are selected for pedagogic purposes as there are more than three methods (e.g. Law (2010:419) lists six methods). These three selected methods are discussed in turn in subsequent units. The second of these three methods is introduced in MA111.

Possessive determiner (our); ordinal numerative (second)	<u>our second</u> <u>type of</u> <u>measure</u>	MA208	The identity of the entity is presumed and limited to the scope of measures selected for pedagogic purposes in unit MA159. In MA159, the lecturer introduces three financial performance measures that will be discussed. The second of these three measures is introduced in MA208.
Definite article (the); comparative reference (other); cardinal numerative (one),	<u>the other</u> <u>one</u> [procedure]	AUD149	The identity of the entity is presumed and limited to the scope of procedures selected for pedagogic purposes in unit AUDA142. In AUD142, the lecturer introduces three procedures that are listed on the lecture slides (<i>these ones here</i>). Two are explained in turn, with the third introduced as <i>the other one</i> in AUD149.

6.5.2 Specific entities

Meanings in this category remain context dependent, although they relate to contexts outside the learning and teaching environment. This category includes references to specific individuals or named organizations, and specific material or semiotic entities. In contrast to the previous analytical category, the entities in this category are participants in processes that take place outside the classroom. This category includes specific case examples that are usually hypothetical; direct references to lecturers' own experience of practice (as in IS386 below), and reference to participants in actual events or states of affairs in which the lecturers themselves may have no direct

involvement. The processes in this category are grounded in time and space, as indicated through the use of past or present perfect tense, and/or circumstances of location, as in these two examples from the information systems seminar: *you know fifteen years ago I could buy process manufacturing software* (IS386); *You know, in my last company for example, it was about a sixty million dollar company* (IS81).

As shown in Figure 6.15 above, the relative size of this category ranged from 8.4% of topical Themes in the auditing seminar, to 15.2% of topical Themes in the information systems seminar. Between the two, this category in the management accounting seminar accounted for 10.5% of the topical Themes in that seminar. The size of the category in terms of words coded was slightly more consistent, with approximately 11% of words in the management accounting seminar coded in this category, 16% of words in the information systems seminar, and 10% of the auditing seminar. As well as being slightly larger in size, this category in the information systems seminar can be differentiated from the other seminars by the frequency of first and second person pronouns. This is explained by the lecturer's use of examples from her own professional experience throughout the seminar.

As in the previous section, topical Themes coded in this category are listed in the Appendix: topical Themes in this category in the management accounting seminar are in Appendix 4.2, those from information systems in Appendix 5.2; and auditing in Appendix 6.2. This data is grouped into further sub-categories in Appendices 7.2 (management accounting), 8.2 (information systems) and 9.2 (auditing). Data from these Appendices is summarized in Figures 6.25. Pronouns from Appendices 7.2, 8.2, 9.2 are summarized in Figure 6.26, and non-conscious entities are summarized in Figure 6.27.

Figure 6.25 Types of specific entities chosen as topical Theme in each seminar

Specific entities		Management accounting		Information systems		Auditing	
		Actual	Adj	Actual	Adj	Actual	Adj
Conscious participants	Personal reference	0	0.0%	0	0.0%	0	0.0%
	Institutional reference	9	3.3%	7	1.8%	1	0.2%
	General nouns	0	0.0%	0	0.0%	0	0.0%
	Pronouns (conscious participants)	15	5.5%	37	9.5%	29	6.6%
	<i>SUBTOTAL</i>	24	8.7%	44	11.3%	30	6.8%
Non-conscious participants	Specific entities	5	1.8%	11	2.8%	6	1.4%
	Pronouns (non-conscious participants)	0	0.0%	4	1.0%	1	0.2%
	<i>SUBTOTAL</i>	5	2.2%	15	3.8%	7	1.6%
	TOTAL	29	10.5%	59	15.2%	37	8.4%

Conscious participants

As with the previous analytical category, the majority of topical Themes coded in this category refer to conscious participants: approximately 83% (24/29) of the topical Themes coded SPECIFIC ENTITIES in the management accounting seminar, approximately 75% (44/59) of the topical Themes in this category in the information systems seminar, and approximately 81% (30/37) of topical Themes in this category in the auditing seminar. Also consistent with the previous category, pronouns were used more frequently than other forms of reference to conscious participants within topical Themes. As shown in Appendix 7.2, the management accounting lecturer used institutional reference to refer to departments and managers in case examples. The specific identity of these is indicated through the labels given to each entity that are used to track the participants within the example (e.g. Department A or Department B). The information systems lecturer also institutional reference in referring to specific entities in her recounts of professional experience (the CEO, the company, my team, and our customers, the Commonwealth bank, Telstra). The

specific identity of each of these is indicated by the definite article, a possessive determiner, or company name. The other instance of institutional reference in the information systems seminar is to *a bank*, in the context of introducing a specific example: *and let's say a bank wants to launch a new product or a new service* (IS279). Here the indefinite article *a* is used, as the lecturer is 'presenting' a new participant (Martin & Rose, 2007: 168). The context of the example is introduced in the previous unit: *So generally if you [are] doing, you have to do a very, a reasonably small development* (IS278). The only instance of institutional reference within the topical Theme in this analytical category in the auditing seminar was to *the client*, in *Maybe the client has been susceptible to, you know, high foreign exchange* (AUD231). Here the specific identity of the client is indicated with the definite article.

As shown in Figure 6.26 lecturers used a range of pronouns in topical Themes in this analytical category. The information systems lecturer uses pronouns in topical Themes in this category more frequently than the other two lecturers, with pronouns referring to conscious participants accounting for 9.5% of topical Themes in information systems seminar overall. Figure 6.26 indicates that lecturers choose a range of pronouns as topical Theme in this analytical category. Although the frequency of each pronoun is quite low, the range of pronouns chosen indicates that these provide an opportunity for lecturers to position themselves and practitioners in different ways as shown in the following examples from the seminar data.

The information systems lecturer frequently uses the first person pronouns *I (speaker)* and *we (speaker plus specific others)* when recounting her professional experience, as in the following: *I used our auditors, KPMG* (IS143), *and we produced two volumes like this of an RFP* (IS144), coded as SPECIFIC ENTITIES rather than LOCAL ENTITIES as they refer to activity outside the context of the classroom. While the auditing lecturer also uses *we (speaker plus specific others)* in data coded in this category, this is to refer to practitioners within case examples, as in units AUD257 and AUD258 shown in Figure 6.8 above. Neither the management accounting lecturer nor the auditing lecturer used first person pronouns as topical Themes to recount their own professional experience.

Figure 6.26 Types of pronouns referring to specific entities chosen as topical Theme in each seminar

Specific entities		Management accounting		Information systems		Auditing	
		Actual	Adj	Actual	Adj	Actual	Adj
Speech roles	I=speaker recounting experience	0	0.0%	8	2.1%	0	0.0%
	we=speaker plus specific others [practitioners]	0	0.0%	17	4.4%	2	0.5%
Other roles	I=specific actor [practitioner]	6	2.2%	0	0.0%	8	1.8%
	I =specific actor [not practitioner]	6	2.2%	0	0.0%	0	0.0%
	you=specific actor [practitioner]	0	0.0%	0	0.0%	15	3.4%
	you=specific actor [not practitioner]	0	0.0%		0.3%	1	0.2%
	he= specific actor	0	0.0%	6	1.5%	0	0.0%
	they=one or more specific others [not practitioners]	3	1.1%	3	0.8%	3	0.7%
	it = conscious entity	0	0.0%	2	0.5%	0	0.0%
	SUB TOTAL	15	5.5%	37	9.5%	29	6.6%
Other roles (non-conscious)	it= specific entity	0	0.0%	4	1.0%	0	0.0%
	they = specific entities	0	0.0%		0.0%	1	0.2%
	SUB TOTAL	0	0.0%	4	1.0%	1	0.2%
TOTAL ALL PRONOUNS		15	5.5%	41	10.5%	30	6.8%

Both the management accounting lecturer and the auditing lecturer use *I* to refer to practitioners and others in case examples, rather than to speech roles in the classroom context, as in the following examples: *From an analysis I evaluate that seventy percent of the profit of the, if it was a hundred million, was from department A and thirty percent was from department B* (MA41); *So I [am] department manager B* (MA55); *So, if I confirm the balance, I might write to the, to the debtor and ask them to confirm that their balance is what's in the accounts* (AUD351). *I would also look at subsequent receipts* (AUD352).

The auditing lecturer also uses the pronoun *you* to refer to practitioners within case examples, rather than to speech roles in the classroom context: *For example, let's say you [have] got intangible assets* (AUD370). In his discussion of engagement in academic writing, Hyland (2009) suggests that the meaning of *you* in the sense shown in AUD370 is 'closer to the indefinite pronoun *one*' and 'seeks to engage the [audience] through shared experience rather than direct personal interaction' (p. 116, italics in original). The use of *I* in MA41, MA55 and AUD351–352 above could be seen as seeking an even closer alignment with the experience of the listener, creating a space for them to put themselves in the role of the practitioner or other participant in the example. The role of pronouns in enacting social roles will be discussed further in Section 7.2.

As can be seen in Figure 6.26, fewer third person pronouns were used in this category. The information systems lecturer uses *he* to refer to specific entities in examples drawn from her own experience. As an example: *He was a user of Excel* (IS96), *he could do all sorts of things with pivot tables, macros and that sort of stuff* (IS97). All three lecturers use *they* to a limited extent to refer to specific conscious participants. In the management accounting and auditing seminars, *they* refers to participants in case examples. In the information systems seminar, *they* refers to either participants in recounts of the lecturer's professional experience, or participants in specific case examples. In unit IS150 for example, *they* refers to software vendors, in a specific case defined by the circumstantial adjunct in IS151 (*when you sit down to say evaluate the vendor*). For consistency, the pronoun *it* used to refer to a conscious entity has been included in Figure 6.26 although it is only used twice by the information systems lecturer in reference to *my last company* (IS81), and *a bank* (IS279).

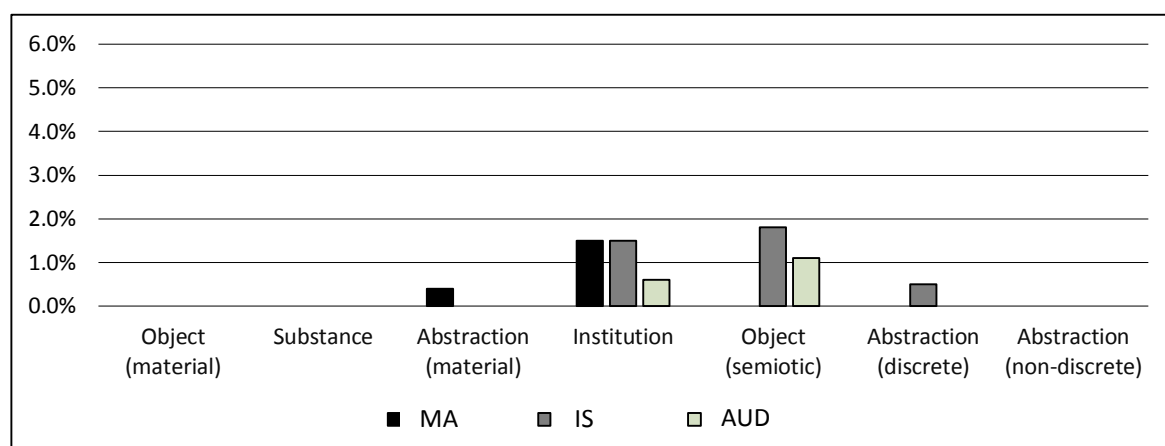
Non-conscious participants

As in the previous analytical category, non-conscious entities chosen as topical Theme in the category SPECIFIC ENTITIES drawn from Appendices 7.2, 8.2 and 9.2 are categorized according to Halliday and Matthiessen’s typology of non-conscious entities (Figure 6.14) in Appendix 11. Appendix 11 includes non-conscious entities and pronouns used to refer to these, and is summarized in Figure 6.27. Adjusted figures from the shaded columns are then shown in chart form in Figure 6.28.

Figure 6.27 Types of non-conscious specific entities chosen as topical Theme in each seminar

Specific entities	Management accounting		Information systems		Auditing	
	Actual	Adj	Actual	Adj	Actual	Adj
Object (material)	0	0.0%	0	0.0%	0	0.0%
Substance	0	0.0%	0	0.0%	0	0.0%
Abstraction (material)	1	0.4%	0	0.0%	0	0.0%
MATERIAL	1	0.4%	0	0.0%	0	0.0%
Institution	4	1.5%	6	1.5%	2	0.6%
Object (semiotic)	0	0.0%	7	1.8%	5	1.1%
Abstraction (discrete)	0	0.0%	2	0.5%	0	0.0%
Abstraction (non-discrete)	0	0.0%	0	0.0%	0	0.0%
SEMIOTIC	4	1.5%	15	3.9%	7	1.6%
TOTAL	5	1.8%	15	3.9%	7	1.6%

Figure 6.28 Chart showing types of non-conscious specific entities chosen as topical Theme in each seminar



The specific identity of non-conscious entities in this category is indicated through various forms of pre-modification, including for example the definite article (***the transfer price*** (MA15)), and possessive determiners (***their controls*** (AUD275)). In some instances, the specific nature of entities derives from the use of tense in the New component of the clause, as in unit IS53 from the information systems seminar: ***so a whole lot of methodologies and then subsequently software, so actual software programs have been developed to support that*** (IS53). In unit IS53, the specific nature of the example is indicated through pre-modification (*actual*) and the use of the present perfect tense (*have been developed*). The latter indicates that the action extends into the present, rather than the generic activity of the preceding two units: ***you can't wait two years for that new system to be developed*** (IS51); and ***That [is] generally unacceptable today*** (IS52).

Fewer non-conscious entities were chosen as topical Theme in this category compared to the category LOCAL ENTITIES. As with the category LOCAL ENTITIES, non-conscious entities chosen as topical Theme in this category were more frequently semiotic than material, with only one example of a material abstraction in the management accounting seminar (***the net difference [in the example]*** (MA72)).

The distribution of non-conscious entities across the various sub-categories of non-conscious entities in Figure 6.27 was different in this category. Unlike the category LOCAL ENTITIES, this category includes data in the sub-category *institutions* in each seminar, with 4 institutional abstractions in the management accounting seminar (representing 1.5% of topical Themes in that seminar), 6 in the information systems seminar (1.5%) and 2 in the auditing seminar (0.6%). An examination of preliminary

analytical categories revealed that institutional abstractions were an important section of the seminar data, being frequently chosen as topical Theme in the category ABSTRACT ENTITIES, and also to some extent in the category GENERIC ENTITIES, so institutional abstractions from each of the categories SPECIFIC ENTITIES, GENERIC ENTITIES and ABSTRACT ENTITIES will be discussed further in Section 6.6.

Figure 6.27 shows that there are fewer semiotic objects in this analytical category in the information systems seminar compared with the category LOCAL ENTITIES, and none in the management accounting seminar. The role of semiotic objects in accounting practice is discussed further in Section 7.2. The lack of semiotic objects chosen as topical Theme in the management accounting seminar is a feature of this seminar that will be noted again in the categories GENERIC ENTITIES and ABSTRACT ENTITIES and discussed further in Section 7.5.3. As shown in Appendix 11, semiotic objects in the information systems seminar largely refer to software, which can be considered semiotic in that it is composed of lines of code. This code consists of ‘instructions and algorithms that, when combined and supplied with appropriate input, produce routines and programs capable of complex digital functions’ (Kitchin & Dodge, 2011:3). While software is a semiotic entity, its properties enable it to be used as a mechanism with causal effects, for example to *run manufacturing plants* as shown in units IS216–218:

And we had that for example with our customers, because we had what they call mission critical software (IS216), **that is our software** was used to run manufacturing plants (IS217), **and if our software suddenly stopped, fell over, as we commonly say, suddenly, our customers** can’t produce any products (IS218).

Appendix 11 shows that semiotic objects in the auditing seminar include various references to components of financial statements (**a transaction** [in the example], **a balance sheet item** [in the example], **the bank balance** [in the example]) and an auditor’s working papers (**those audit work papers** [in the example]; and **permanent information** [in the example]). The topical Theme **permanent information** refers to a category of information within an auditor’s working paper file. This participant is presented in unit AUD413 of the auditing seminar: *Now **the working paper file** can be made up of current and permanent information.* The working paper file consists of semiotic objects, and the category *permanent information* could include a range of

written documents. Two examples are given in the seminar: *Permanent information could be things like, if they've taken out a contract or a lease that goes over a number of years (AUD415).*

6.5.3 Generic entities

This analytical category includes references to generic individuals or generic organizations as actors, and generic material or semiotic entities. Generic participants and processes could be regarded as weaker in semantic gravity (Matruglio, Maton, & Martin, 2013:45), or less context-dependent than the specific participants and processes in the previous category. In Muller's (2007) terms, this represents a break away from the coincidence of time and space in the previous analytical category, to generic entities and processes that transcend position in time and space.

As indicated in Figures 6.15 and 6.16, there was considerable variation between seminars in the relative size of this category, both in terms of the number of topical Themes coded, and in the number of words coded. As shown in Figure 6.15, this category was largest in the auditing seminar compared to the other seminars, and also the largest of all the analytical categories in the auditing seminar, with GENERIC ENTITIES accounting for 37.6% of all topical Themes. The category GENERIC ENTITIES is twice the size of the next largest category in the auditing seminar (ABSTRACT ENTITIES at 18.7%). It was also the largest category in the information systems seminar, with 29.6% of topical Themes coded GENERIC ENTITIES. Again, this is nearly twice the size of the category ABSTRACT ENTITIES in the information systems seminar (15.7%). The opposite is the case in the management accounting seminar. Here, the category GENERIC ENTITIES accounts for 13.5% of topical Themes, where the category ABSTRACT ENTITIES is larger at 20.7%. A similar pattern holds for the size of this category as measured by the number of words coded. Figure 6.17 shows 40.1% of words in the auditing seminar coded in this category (twice the size of the category ABSTRACT ENTITIES in the auditing seminar with 19.1% of words coded), 29.8% of words coded in the information systems seminar (compared to 17.2% in ABSTRACT ENTITIES), and 17% of words coded in the management accounting seminar (compared to 25.5% in ABSTRACT ENTITIES). Topical Themes coded in this category are listed in Appendix 4.3 (management accounting) Appendix 5.3 (information systems); and auditing in Appendix 6.3

(auditing). This data is grouped into further sub-categories in Appendices 7.3 (management accounting), 8.3 (information systems) and 9.3 (auditing). Data from these Appendices is summarized in Figures 6.29 and 6.30: pronouns from Appendices 7.2, 8.2, 9.2 are summarized in Figure 6.29, and non-conscious entities are summarized in Figure 6.30.

Conscious participants

Figure 6.29 shows that, as in previous categories, the majority of topical Themes in this analytical category were conscious participants, with these accounting for approximately 70% (26/37) of topical Themes in this category in the management accounting seminar, approximately 77% (89/115) of topical Themes in this category in the information systems seminar and approximately 88% (145/165) of topical Themes in this category in the auditing seminar. Also as with previous categories, pronouns were used more frequently than other forms of reference to conscious participants. They were used most frequently in the auditing seminar, accounting for 31% of topical Themes in that seminar, as compared with 9.1% of topical Themes in the management accounting seminar. In the information systems seminar pronouns accounted for 18.0% of topical Themes.

Figure 6.29 Types of generic entities chosen as topical Theme in each seminar

Generic entities		Management accounting		Information systems		Auditing	
		Actual	Adj	Actual	Adj	Actual	Adj
Conscious participants	Personal reference	0	0.0%	0	0.0%	0	0.0%
	Institutional reference	1	0.4%	11	2.8%	7	1.6%
	General nouns	0	0.0%	8	2.1%	2	0.5%
	Pronouns (conscious participants)	25	9.1%	70	18.0%	136	31.0%
	SUBTOTAL	26	9.5%	89	22.9%	145	33.0%
Non-conscious participants	Generic entities	11	4.0%	17	4.4%	15	3.4%
	General nouns	0	0.0%	1	0.3%	4	0.9%
	Pronouns (non-conscious participants)	0	0.0%	8	2.1%	1	0.2%
	SUBTOTAL	11	4.0%	27	6.9%	20	4.6%
	TOTAL	37	13.5%	115	29.6%	165	37.6%

A breakdown of pronouns is shown in Figure 6.30. This shows that the most frequently used pronoun was generic *you*, which constituted 13.9% of all topical Themes in the information systems seminar, and 14.1% of topical Themes in the auditing seminar. Generic *you* was used less frequently in the management accounting seminar, accounting for only 1.5% of topical Themes. Instead, the management accounting lecturer used *I* more frequently than the other two to refer to generic practitioners and non-practitioners. An example of this use of *I* can be seen in unit MA194: *So if I increase my expenditure on my invested capital, I would decrease, I would decrease my rate of return.* Another frequently used pronoun in the auditing seminar was *we* (*speaker plus generic others*). This was chosen as topical Theme in 13.4% of analytical units in the auditing seminar, as compared with 1.5% of topical Themes in the management accounting seminar and 1.0% in the information systems seminar.

Figure 6.30 Types of pronouns referring to generic entities chosen as topical Theme in each seminar

Generic entities		Management accounting		Information systems		Auditing	
		Actual	Adj	Actual	Adj	Actual	Adj
Other roles	I= generic actor [practitioner]	4	1.5%	0	0.0%	8	1.8%
	I= generic actor [not practitioner]	9	3.3%	0	0.0%	0	0.0%
	you=generic actor(s) [practitioner]	4	1.5%	54	13.9%	62	14.1%
	you=generic actor(s) [not practitioner]	0	0.0%	1	0.3%	0	0.0%
	we=speaker plus generic others [practitioners]	4	1.5%	4	1.0%	59	13.4%
	they=one or more generic others [practitioners]	0	0.0%	1	0.3%	1	0.2%
	they=one or more generic others [not practitioners]	4	0.0%	10	2.6%	6	1.4%
	SUB TOTAL	25	9.1%	70	18.0%	136	31.0%
Other roles (non-conscious)	it= generic entity	0	0.0%	1	0.3%	1	0.2%
	they = generic entities	0	0.0%	7	1.8%	0	0.0%
	SUB TOTAL	0	0.0%	8	2.1%	1	0.2%
TOTAL ALL PRONOUNS		25	9.1%	78	20.1%	137	31.2%

Non-conscious participants

As shown in Figure 6.29, the category GENERIC ENTITIES includes more non-conscious participants than the previous categories, with these accounting for 4.0% of topical Themes in management accounting, compared with 1.8% in the previous category, 6.7% of topical Themes in the information systems seminar compared with 3.9%, and 4.6% of topical Themes in the auditing seminar compared with 1.6%.

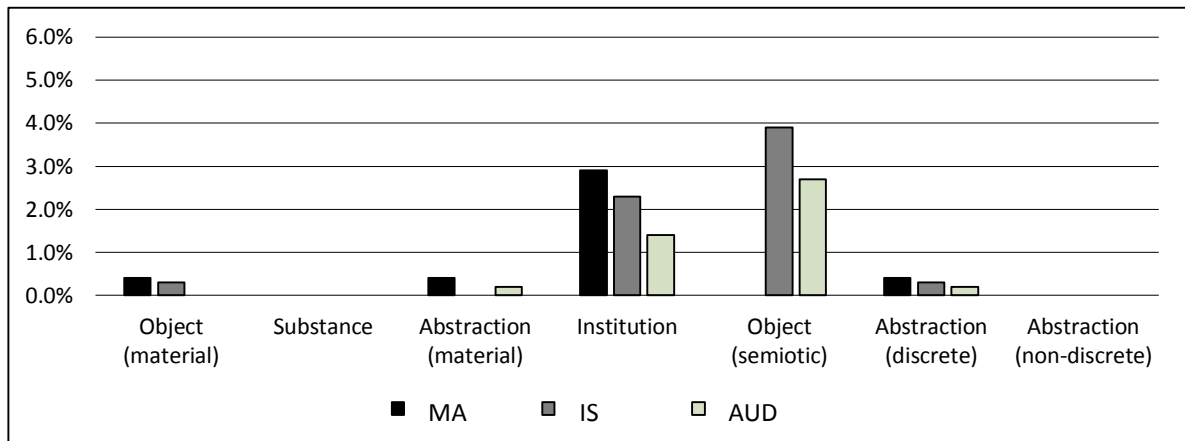
Non-conscious entities in this category are grouped according to Halliday and Matthiessen’s typology in Appendix 12. This data is summarized in Figure 6.31.

Adjusted figures in the shaded columns are shown in chart form in Figure 6.32.

Figure 6.31 Types of non-conscious generic entities chosen as topical Theme

Generic entities	Management accounting		Information systems		Auditing	
	Actual	Adj	Actual	Adj	Actual	Adj
Object (material)	1	0.4%	1	0.3%	0	0.0%
Substance	0	0.0%	0	0.0%	0	0.0%
Abstraction (material)	1	0.4%	0	0.0%	1	0.2%
MATERIAL	2	0.7%	1	0.3%	1	0.2%
Institution	8	2.9%	9	2.3%	6	1.4%
Object (semiotic)	0	0.0%	15	3.9%	12	2.7%
Abstraction (discrete)	1	0.4%	1	0.3%	1	0.2%
Abstraction (non-discrete)	0	0.0%	0	0.0%	0	0.0%
SEMIOTIC	9	3.3%	25	6.4%	19	4.3%
TOTAL	11	4.0%	26	6.7%	20	4.6%

Figure 6.32 Chart showing types of non-conscious generic entities chosen as topical Theme



Figures 6.31 and 6.32 show that overall there are more institutional abstractions and semiotic objects chosen as topical Theme in this category compared with the previous analytical category SPECIFIC ENTITIES. Institutional abstractions account for 2.9% of topical Themes in the management accounting seminar, 2.3% of topical Themes in the information systems seminar, and 1.4% of topical Themes in the auditing seminar. Institutional abstractions in this analytical category will be discussed further in Section 6.6. Again, as with the previous category, there are no semiotic objects chosen as topical Theme in the management accounting seminar. In the information systems seminar, these account for 3.9% of topical Themes and in the auditing seminar, 2.7%. Where there were no material objects chosen as topical Themes in the previous category, in this category there is one material object chosen as topical Theme in both the management accounting (*machinery*) and information systems (*a system*) seminars. The latter refers to a system as an object: *so, and a, a system is much more, often much more expensive than a car* (IS139). This category also includes more discrete abstractions chosen as topical Theme than the previous category SPECIFIC ENTITIES, although numbers of these remain relatively low.

Figure 6.31 indicates that 15 semiotic objects were chosen as topical Theme in the information systems seminar, and 12 in the auditing seminar. These are listed in Appendix 12. Most can be clearly seen to be different kinds of semiotic objects (e.g. *the contract* (IS213); *work papers* (AUD400)). The information systems seminar includes several references to *software* that, as noted in the previous analytical category, has different properties to the other semiotic objects in the data. In this analytical category, software is represented as capable of using other entities: *Now the*

*interesting thing about systems as I said in week one, the software uses data, of course (IS231). Further, it is represented as having the capacity to generate further meaning: Lower CASE is generally what generates the software, sorry the program code (IS73). The potential of software to create new meanings is acknowledged by Smith et al. (2011), who explain that software resources provide scope for ‘creating (multimodal) discourse’ (p. 361). The term ‘multiodality’ was introduced in Section 5.6, and refers to meanings carried by means other than language, for example through sound or images. Software is a tool that both mediates and augments practice (Kitchin & Dodge 2011). As noted in the previous analytical category, it can be deployed as a mechanism, in that it ‘instructs computer hardware—physical, digital circuitry—about what to do which in turn can engender action in other machinery’ (p. 3). Mechanisms will be discussed further in Chapter 7. The semiotic object in unit IS247 indicates another feature of technological tools such as internet applications—that is, they have extension in virtual space (*web-based*) rather than physical space: ***And now when you deal with the internet, a lot of applications are web based*** (IS347).*

The semiotic objects in the auditing seminar again are associated with either financial statements (***inventory*** (AUD213); ***it*** [*account balance*] (AUD349)), or an auditor’s working papers (***work papers*** (AUD400); ***your folder*** (AUD407); ***what you’ve got in there*** (AUD408)). It should be noted that where the topical Theme ***permanent information*** (AUD415) in the auditing seminar was coded in the previous analytical category, the topical Theme ***current information*** (AUD414) has been coded as a GENERIC ENTITY as no specific examples are given: ***Current information*** is *information that's relevant just for the audit that we've done this year* (AUD414). The topical Theme *some items* refers to categories within an auditor’s working papers: ***Obviously some items*** *might only have a little bit of information* (AUD425).

6.5.1 Abstract entities

By definition, this category does not include conscious entities as topical Theme. Non-conscious entities in this category are listed in Appendices 4.4 (management accounting), 5.4 (information systems) and 6.4 (auditing). Data from these Appendices are further categorized into Halliday and Matthiessen’s categories of non-conscious participants in Appendix 13. Appendix 13 is summarized in Figure 6.33,

with adjusted figures shown in chart form in Figure 6.34. The scale of the chart in Figure 6.34 matches charts reporting non-conscious entities in the previous analytical categories. Figures 6.33 and 6.34 show that institutional abstractions were chosen as topical Theme more than any other type of abstraction in this category, with institutional abstractions accounting for 77% (44/57) of non-conscious entities chosen as topical Theme in this category in the management accounting seminar, and 16% of all topical Themes in that seminar. Institutional abstractions in the information systems seminar accounted for approximately 85% (52/61) of the non-conscious entities in this category in the information systems seminar and 13.4% of all topical Themes in that seminar. In the auditing seminar, approximately 87% (71/82) of non-conscious entities were institutional abstractions, and these constituted 16.1% of all topical Themes in the auditing seminar. Institutional abstractions chosen as topical Theme in this category will be discussed further in Section 6.6.

Other types of non-conscious entities chosen as topical Theme in the category ABSTRACT ENTITIES included semiotic objects, discrete abstractions and non-discrete abstractions. Semiotic objects were infrequent, but there were two in the management accounting seminar, unlike in the previous analytical categories where there were none of these. As can be seen in Appendix 13, the two semiotic objects in the management accounting seminar were references to the formula for *weighted average cost of capital* as a semiotic object, in response to a student who compared the 'look' of the formula to that for *residual income*. This exchange can be found in units MA260 to 269 in the management accounting seminar transcript in Appendix 1. The only other semiotic object was a reference to the audit risk model on the screen in the auditing seminar: ***in the middle*** [of the model] (AUD264).

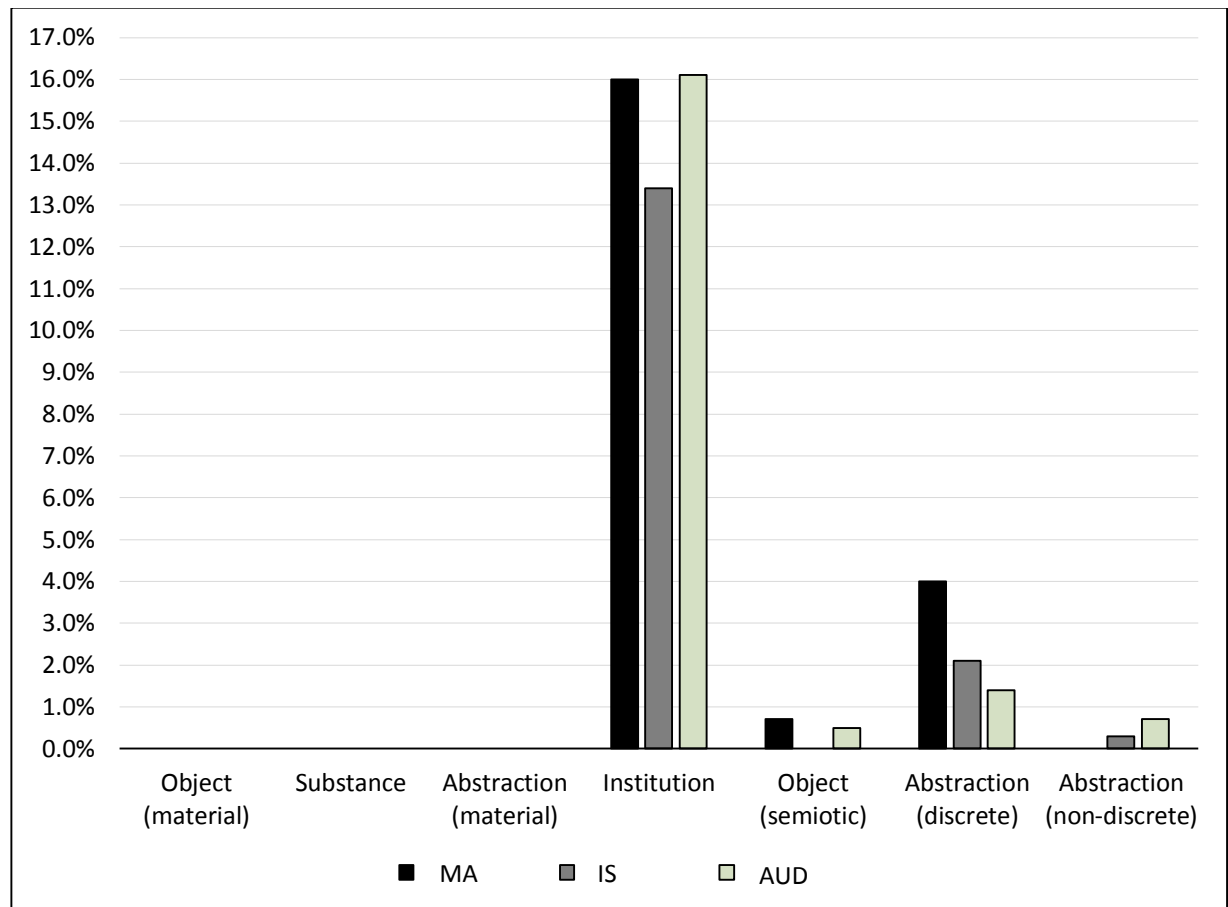
A number of discrete abstractions were chosen as topical Theme in each seminar in this category. As can be seen in Figure 6.33, these were chosen as topical Theme more frequently in the management accounting seminar compared to the other two seminars, and represented 4% of all topical Themes in that seminar. Discrete abstractions in this analytical category represented 2.1% of topical Themes in the information systems seminar, and 1.4% of topical Themes in the auditing seminar. Appendix 13 shows that these discrete abstractions in each seminar were generally embedded clauses within relational identifying processes expressing lecturer comment on abstract entities, for example: ***the key to a transfer price*** (MA8); ***the***

challenge [with the system development life cycle and the steps we go through] (IS33); and ***what it means*** (AUD216). There were also four non-discrete abstractions in this analytical category. These included one in the information systems seminar: ***Things*** are much more visual today (IS349); and three in the auditing seminar, each of which were elaborating on internal and external factors in unit AUD227: [***They*** are] outside of our control (AUD228). [***They*** are] outside of the control of the entity (AUD229). [***They*** are] more environmental characteristics, okay (AUD230).

Figure 6.33 Types of non-conscious entities chosen as topical Theme in the category ABSTRACT ENTITIES

Abstract entities	Management accounting		Information systems		Auditing	
	Actual	Adj	Actual	Adj	Actual	Adj
Object (material)	0	0.0%	0	0.0%	0	0.0%
Substance	0	0.0%	0	0.0%	0	0.0%
Abstraction (material)	0	0.0%	0	0.0%	0	0.0%
MATERIAL	0	0.0%	0	0.0%	0	0.0%
Institution	44	16.0%	52	13.4%	71	16.1%
Object (semiotic)	2	0.7%	0	0.0%	2	0.5%
Abstraction (discrete)	11	4.0%	8	2.1%	6	1.4%
Abstraction (non-discrete)	0	0.0%	1	0.3%	3	0.7%
SEMIOTIC	57	20.7%	61	15.7%	82	18.7%
TOTAL	57	20.7%	61	15.7%	82	18.7%

Figure 6.34 Chart showing types of non-conscious entities chosen as topical Theme in the category ABSTRACT ENTITIES



6.6 Stage 1: Institutional abstractions chosen as topical Theme

This section examines institutional abstractions chosen as topical Theme in the categories SPECIFIC ENTITIES, GENERIC ENTITIES and ABSTRACT ENTITIES.

Institutional abstractions in each of these categories are listed in Appendix 14, which shows that institutional abstractions are quite different in nature. While many items in the category of institutional abstractions are technical terms, or technical abstractions (Martin & Rose, 2007), Halliday and Matthiessen do not provide a separate category within their typology of entities for technical abstractions. Further to this, the status of these items as institutional abstractions connects them with the institutional order—the social system or institution in which the interpersonal exchanges that constitute accounting practices are embedded, and to which they also contribute. This recognizes relations between professional and institutional discourses (Sarangi & Roberts, 1999), and the role that accounting practices play in

‘constitut[ing] and reconstitut[ing]’ the economic domain of social life (Miller, 1994). The nature of institutions will be discussed further in the following chapter.

Based on the data in Appendix 14, five subcategories of institutional abstractions were established:

1. Accounting categories
2. Practitioner activity
3. Tokens of exchange
4. Rules
5. Symbolic relations

Each of these subcategories will be described with reference to the seminar data below.

Accounting categories

Accounting categories used within the seminar data mark the structure of the social system or institutional order in which professional practice is embedded and to which accounting practices contribute. These categories are extensive beyond professional practices in the accounting field to structure financial exchange in social and organizational practices. Accounting discourse lends structure to economic activity and is also structured by it. That these elements of the financial system are thematized in the seminar data indicates their role in structuring the work of practitioners in management accounting, information systems and auditing. Items in the subcategory *accounting categories* are listed in Appendix 15.1.

The abstractions **revenue** (MA25, MA29), **expenses** (MA27), **return** (MA269) and **debtors** (AUD357) used within the categories SPECIFIC ENTITIES and GENERIC ENTITIES are *categories* within accounting discourse that have become part of managing everyday economic activity in social and organizational practices, as well as in professional practices. These terms are specialized to the social institution of the economy, within which these practices are located. As well as their more general meanings, these terms also have more specific meanings in accounting—meanings that students would have encountered in earlier subjects of their degree program. The general meaning of *revenue* for example is ‘income, esp[ecially] of a large amount, from any source’ (Hughes, Michell, & Ramsom, 1992:980), while its more specific

meaning in accounting is '[c]ost and income items that are either charged or credited to the profit and loss account for an accounting period' (Law, 2010:364).

Institutional abstractions chosen as topical Themes in the data also include elements of financial exchange such as *cost*, *capital*, *fee* and *receipt* that have more specific technical meaning throughout the broader field of accounting. These elements of financial exchange are identified in professional discourse as *types* of things, for example different types of *cost*. Examples from the data include *opportunity cost* (MA126) and *invested capital* (MA166, MA169) in management accounting; *maintenance costs* (IS355); and *support fee* (IS203, IS204, IS207) in information systems; and *subsequent receipts* (AUD354) in auditing. One type of *cost* in the management accounting seminar—*outlay cost* (MA125), expresses a symbolic relation (*product cost plus our opportunity cost to the supplying division* (MA125)) and is included in the sub-category of symbolic relations discussed below.

Practitioner activity

Institutional abstractions in the sub-category *practitioner activity* are associated with practitioners' projects and roles in interpersonal exchange as defined by the units of social organization (or institutions) in which that exchange takes place. This social system provides a framework that orders the work of practitioners into structured and meaningful activity.

Institutional abstractions that refer to elements of practitioner activity are listed in Appendix 15.2 where it can be seen that these are chosen as topical Theme most frequently in the information systems seminar (32 items), with just over half the number of instances of these in the auditing seminar (17 items), and around half those again in the management accounting seminar (9 items).

The items in the subcategory *practitioner activity* can be grouped into three further subsets, two of which have a number of elements:

- i) Practices
- ii) Projects: exchanges; techniques and procedures; tasks; actions
- iii) Roles: values; attributes

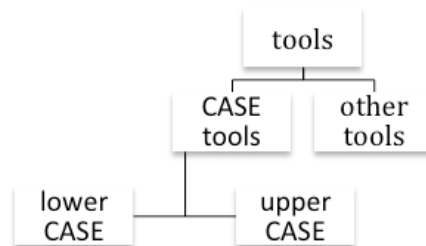
Practices in the seminar data include nominalized processes such as *transfer pricing* (MA3), *prototyping* (IS75) and *substantive testing* (AUD310). The term *projects*

derives from Archer's (2003) use of the term to describe the 'enterprises' of agents, that involve 'an end that is desired ... and also some notion, however imprecise, of the course of action through which to accomplish it' (p. 6). The content of each subset of *practitioner activity* is shown in Appendix 15.2.1. This combines all elements of each subset, which are then outlined in the following text.

Moving through the analytical categories of SPECIFIC ENTITIES, GENERIC ENTITIES and ABSTRACT ENTITIES, it can be seen in Appendix 15.2.1 that there are few items coded as *practitioner activity* in the category SPECIFIC ENTITIES, and these are only thematized in the information systems seminar. These items relate to the individual or collaborative *projects* of practitioners (IS129, IS131 and IS388) and tasks (*one of his first jobs* (IS94)). One abstraction in this category refers to a practitioner's role in interpersonal exchange. This takes the form of an embedded clause: *what you can do* within the relational identifying clause: ***but perhaps what you can do is build it from components*** (IS388). The emphasis is on the nominalization ***what you can do***, emphasizing the practitioner's role in meeting user requirements, rather than on the 'do-er'. The latter would be the case in a possible alternative realization: '*but perhaps you can build it from components*'. As in the following, the scope of this nominalization is limited to the specific case specified by the circumstantial adjunct in unit IS387 (*if you've got a really unique requirement*): ***So you're absolutely right, if you've got a really unique requirement, you may have no choice*** (IS387) ***but perhaps what you can do is build it from components, okay, which the text does talk about*** (IS388).

Institutional abstractions referring to practitioner activity are more frequently chosen as topical Theme in the category GENERIC ENTITIES in both the information systems seminar and the auditing seminar. As in the category SPECIFIC ENTITIES, topical Themes associated with *practitioner activity* in the category GENERIC ENTITIES refer to projects and roles as shown in Appendix 15.2.1. In this category however, these references are generic rather than specific. The sub-category *projects* in the category GENERIC ENTITIES includes thematic emphasis on nominalized actions (*the key action* (MA190) and nominalized collaborative actions or exchanges (*workshops* (IS304, 305, 310, 311, and 314)). It also includes thematic emphasis on two types of technique: *upper CASE* (IS72) and *lower CASE* (IS73). These have been categorized as institutional abstractions rather than semiotic objects in that they specify categories

of CASE (computer-aided software engineering) tools. In unit IS70, CASE tools are referred to as semiotic objects: *Basically they [are] software programs that are written to help you mock up screens, reports, generate program code from the way you design screens* (IS70). In units IS72 and IS73 however, reference is not to the CASE tools themselves as semiotic objects, but to categories of tools that are associated with different kinds of activity: *upper CASE is generally what you do for high level design* (IS72). The terms *upper CASE* and *lower CASE* are introduced in unit IS71: *They [are] referred to generally as upper CASE or lower CASE, not as in writing* (71). Here, the lecturer is building a simple taxonomy of semiotic objects that could be illustrated as follows:



In this taxonomy, *CASE tools* are semiotic objects (specified by the technical term *CASE tools* to indicate a particular kind of tool), and *upper CASE* and *lower CASE* are technical abstractions used to differentiate between different kinds of CASE tools, and in this seminar, are also used to differentiate between different kinds of practitioner activity.

In the auditing seminar, thematic emphasis in the category GENERIC ENTITIES was on the *roles* of practitioners—what they *might do*, *try to do*, or *do*. These different expressions of modality will be discussed further in Sections 6.7 and 7.3. Differences between representing practitioner activity as nominalized actions or exchanges, and representing practitioner activity as roles will be discussed further in Section 7.3.

Topical Themes in this subcategory of ABSTRACT ENTITIES include projects and roles as in the previous analytical categories. Projects in this analytical category include exchanges and actions as in the previous analytical categories, and also techniques and procedures. Roles in this analytical category extend to include values and attributes. In addition to projects and roles, the management accounting lecturer and auditing lecturer also thematize practices.

Data in Appendix 15.2.1 show that the management accounting lecturer only places thematic emphasis on professional practices, thematizing the practice of *transfer pricing* several times, and also thematizing *responsibility accounting*. In the information systems seminar, the lecturer thematizes various other elements of practitioner activity including projects and roles. The projects thematized in this seminar include tasks such as *determining the evaluation criteria* (IS174), and techniques and procedures such as *analysis and design* (IS39) and *another way [of speeding up systems development]* (IS78, IS80). In the latter, practitioners are represented as operationalizing a discourse of efficiency while developing systems. The information systems lecturer also thematizes aspects of a practitioner's role, emphasizing the duties of practitioners in *one of your key duties* [[in the organization]] (IS227) and *safeguarding that asset, [[and anything around it]]* (IS239), and also the values of practitioners: *one of the things you're concerned about* (IS41) and *one of the things you have to be concerned about* (IS116).

In the auditing seminar, only one practice is given thematic prominence—that of *substantive testing* (AUD310), along with various elements of projects and roles. Most thematic prominence in the subcategory of practitioner activity in this seminar is on techniques and procedures, within the subset of projects. Techniques and procedures include *the way we gather it* (AUD124), and various references to procedures, including *they [substantive procedures]* (AUD143), *analytical procedures* (AUD157) and *tests of detail* (AUD348). In the subset of roles, the auditing lecturer places thematic prominence on one nominal group that refers to practitioner attributes: *having an understanding of the control environment and the internal control procedures the client has* (AUD174).

Tokens of exchange

The term 'tokens of exchange' is used here to describe entities in the seminar data that have a value that is negotiated in the context of interpersonal exchange within professional practices. Tokens of exchange chosen as topical Themes in the seminar data are listed in Appendix 15.3. This shows that these are more frequently chosen as topical Theme in the management accounting seminar, with 17 items overall. Items in this category in the management accounting seminar have a financial value, for example *transfer price* and *negotiated price*. The 16 tokens of exchange chosen as

topical Theme in the category ABSTRACT ENTITIES the auditing seminar are various kinds of *assertions*. There is only one token of exchange in the information systems seminar—*the weightings*, in the category ABSTRACT ENTITIES. Tokens of exchange are described in more detail in Section 7.5.1 in the following chapter.

Rules

In this study, institutional abstractions in this category are considered as being most closely associated with the regulative function of institutional orders, and are termed *rules*. These include rules that regulate the activities of practitioners from outside professional practices, and those that regulate the activities of practitioners from within professional practices. It also includes rules that regulate the activities of non-practitioners. Instances of this kind of institutional abstraction are summarized in Appendix 15.4 where it can be seen that these are most frequently chosen as Theme in the auditing seminar, with a total of 33 instances, constituting 7.5% of all topical Themes in that seminar. In the management accounting seminar there were 15 instances of this kind of institutional abstraction, accounting for 5.5% of topical Themes in that seminar. In the information systems seminar, there were only a total of 5 instances (1.3% of topical Themes in information systems). Rules are described in more detail in Section 7.5.2 of Chapter 7.

Symbolic relations

As can be seen in Appendix 15.5, this subcategory includes items that condense meaning in symbolic form, as relations between entities of various kinds: formulae, procedures and models. These items will be discussed in Section 7.5.3 of Chapter 7, where they will be described as a subcategory of rules.

6.7 Stage 2: Building an expanded language of description

This section and the following report on the second stage of data analysis. In the second stage of analysis, data in the preliminary categories, including the additional categories of TEXT REFERENCE, WH-INTERROGATIVES, OTHER QUESTIONS, EXISTENTIAL THERE, and EMPTY SUBJECT were examined in order to build an

expanded language of description for the seminar data. A summary of the expanded language of description is shown in Figure 6.35.

Data in the preliminary analytical categories included different kinds of statements and questions. The expanded language of description differentiates between 1) statements presented as facts, that purport to indicate ‘what (always) is’, and 2) statements and questions about how things may, might, could or should be. Where the latter related to non-conscious entities they were categorized as a form of ‘packing’, and where they related to conscious participants, circumstances and actions they were categorized as a form of ‘unpacking’. Hence, sub-categories of ‘packing’ and ‘unpacking’ were created for the preliminary categories ABSTRACT ENTITIES, GENERIC ENTITIES, and SPECIFIC ENTITIES shown in Figure 6.35. While it would also be possible to create ‘packing’ and ‘unpacking’ categories for the preliminary category LOCAL ENTITIES, the analysis here is limited to those aspects of the data that explicitly address the research questions.

Figure 6.35 Summary of expanded language of description

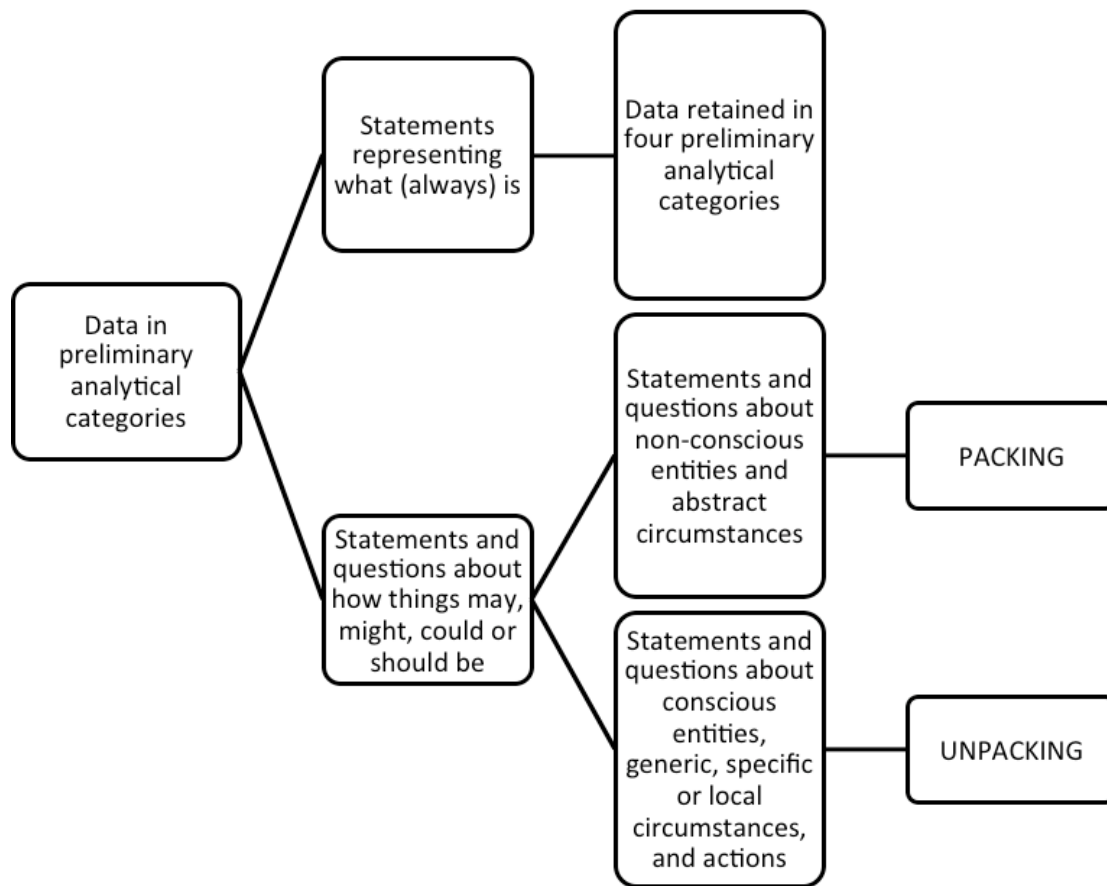
8	Abstract entities
7	Unpacking abstract entities
6	Packing generic entities
5	Generic entities
4	Unpacking generic entities
3	Packing specific entities
2	Specific entities
1	Unpacking specific entities
0	Local entities

In Figure 6.35 the four preliminary analytical categories are shown in bold. Data in all nine analytical categories—that is, the four preliminary categories and the five additional categories, were analyzed with reference to the expanded language of description, as recorded in Column G of the seminar transcripts in Appendices 1 to 3. The treatment of data in these preliminary categories is outlined below. This analysis was used to produce the graphical representations of segments of the data shown in Section 7.7 of the following chapter. Although waves of this kind could be produced to represent movements between analytical categories throughout each seminar, it is the intention of this study to describe general patterns of movement that apply to all three seminars (as will be the focus of the following), rather than to provide a detailed description of movements within each seminar.

Categories of statements and questions

As indicated above, the nature of statements and questions in the preliminary analytical categories was used in producing an expanded language of description. Data in each preliminary analytical category was sorted into 1) statements presented as facts, that purport to indicate ‘what (always) is’, and 2) statements and questions about how things may, might, could or should be. Various linguistic distinctions are made between different kinds of propositions (Hunston, 2000, 2011) and opinions about propositions and entities (Hunston & Thompson, 2000) within systemic functional linguistics. However, in order to address the second research question regarding the implications of representations of practice in classroom discourse for students and for the profession, this study takes a broader sociological approach. The second of the two categories above (statements and questions about how things may, might, could or should be), is further differentiated into i) those related to non-conscious entities and abstract circumstances (packing), and ii) those related to conscious entities, generic or specific circumstances and actions (unpacking) to parallel Archer’s (1988, 2000) (1988, 2000) distinction between the *cultural system*, or system of meaning, and the *socio-cultural system*, or the community—the socio-material activities of conscious entities, and circumstances of this activity. The basis for developing the expanded language of description as described in this paragraph is summarized in Figure 6.36.

Figure 6.36 Basis for developing the expanded language of description in stage 2



Text reference

In the first stage of data analysis, topical Themes incorporating text reference were shown to account for 11.6% of topical Themes in the management accounting seminar, 11.1% of topical Themes in the information systems seminar, and 5.9% of topical Themes in the auditing seminar. These figures were reported in Figure 6.15 earlier in this chapter. The second stage of data analysis demonstrates that tracking discourse participants through nominal deixis is a resource for construing reality (Halliday & Martin, 1993:31) in the seminars. The lecturers relocalize the activities of generic or specific entities in the stage 2 categories 5. GENERIC ENTITIES or 2. SPECIFIC ENTITIES, then reconstrue those relocalized activities semiotically, using nominal deixis (*this* and *that*). Instances of nominal deixis are therefore resources for ‘packing’ meaning in the seminars. An example of this can be seen in units IS187 to IS188 of the information systems seminar:

187	And	you may even try to process data through [the evaluation copy].	you=generic actor(s) [practitioner]	you [generic practitioner]	GE	4
188		That [is] a very common process if you're investing a large amount of money.	that=nominal deixis	that [mentioned earlier]	TR	6

Unit IS187 is coded as 4. UNPACKING GENERIC ENTITIES: the generic practitioner *you* is represented as possibly engaging in the activity of processing data (*process data*). In unit IS188, this activity is ‘packed’ by being reconstrued as a thing—a *very common process*.

Another example can be seen in units AUD283 to AUD285 in the auditing seminar:

283	it's like you,	you choose a formula that works to get that end result the best way possible.	you=generic actor(s) [practitioner]	you [generic practitioner]	GE	4
284	So, if controls are good,	why don't you use them?	WH element (abstract circumstance)	WH abstract circumstance [why] RHET	WH	6
285		That [is] what you should do, not then re-do detailed testing, okay.	that=nominal deixis	that [mentioned earlier]	TR	6

In unit AUD283, the lecturer comments on the activity of generic practitioners. In unit AUD284 begins to pack this meaning by providing a rationale, the WH-element *why* linking to the conditional conjunctive adjunct within the extended Theme (*if controls are good*). In unit AUD285, the lecturer continues to pack this activity, and the rationale for it as a thing: *what you should do*.

Analytical units such as IS188 and AUD285 in which nominal deixis constitutes the topical Theme are shown in Appendix 16 (management accounting), Appendix 17 (information systems) and Appendix 18 (auditing) in Volume 2. Data in these

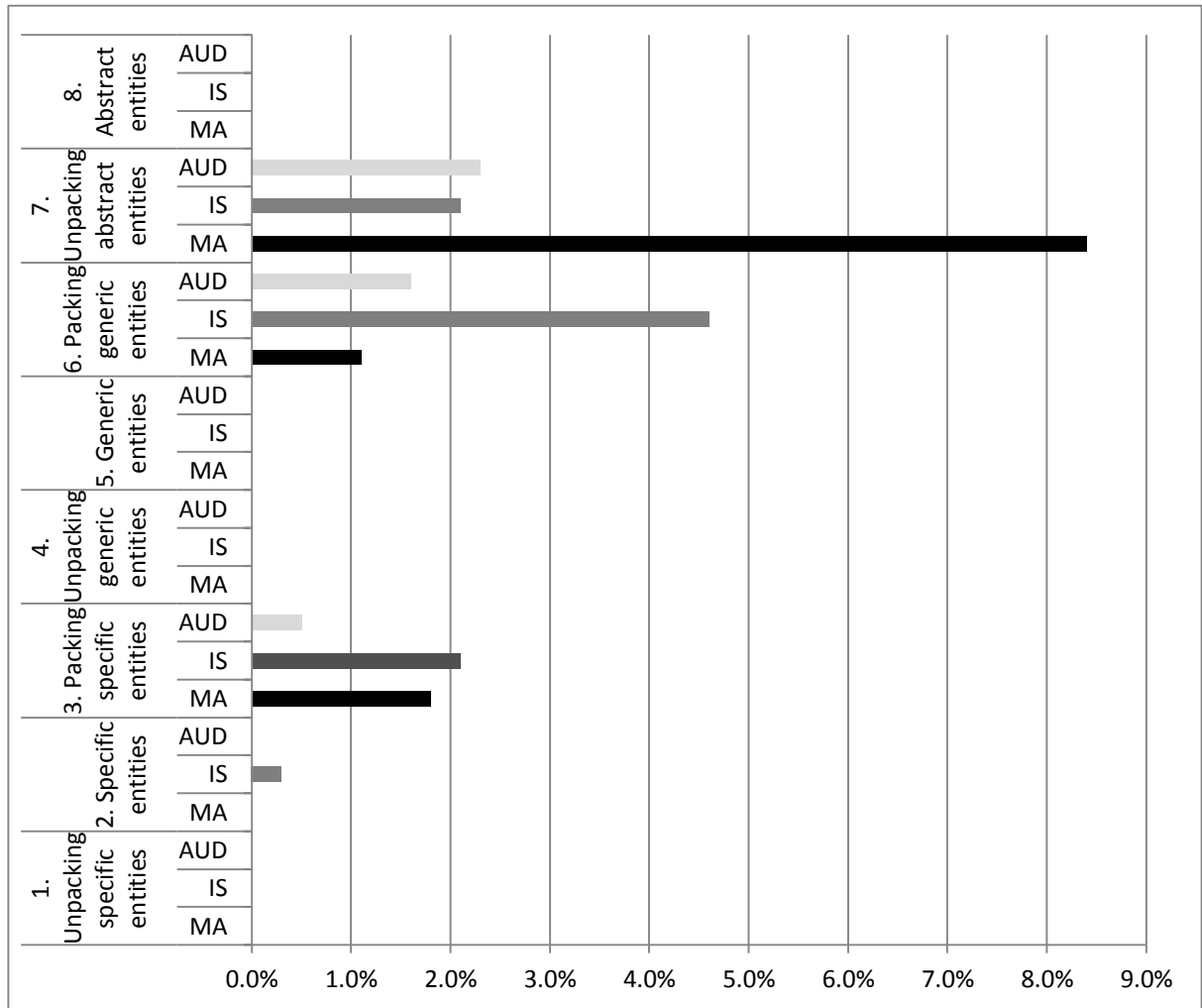
appendices is grouped according to Stage 2 categories. This data is summarized in Figure 6.37, which gives the number of analytical units in the category of TEXT REFERENCE in each of the stage 2 analytical categories, adjusted for the number of analytical units in each transcript in the shaded column. Adjusted figures are shown in the chart in Figure 6.38. Figures 6.37 and 6.38 show that text reference is used as a resource for packing meaning in all three seminars, but most frequently in the information systems seminar in both the categories 3. PACKING SPECIFIC ENTITIES and 4. PACKING GENERIC ENTITIES. Text reference is also used as a resource for unpacking abstract entities in the stage 2 category 7. UNPACKING ABSTRACT ENTITIES, most frequently in the management accounting seminar, accounting for 8.4% of topical Themes in that seminar. An example can be seen in units MA113 to 116 in the management accounting seminar as set out below. In this example, it can be seen that the use of *that* in units MA115 and MA116 is different to the use of *that* in unit AUD285 in the example shown above. In the category 7. UNPACKING ABSTRACT ENTITIES, *that* is used in reference to more abstract meanings, where in unit AUD285, it is used in reference to the activities of generic practitioners.

113	and	<u>we</u> really are looking at the cost,	we=speaker plus generic others [practitioners]	we [generic practitioners]	GE	4
114	so	<u>what</u> [is] our product cost or outlay cost plus a particular mark up.	WH-element (abstract participant)	WH abstract participant [what] RHET	WH	6
115	Okay	<u>that</u> can be a percentage profit mark up of anything really.	that=nominal deixis	that [mentioned earlier]	TR	7
116	And	<u>that</u> means too then this idea of negotiated prices.	that=nominal deixis	that [mentioned earlier]	TR	7

Figure 6.37 Redistribution of analytical units in the category text reference in stage 2

		Text reference	Adj
8. Abstract entities	MA	0	0.0%
	IS	0	0.0%
	AUD	0	0.0%
7. Unpacking abstract entities	MA	23	8.4%
	IS	8	2.1%
	AUD	10	2.3%
6. Packing generic entities	MA	3	1.1%
	IS	18	4.6%
	AUD	7	1.6%
5. Generic entities	MA	0	0.0%
	IS	0	0.0%
	AUD	0	0.0%
4. Unpacking generic entities	MA	0	0.0%
	IS	0	0.0%
	AUD	0	0.0%
3. Packing specific entities	MA	5	1.8%
	IS	8	2.1%
	AUD	2	0.5%
2. Specific entities	MA	0	0.0%
	IS	1	0.3%
	AUD	0	0.0%
1. Unpacking specific entities	MA	0	0.0%
	IS	0	0.0%
	AUD	0	0.0%

Figure 6.38 Chart showing redistribution of analytical units in the category text reference in stage 2



WH-INTERROGATIVES and OTHER QUESTIONS

It can be seen from Figure 6.15 earlier in this chapter that WH-interrogatives were used more frequently in the management accounting seminar, accounting for 19.3% of all topical Themes in that seminar. In the information systems seminar WH-interrogatives constituted 5.9% of topical Themes, and in the auditing seminar, 2.7%. Figure 6.15 also shows the number of topical Themes in the category OTHER QUESTIONS in each seminar. This was a relatively small portion of the data and items were not grouped into subcategories. Again it can be seen that other question types were used more frequently in the management accounting seminar than in the other two seminars.

Distinctions made between WH-interrogatives in the first stage of analysis outlined in Section 6.2 produced the subcategories generic, specific and local conscious

participant; abstract, generic, specific or local entity; and abstract, generic, specific or local circumstances. These were shown in Figure 6.12 with examples. WH-interrogatives were distributed into each of these sub-categories, incorporating distinctions between different types of circumstance (time, place, distance, duration, manner and cause) from Halliday and Matthiessen (1999:102) shown in Figure 6.11. Topical Themes in the category WH-INTERROGATIVES from the first stage of analysis are shown grouped according to these categories in Appendix 19. Part a) of Appendix 19 lists rhetorical questions formed with WH-interrogatives and part b) lists actual questions formed with WH-interrogatives. This data is summarized in Figure 6.39, which shows that WH-interrogatives of both types were used more frequently in the management accounting seminar.

Figure 6.39 WH interrogatives in the seminar data

a) WH INTERROGATIVES: RHETORICAL			MA	IS	AUD
Participants	Generic conscious participant		2	0	0
	Specific conscious participant		2	0	1
	Local conscious participant		0	0	0
	Abstract entity		9	5	4
	Generic entity		0	3	0
	Specific entity		0	0	0
	Local entity		0	0	0
Circumstances	Abstract circumstances	<i>Manner (how?)</i>	2	0	0
		<i>Cause (why?)</i>	1	0	1
		<i>Place (where?)</i>	0	1	0
	Generic circumstances	<i>Time (when?)</i>	0	1	0
		<i>Place (where?)</i>	0	0	2
		<i>Distance (how far?)</i>	0	0	0
		<i>Duration (how long?)</i>	0	0	0
		<i>Manner (how?)</i>	3	6	
		<i>Cause (why?)</i>	1	0	0
		<i>Time (when?)</i>	0	0	0
	Specific circumstances	<i>Place (where?)</i>	0	0	0
		<i>Distance (how far?)</i>	0	0	0
		<i>Duration (how long?)</i>	0	0	0
		<i>Manner (how?)</i>	0	3	0
		<i>Cause (why?)</i>	0	0	0
		<i>Time (when?)</i>	0	0	0
	Local circumstances	<i>Place (where?)</i>	1	0	0
		<i>Distance (how far?)</i>	0	0	0
		<i>Duration (how long?)</i>	0	0	0
		<i>Manner (how?)</i>	0	0	0
TOTAL WH interrogatives (rhetorical)			21	19	8
WH interrogatives (rhetorical) relative to number of analytical units per seminar			7.6%	4.9%	1.8%

b) WH INTERROGATIVES: NOT RHETORICAL			MA	IS	AUD
Participants	Generic conscious participant		0	0	0
	Specific conscious participant		0	0	0
	Local conscious participant		1	0	2
	Abstract entity		10	4	1
	Generic entity		0	0	0
	Specific entity		0	0	0
	Local entity		1	0	1
Circumstances	Abstract circumstances	<i>Manner (how?)</i>	5	0	0
		<i>Cause (why?)</i>	3	0	0
	Generic circumstances	<i>Time (when?)</i>	0	0	0
		<i>Place (where?)</i>	0	0	0
		<i>Distance (how far?)</i>	0	0	0
		<i>Duration (how long?)</i>	0	0	0
		<i>Manner (how?)</i>	2	0	0
		<i>Cause (why?)</i>	0	0	0
	Specific circumstances	<i>Time (when?)</i>	0	0	0
		<i>Place (where?)</i>	4	0	0
		<i>Distance (how far?)</i>	0	0	0
		<i>Duration (how long?)</i>	0	0	0
		<i>Manner (how?)</i>	6	0	0
		<i>Cause (why?)</i>	0	0	0
	Local circumstances	<i>Time (when?)</i>	0	0	0
		<i>Place (where?)</i>	0	0	0
		<i>Distance (how far?)</i>	0	0	0
		<i>Duration (how long?)</i>	0	0	0
		<i>Manner (how?)</i>	0	0	0
TOTAL WH interrogatives (not rhetorical)			31	4	4
WH interrogatives (not rhetorical) relative to number of analytical units per seminar			11.3%	1.0%	0.9%

It can be seen from the diagram in Figure 6.36 that data from the additional preliminary categories WH-INTERROGATIVES and OTHER QUESTIONS were regrouped in packing and unpacking categories in the second stage of analysis depending on the nature of the information sought. Questions about conscious entities, processes and circumstances were redistributed into unpacking categories and questions about non-conscious entities were redistributed into packing categories.

Remaining additional categories

There was a relatively small number of items in the categories EXISTENTIAL *THERE* and EMPTY SUBJECT in each seminar, as shown in Figure 6.15. Data in the preliminary additional category EXISTENTIAL *THERE* was distributed across the second stage categories depending on the nature of the Existent as can be seen in the examples below. Existential *there* was not used in the categories 5. GENERIC ENTITIES and 1. UNPACKING SPECIFIC ENTITIES. Data in the category EMPTY SUBJECT was regrouped into packing and unpacking categories as the empty subject is often used to express viewpoint as noted earlier in this chapter.

Examples of redistribution of data in the category EXISTENTIAL *THERE*

8. ABSTRACT ENTITIES	And <u>there</u> are certain mechanisms for doing that (IS183)	Existence of abstract entities (<i>certain mechanisms</i>)
7. UNPACKING ABSTRACT ENTITIES	However <u>there</u> are the advantages of it being a very good performance measure (MA200).	Comment on abstract entity (<i>it</i>)
6. PACKING GENERIC ENTITIES	Then <u>there</u> [is] other techniques like prototyping, which are used in special circumstances (IS74)	Comment on non-conscious entity in reference to activity of generic entity
4. UNPACKING GENERIC ENTITIES	Okay, so the higher the mark up the <u>better skill there</u> is for department manager A, (MA120)	Comment on conscious entity
3. PACKING SPECIFIC ENTITIES	or, as I said, <u>there</u> could be something overseas that's affecting our company so we assume inherent risk is high (AUD256)	Comment on non-conscious entity in reference to activity of specific entity
2. SPECIFIC ENTITIES	Ah, specially in my case, in the [multinational company] case I talked about [<u>there</u>] are thirteen factories, thirteen factory accountants to get agreement on how the job costing systems, their needs of the job costing systems and so on, issues that they have in helping the factory manager to run effectively in the plant (IS309)	Existence of specific entities

Summary

The redistribution of data in each of the additional preliminary categories across each of the stage 2 categories is summarized in Figure 6.40.

Figure 6.40 Redistribution of data in additional preliminary categories in stage 2

Stage 2		Text reference	WH-interrogatives	Other questions	Existential there	Empty subject
8. Abstract entities	MA	0	0	0	0	0
	IS	0	0	0	2	0
	AUD	0	0	0	7	0
7. Unpacking abstract entities	MA	23	13	1	3	0
	IS	8	5	1	0	3
	AUD	10	3	7	3	3
6. Packing generic entities	MA	3	11	6	0	0
	IS	18	6	0	7	6
	AUD	7	2	1	2	8
5. Generic entities	MA	0	0	0	0	0
	IS	0	0	0	0	0
	AUD	0	0	0	0	0
4. Unpacking generic entities	MA	0	4	1	2	1
	IS	0	9	2	3	3
	AUD	0	4	3	0	0
3. Packing specific entities	MA	5	7	0	0	2
	IS	8	3	0	0	1
	AUD	2	0	0	5	0
2. Specific entities	MA	0	0	0	0	0
	IS	1	0	0	1	0
	AUD	0	0	0	0	0
1. Unpacking specific entities	MA	0	15	0	0	0
	IS	0	0	0	0	0
	AUD	0	0	0	0	0
0. Local entities	MA	1	3	4	2	1
	IS	8	0	3	1	1
	AUD	7	3	6	2	5

6.8 Stage 2: Description and content of stage two categories

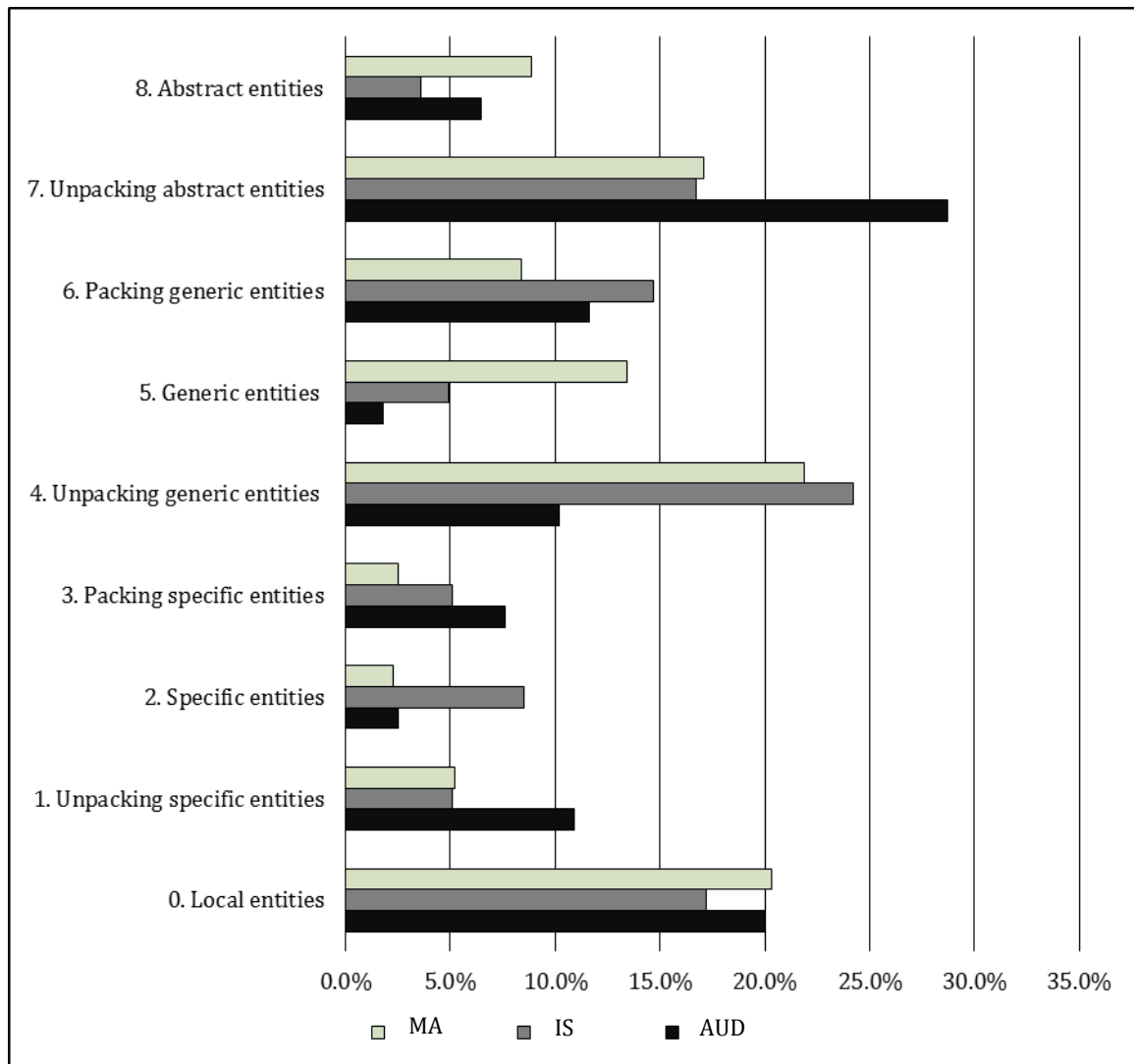
Data in each of the stage 2 categories 0 to 8 can be found in Appendix 20 (management accounting), Appendix 21 (information systems) and Appendix 22 (auditing). The number of analytical units in each stage 2 category drawn from these Appendices is summarized in Figure 6.41, which includes adjusted figures in shaded columns. Data from the shaded columns of Figure 6.41 is shown in chart form in Figure 6.42. It can be seen in both Figure 6.41 and 6.42 that the largest stage 2 category in the management accounting seminar was the category 7. UNPACKING ABSTRACT ENTITIES, with 79 units coded in this category. The largest stage 2 category in both the information systems and auditing seminars was 4. UNPACKING GENERIC ENTITIES. The smallest stage 2 category in the management accounting seminar was 5. GENERIC ENTITIES, including only 1.8% of analytical units in that seminar. In comparison, this category was the third largest in the auditing seminar (not including category 0) accounting for 13.4 % of analytical units in that seminar. The smallest stage 2 category in the information systems seminar was 8. ABSTRACT ENTITIES, and the proportion of data in this category was smaller in the information systems seminar than in the other two seminars. The smallest stage 2 category in the auditing seminar was 2. SPECIFIC ENTITIES. This category was a similar size in the management accounting seminar but larger in the information systems seminar, reflecting the lecturer's references to their own professional experience.

The characteristics of data in stage 2 categories 1 to 8 will be outlined below. The content of the stage 2 category 0. LOCAL ENTITIES does not yield data that addresses the research questions so will not be discussed further.

Figure 6.41 Number of analytical units in each stage 2 category

		MA	Adj	IS	Adj	AUD	Adj
8	Abstract entities	18	6.5%	14	3.6%	39	8.9%
7	Unpacking abstract entities	79	28.7%	65	16.7%	75	17.1%
6	Packing generic entities	32	11.6%	57	14.7%	37	8.4%
5	Generic entities	5	1.8%	19	4.9%	59	13.4%
4	Unpacking generic entities	28	10.2%	94	24.2%	96	21.9%
3	Packing specific entities	21	7.6%	20	5.1%	11	2.5%
2	Specific entities	7	2.5%	33	8.5%	10	2.3%
1	Unpacking specific entities	30	10.9%	20	5.1%	23	5.2%
0	Local entities	55	20.0%	67	17.2%	89	20.3%
TOTAL		275	100%	389	100%	439	100%

Figure 6.42 Chart showing number of analytical units in each stage 2 category



1. Unpacking specific entities

Data from this category can be found in Appendices 20.1 (management accounting), 21.1 (information systems) and 22.1 (auditing). This category includes statements and questions about specific conscious entities, circumstances and actions that refer to how things may, might, could or should be. As shown in Appendix 19, this category includes a number of WH-interrogatives in the management accounting seminar. These are largely questions seeking information about circumstances in specific examples, with some questions about specific participants (e.g. ***Who** is going to be happy?* (MA46). Questions about specific circumstances include questions about place (***And department B, where** is their revenue coming from?* (MA28) and manner (***how** are they achieving their revenue?* (MA23). Figure 6.40 shows that there are no

WH-interrogatives in this category in the other two seminars. There are also no instances of text reference, other questions, existential *there* or empty subject in any of the seminars in this category.

In this category, participants are frequently represented as engaged in material processes: *working, go through, show, write, done, do*. Relational processes are also used to refer to the attributes of participants: ***Who*** is going to be happy? (MA46). In some cases, verbal processes are used to legitimate the actions of participants, as in: ***That audit opinion you*** can't say, well I relied on the expert so I don't have any responsibility, because you need to go through a few steps (AUD382). This category includes frequent expressions of modality associated with obligation, indicating how participants *should* act: ***Okay, they're colleagues in the same company [so] they*** should be working together (MA81); ***but you*** have got to go through the same steps, okay (AUD395). It also includes expressions of modality associated with typicality, to indicate how things *might* or *could* be, suggesting that alternatives are possible, as in: ***Or I*** could decrease my expenses (MA64).

In this category, evaluative comments may be present in extended Themes: ***Not the sort of thing I enjoy but he*** really had done this in other companies (IS98); ***So, when detection risk is high because you're happy to do less substantive testing, because you're comfortable your controls are good, you*** do a lot more analytical procedures because they're quick (AUD343). The term *comfortable* is used several times in the auditing seminar and will be discussed further under the stage 2 category 5. GENERIC ENTITIES below. Extended Themes may also be used to comment on the behaviour of participants. As this is contained in the Given part of the message, this suggests shared understanding about the habits or goals of participants: *I want to earn more of that bonus* (MA57); *I want to increase my profit* (MA62).

2. Specific entities

Data from this category can be found in Appendices 20.2 (management accounting), 21.2 (information systems) and 22.3 (auditing). This category includes statements about the customary activities of specific entities and the identity and attributes of specific conscious and non-conscious entities. It also includes statements about specific past or present states of affairs. As can be seen in Figure 6.40 there were two items from the additional preliminary categories in this section of the data, both in the

information systems seminar: one instance of text reference following an extended Theme in IS383, and one use of existential *there* as an ellipsed subject in unit IS309: *Ah, specially in my case, in the [multinational company] case I talked about [there] are thirteen factories.*

As in the previous category of 1. UNPACKING SPECIFIC ENTITIES, this category also includes material processes representing the actions of participants, for example: *So what I'd be looking at is, okay, I [am] going to go and enquire whether a bank reconciliation has been done* (AUD329). Relational processes are also frequent, in statements about the identity or attributes of specific conscious entities, as in: *And department A will have strong negotiation skills for their purchases, okay, with external people* (MA88); *They don't really have any controls in place, okay* (AUD259). Relational processes are also used in making statements about the attributes or identity of specific non-conscious entities: *so [they are] Federal government, the Medicare system, right, the national health system, the tax system, national tax* (IS367); *They [are] quite specialized like good will or patents* (AUD371).

The key difference between this category and the previous category is that in this category, these processes are expressed as 'positive declarative' statements (White, 2012b): lecturers choose not to acknowledge alternative ways of acting or being.

3. Packing specific entities

Data from this category can be found in Appendices 20.3 (management accounting), 21.3 (information systems) and 22.3 (auditing). This category includes statements and questions about specific non-conscious entities, and abstract participants and circumstances. In this category, relational attributive processes, with the function of 'constru[ing] relationships of description' (Butt et al., 2001) p. 63) are common, as are relational identifying processes, with the function of 'decod[ing] known meanings and encod[ing] new meanings' (Butt et al., 2001) p. 63). Relational processes are frequently used to make generalizations based on specific examples, often using nominal deixis, and sometimes causal conjunctive adjuncts, as in: *Okay, so that [is] very simply how the bonus system will be determined* (MA52). Relational processes are also used to make summarizing comments based on specific examples, again,

often with causal conjunctive adjuncts as in: So **those audit work papers** are purely the auditor's records (AUD438). Relational processes are also used to explain entities introduced in specific examples: *that is, **our software** was used to run manufacturing plants* (IS217), and also to define entities or processes introduced in specific examples: *If I re-perform the bank reconciliations, **that** [is] a substantive test* (AUD333). Also included in this category are evaluative comments on non-conscious entities: **Excel** [is] where you can do lots of great things especially in the finance area and of course, packaged software (IS359). Where in the previous analytical category positive declarative statements were made about the attributes of non-conscious entities, this category includes statements that use modals to express the possibility of alternatives, as in: **Permanent information** could be things like, if they've taken out a contract or a lease that goes over a number of years (AUD415). This category also includes existential processes indicating possible states of affairs: *or, as I said, **there** could be something overseas that's affecting our company so we assume inherent risk is high* (AUD256). Possible states of affairs may also be indicated with mood adjuncts such as *maybe: **Maybe the client** has been susceptible to, you know, high foreign exchange* (AUD231).

As noted, this category also includes questions about specific non-conscious participants, for example: *For example, if I was to say to you, I asked the client for a bank statement and I'm happy with that, versus somebody who says, well I got the bank statement from the client but I also got confirmation from the bank that that's **the bank balance** is more accurate, isn't it?* (AUD195). The category also includes questions about abstract participants connected with specific examples, as in: **What** does this mean for the company as a whole? (MA70); So **what** happens to sales and so on? (IS219).

4. Unpacking generic entities

Data from this category can be found in Appendices 20.4 (management accounting), 21.4 (information systems) and 22.4 (auditing). This category includes statements and questions about generic conscious entities, circumstances and actions that refer to how things may, might, could or should be. As with the category 1. UNPACKING SPECIFIC ENTITIES, participants in this category are frequently engaged in material processes. Similarly, modals are used to indicate obligation, or how participants

should act, as in: **And we need to be able to recognize those elements** (MA152); **Because you need to have that comfort that you're happy with what they've done** (AUD387). Obligation is also expressed using imperatives: **Existence [you] make sure those assets and liabilities do exist, okay** (AUD73). Modals are also used to express the possibility of alternative courses of action that generic participants might take, as in: **but one of them, you might prefer one vendor to another because he [is] a nice guy, you know, a nice guy easy to get on with, very helpful and so on** (IS151); and **Banks [might do their own systems] in some areas** (IS372). Possible alternative courses of action are also indicated through mood adjuncts such as *probably* (**If they're in the balance sheet, I can probably take a guess that they probably do exist** (AUD75)), and *often* (**Well we often, when we turn up to a client, they [will] give us their ledgers, you know, access to the general ledger and subsidiary ledger** (AUD111)).

This category also includes evaluative comments about participants or processes, sometimes using evaluative terms in extended Themes, such as *better* in the following example: **Okay, so the higher the mark up the better skill there is for department manager A** (MA120). In some instances, the actions of participants are legitimated through conditional conjunctive adjuncts (if ... then) in extended Themes: **Okay, so if a manager is held accountable or responsible for their area then they will be acting in a fashion that will be increasing their profit** (MA96). Questions in this category include questions about generic participants: **Do you have ownership when the goods are ordered** (AUD91), and questions about generic circumstances: **So how well have they used that to generate a profit that's contributing to my overall organization** (AUD181).

As in the category 1. UNPACKING SPECIFIC ENTITIES, the auditing lecturer used variants of the term *comfortable* several times in this category, as in unit AUD387 above. Other examples in this category of data in the auditing seminar include: **So you need to be comfortable that they have the independence, the competence and that you actually check their work** (AUD390); and **You want to make sure that that trial balance, all those items have been verified to some point that you're comfortable with** (AUD429). Malhotra and Morris (2009) describe auditing as a 'collective team-based activity comprising intensive ongoing interactions within a cohesive, tightly knit engagement team in the process of framing an audit opinion' (p. 905). The word

'comfortable' is used by auditors and their colleagues and managers to describe satisfaction with an audit procedure (Pentland, 1993). Following Collins (1981), Malhotra and Morris describe this as an "interaction ritual" that 'forms the foundation for constructing institutional trust in the audit practice' (p. 906).

5. Generic entities

Data from this category can be found in Appendices 20.5 (management accounting), 21.5 (information systems) and 22.5 (auditing). This category includes statements about the customary activities of generic entities and the identity and attributes of generic conscious and non-conscious entities. It can be seen in Figure 6.40 that this category does not include instances of text reference, WH-interrogatives or other questions, existential *there*, or empty subject from the preliminary analytical category. As in the category 2. SPECIFIC ENTITIES, these are expressed as positive declarative statements, rather than suggesting alternative possibilities. Examples include: ***And to determine that single rate I will weight my capital based on the interest rates I'm paying*** (A253); ***we try to work out the assertions that are of greater risk*** (AUD18); ***Our CEOs, our boards, our CFOs aren't going to wait around for systems to be developed*** (AUD264). This category also includes statements about the identity or attributes of generic conscious participants, as in: *Because **every firm** will have their own audit program and standard procedures which they need to adopt, because that audit program then is used by all the audit team* (AUD126), as well as statements about identity or attributes of generic non-conscious participants, as in: ***A request, [an RFP] [is] a request for proposal*** (IS145).

6. Packing generic entities

Data from this category can be found in Appendices 20.6 (management accounting), 21.6 (information systems) and 22.6 (auditing). This category includes statements and questions about specific non-conscious entities, and abstract circumstances. As in the category 3. PACKING SPECIFIC ENTITIES, relational processes are frequently used in making generalizations, but here, generalizations are made about generic examples. Again, nominal deixis is often used to do this, as in: ***and that [is] why we need to focus on the audit risk model*** (AUD222). Figure 6.40 shows that nominal deixis is used most frequently in the information systems seminar in this category, but

is also used to some extent in the other two seminars. Existential *there* is also used in generalizing from generic examples: ***There*** [is] *no set procedure other than every audit firm will have their own requirements* (IS192). Also in this category, lecturers make evaluative comments on non-conscious entities, for example: ***So the RFP*** *is a very objective way of putting together all of the requirements and comparing one vendor against the other* (IS153). In some instances, lecturers use the empty subject *it* to make an evaluative comment on participants or processes: ***it*** [is] *necessary because business won't wait* (IS341). Frequency of existential *there* and empty subject in each seminar in this category is shown in Figure 6.40, where it can be seen that neither are used in the management accounting seminar.

This category also includes questions about abstract participants connected with generic examples, with WH-interrogatives being used most frequently in the management accounting seminar as indicated in Figure 6.40. Examples include: ***Ok because what what effect*** *is that going to have on my return on investment?* (MA191); and ***What*** *can I use as a basis?* (MA213). Other question types are also used in the management accounting seminar in this category, but not in the information systems seminar, and rarely in the auditing seminar.

7. Unpacking abstract entities

Data from this category can be found in Appendices 20.7 (management accounting), 21.7 (information systems) and 22.7 (auditing). This category includes statements and questions about abstract entities and circumstances that refer to how things may, might, could or should be. As in the previous 'unpacking' categories, possible alternatives may be expressed in a number of ways, including mood adjuncts such as *primarily* (***This*** *is where, this is primarily used to determine the performance of an investment centre* (MA164)) and *generally* (***So the negotiated price*** *would generally be a market price as a start* (MA117)). In this category, lecturers may make generalizations about abstract entities, as indicated here with the summative conjunctive adjunct *basically*: ***So basically the rule*** *is the more external, written evidence you can get, that's got a higher reliability than evidence which is produced verbally from the client, okay* (AUD196). Abstract entities are also explained, as in ***The external market*** *is referring to there being suppliers in the market because it [is] related to the price that's available* (MA135). Summarizing comments about abstract

entities may be expressed using the empty subject it: *So it [is] all about managing risk* (IS228). This category also includes lecturers' opinions about abstract entities indicated in modal adjuncts of opinion such as *from my point of view* in extended Themes: *Yep, from my point of view, [that is] the most important step* (IS288).

As discussed in Section 6.5.1 and shown in Appendix 13, the preliminary category ABSTRACT ENTITIES included a number of discrete abstractions in each seminar. These have been regrouped into this analytical category and are used for a range of purposes including emphasizing key points: *The key to a transfer price is recognising that it is only effective within a decentralized environment* (MA8); and *The challenge [[with the System Development Life Cycle and the steps that we go through]] are steps two and three* (IS33). Other uses of these discrete abstractions include listing advantages (MA201) and disadvantages (MA232), and giving reasons (AUD17, AUD267, and AUD278).

Questions in this category include those about abstract participants: *So what is return on investment?* (MA163), and *You know, for example, if we're dealing with inventory, is it picked up under cost of goods sold* (AUD52). Questions also include those about abstract circumstances as in: *If [the transfer price] doesn't affect the overall company, why is it important to have a transfer price?* (MA74).

8. Abstract entities

Data from this category can be found in Appendices 20.8 (management accounting), 21.8 (information systems) and 22.8 (auditing). This category includes positive declarative statements about abstract entities. These statements include definitions of abstract entities: *And the formula is our net operating profit after tax minus our capital employed by our weighted average cost of capital* (MA242); *And detection risk is the risk that the auditor will fail to give the appropriate opinion, okay* (AUD240). Statements in this category also build technicality, construing taxonomic or compositional relations. Classifying taxonomies describe the relationships between categories, and compositional taxonomies describe the relationships between parts and wholes (Martin & Rose, 2007:79–80). The following example construes taxonomic relations: *Now assertions are broken up into three areas, transactions, balances and presentation and disclosure* (AUD28), while the next example construes

compositional relations: *Now the audit risk model has got three components: inherent risk, control risk, detection risk* (AUD223). In this category lecturers may also emphasize causal relations, as in: *It [transfer pricing] [is] driving that behaviour, that motivation* (MA85). Definitions may emphasize institutional relations: *or a transfer price is the internal selling price that is used when goods or services are transferred between profit centres and investment centres in decentralized organizations* (MA4). This example is discussed further in Section 7.1.

6.9 Summary of key findings

This chapter has developed a language of description to describe the representation of professional practice in university classroom discourse, directly addressing the first of the three research questions posed in Section 1.2, and preparing the ground for answering the remaining research questions in the following chapter. The language of description was developed through two stages of analysis. The first involved detailed examination of thematic patterns in the seminar data, categorizing conscious and non-conscious entities chosen as topical Theme as local, specific, generic or abstract, forming four preliminary analytical categories: LOCAL ENTITIES, SPECIFIC ENTITIES, GENERIC ENTITIES and ABSTRACT ENTITIES. When arranged hierarchically, these four categories have been shown to reflect shifts between context-dependent, local meanings, and context-independent, abstract meanings as described within Legitimation Code Theory (Maton, 2013, 2014). Data in each of these four preliminary categories has been described, focusing on the range of different ways in which each lecturer uses topical Theme as a resource for texturing classroom discourse. As flagged earlier in the thesis, the intention has been to yield extensive analytical data in order to build a language of description, and to illustrate the range of ways in which individual lecturers texture representations of practice, rather than make comparisons between them.

In describing data in each of the four preliminary categories, the distribution of conscious and non-conscious participants in each analytical category has been noted. Conscious participants chosen as topical Theme in each analytical category have been examined. Here, the language of description provides a framework for describing variation in lecturers' choice of pronouns as topical Theme with reference to shifts between context-dependent and context-independent meanings. This illustrates the

ways in which lecturers exercise their agency in texturing representations of practice, positioning themselves and practitioners in different ways and enacting different social roles as discussed further in Section 7.2. Non-conscious participants in each analytical category have been grouped according to Halliday and Matthiessen's typology of 'things' (1999:194). This analysis has highlighted differences between professional practices in management accounting, information systems and auditing, as they are represented in the seminar data that will be discussed further in Section 7.5.3. It has also been found that in the analytical category ABSTRACT ENTITIES, lecturers frequently thematize institutional abstractions. This chapter has marked out several categories of institutional abstractions to be discussed in the following chapter.

Further aspects of textual meaning were also considered in the first stage of analysis, leading to the development of five additional preliminary categories: TEXT REFERENCE, WH-INTERROGATIVES, OTHER QUESTIONS, EXISTENTIAL *THERE* and EMPTY SUBJECT. In the second stage of analysis, data in all nine preliminary categories, including these five and the four preliminary categories, was examined in order to expand the language of description. This expanded language of description describes the unpacking and packing of meaning in the seminar data. In unpacking meanings, lecturers make statements and ask questions about generic or specific conscious entities, or generic or specific circumstances and actions. In packing meanings, lecturers make statements and ask questions about non-conscious entities and abstract circumstances associated with generic or specific examples or abstract meanings. In each of these 'unpacking' or 'packing' categories, lecturers use a range of resources to acknowledge the possibility of alternatives, including expressions of modality associated with obligation or typicality, modal adjuncts, mood adjuncts, and evaluative comments in extended Themes. In unpacking categories, conscious participants are frequently represented as engaged in material processes. In packing categories, the emphasis is on non-conscious entities, and relational identifying and relational attributive processes, and nominal deixis are frequently used in making generalizations or explaining or defining activities or entities based on specific and generic examples. In between these unpacking and packing categories, in the stage 2 categories of 2. SPECIFIC ENTITIES and 5. GENERIC ENTITIES, and also in the stage 2 category 8. ABSTRACT ENTITIES, lecturers make positive declarative statements

that do not acknowledge the possibility of alternatives. In the category 8. ABSTRACT ENTITIES, these statements build technicality, emphasizing taxonomic or compositional relations, or emphasize causal or institutional relations.

The expanded language of description built through the two stages of analysis described in this chapter provides a framework for describing *how* professional practices are represented in the seminar data, answering the first of the three research questions at the centre of this study. The following chapter moves on to the remaining research questions, considering the nature of movement between the analytical categories in the expanded language of description and the implications of this for professional learning theory and practice.

Chapter 7 Discussion

Discussion in this chapter examines key findings regarding the representation of professional practices in classroom discourse that were summarized at the end of Chapter 6. The question of *how* professional practices are represented in classroom discourse was addressed in that chapter through developing a language of description to account firstly for the thematization of local entities, specific entities, generic entities and abstract entities in the seminar transcripts, and secondly for movements between representations of these different types of entities through unpacking and packing meanings throughout each seminar. This chapter seeks to explain the nature of this movement, using the construct of semantic density from Legitimation Code Theory to explain the condensation of meaning within institutional abstractions within the seminar data. The language of description shows lecturers as representing professional practice as both a ‘system of representation’ and as a ‘system of interpersonal exchange’ (Painter, 2004:149). This system of representation emphasizes the system of institutional relations within which professional practices are embedded. The condensation of meaning within abstract entities in accounting discourse could therefore be described as *institutional* condensation. This complements other forms of condensation already described within Legitimation Code Theory (Maton, 2013, 2014). Institutional abstractions identified in the seminar data in the previous chapter derive their identity from this system of relations.

The idea of *knowledge practices* drawn from Legitimation Code Theory (Maton, 2013, 2014) provides a starting point for interpreting the seminar data by connecting the analysis with the basic analytical unit of practice theory—practices (Schatzki, 2012). Interpersonal exchange within accounting practices involves different kinds of entities. These entities are semiotic or propositional, that is, ideas, ‘theories, beliefs, values and arguments’ that stand in logical relation to each other as elements of the cultural system (Archer 2000: 173), and also material. Schatzki argues that ‘just about every practice ... deals with material entities (including human bodies) that people manipulate or react to’ (2012:16), citing materialities and material arrangements as a pre-condition of practices.

Importantly, humans are more than bodies, but conscious beings, with the capacity for subjective reflexivity (Archer, 2003). Drawing on Halliday and Matthiessen (1999)

the analysis in this study considers people (as they are termed by Schatzki), as *conscious entities*, and regards human activity as concerned with their relations with other conscious entities as well as with non-conscious entities, including both material and semiotic entities. These relations do not occur in a vacuum, but rather have their basis in practices, or the ‘organized activities of multiple people’ (Schatzki, 2012:13). Practices are both discursive and material as will be discussed further in Section 7.2. This chapter will incorporate the idea that conscious entities are ‘cultural agents’ and that relations between them in interpersonal exchange are a function of ‘*causal consensus*’, that is, they are ‘produced by the imposition of ideas by one set of people on another through the whole gamut of familiar techniques—manipulation, mystification, legitimation, naturalization, persuasion and argument’ (Archer 1988:xvi, italics in original). The categories of conscious and non-conscious (material and semiotic) entities employed in the first stage of analysis are set out in Section 6.3. Based on the nominal group chosen as topical Theme, practices were shown in the first stage of data analysis to be represented as *local*—with thematic prominence given to conscious and non-conscious entities in the local setting, *specific*—with thematic prominence given to conscious and non-conscious entities in specific settings, *generic*—thematizing conscious and non-conscious entities in generic settings, or *abstract*—thematizing abstract non-conscious entities.

Literature on professionalism and professional learning reviewed in Chapter 2 has revealed limitations of codifying professional knowledge, and challenges to the knowledge base of professions. A response to this in recent accounts of professional learning has been to position learning as a process of ‘becoming’ a practitioner (Scanlon, 2011b), considering learning as a relation between ‘learning culture’ and learners (Hager & Hodkinson, 2011). The term ‘learning cultures’ is used to refer to the ‘social practices through which people learn’ (Hodkinson, Biesta, & James, 2008:34), locating these practices within broader social structures. Improving professional learning from this perspective focuses on aspects of both the learning culture and learners, and relations between the two (Hager & Hodkinson, 2011). As an alternative, this chapter considers *what* is learned, and relations between objects in a professional field, rather than relations between objects in a field of learning. Where relations between objects in the professional field of accounting are considered in the accounting literature, structures and agents tend to be conflated, so that they

cannot be understood separately, as outlined in Chapter 3. The approach taken here then combines elements from both perspectives. Emphasis is on both what is learned, considering the identity of institutional abstractions with reference to the social systems in which they are embedded, and also on the subjectivity of knowers, as realized through their causal powers of reflexivity (Archer, 2003) in choosing one course of action over another.

Learning in the accounting field (used generally here to encompass management accounting, accounting information systems, and auditing) can be seen as learning particular ways of thinking and acting, or as described within Legitimation Code Theory, as becoming a particular kind of ‘knower’ (Maton, 2010b:155). These ways of thinking and acting incorporate principles for both understanding and making the world, and for understanding and producing casual effects in the social world. At the same time, they are ‘legitimate and stably reliable means for generating truth’ (Young & Muller, 2007), truth being a ‘stable relationship between the objects of study and a community of practitioners’ (Young & Muller, 2010:21). As such they are the basis of objectivity in the professional field of accounting, and serve to legitimate the collective jurisdiction of practitioners over particular areas of work. The activities of professionals gain legitimacy from the institutional order—a complex of relations ‘held together ... by regulating discourses [which] function ideologically, to make specific courses of action accountable to the wider institution’ (Sarangi & Roberts, 1999:16).

Reference was made to relations between professional and institutional discourses in reporting on institutional abstractions in the seminar data in Section 6.6. Professional discourse incorporates not only the specialized lexis of a professional field, but also roles and practices. Sarangi and Roberts (1999) refer to professional discourse as a ‘form of habitus’ (p. 15). Habitus is described in Chapter 2 as both structure and structuring—hence professional habitus is the product of professional practice and generates professional practice. Institutions are regulative, creating *conditions* for ways of thinking and acting in professional roles and practices. They are equivalent to Bernstein’s rules of ‘*social order*’ (2000:13, italics in original) that were referred to in Section 2.3. These are the rules that frame, that is ‘regulate and legitimate’ (Bernstein, 2000:12) interaction between individuals in a pedagogic relationship (e.g. teacher–student). In Chapter 4 it was shown that Bernstein also regards practitioner–

client relations as a pedagogic relation, with practitioners acting as agents of symbolic control, although it was suggested that professional practices extend beyond this relation to incorporate a broader range of practices. Hence Bernstein's rules of social order are also the rules that frame or legitimate professional practices—that shape professional ways of thinking and acting that maintain the boundaries of a profession, and legitimate the activities of professionals. In the same way that the rules of social order, or regulative discourse, dominate the rules of the discursive order, or instructional discourse in Bernstein's model of pedagogic discourse (Bernstein, 2000), institutions dominate the rules of professional discourse, providing conditions for and legitimating professional discourse. In the case of accounting, practitioners also act as agents in the economic field (Bernstein, 2000): professional practices are therefore embedded in and legitimated with reference to, the economic field or the institution of the economy.

The approach to institutions in this study draws in the first instance from systemic functional linguistics (Matthiessen, 2009). Studies in this field tend to focus on institutions as patterns of behaviour from the perspective of either system or instance as discussed in Section 7.4. Institutions are also central to New Institutional approaches to sociology and economics. This is evidenced in distinct fields of research in organizational analysis and economics—New Institutional Sociology and New Institutional Economics respectively, that share a common view on the limits of behavioural assumptions underpinning neoclassical economics, and reference to 'institutions, social relations and cultural beliefs' in their explanations of organizational or economic life (Nee, 2005). New Institutional Sociology has been drawn upon in studies of continuity and change in accounting education (Zhang, Boyce, & Ahmed, in press) and in organizational discourse analysis (Fairclough, 2005; Iedema & Wodak, 1999). Nee (2005) advocates integrating New Institutional approaches to sociology and economics in an approach that examines causal mechanisms that enable and constrain action, recognizing relations between institutional structures and 'social networks and norms' (p. 49), rather than viewing these as separate. Similarly, the work of Fairclough (2005) in critical discourse analysis deals with relations between events and structures, but emphasizes the linguistic/semiotic elements of these, describing social practices as the mediating mechanism between events and structures.

Fleetwood (2008b) is also concerned with investigating relations between structures/institutions and agents, and more specifically the cause of agents' intentions. He notes that Hodgson's (2004) work in institutional economics seeks to explain actors' intentions as primarily a function of habit, with institutional rules also implicated as these 'lead to the adoption of habits' (p. 189). He compares this to Archer's (2000, 2003) explanation of agents' intentions as primarily a function of reasons, which in turn are caused by reflexive deliberation. In Archer's explanation, structures also have causal influences on action, but this is mediated by reflexive deliberation. As summarized by Fleetwood, Archer argues that 'to be human is (in part) to have a genuine interior wherein one can weigh up ... causes stemming from social structure and concerns, and reflexively deliberate ... to arrive at a reason and an intention' (Fleetwood, 2008b:198). As noted in Chapter 3, Archer's work overcomes a dichotomy between structures and individual agents, regarding relations between them as dialectical. Archer's work is underpinned by analytical dualism, a concept discussed further in Section 7.4 and that also informs Fairclough (2005).

In Chapter 2, the relation between instructional and regulative discourse in classroom discourse was described with reference to Christie (2002) in terms of a regulative register that 'projects' an instructional register (p. 25). It could be said that the same relation holds between institutional orders and professional discourse, in that the institutional order projects the professional register. Hence, while the two are closely interrelated, the institutional order dominates over professional discourses (Sarangi & Roberts, 1999:16). Further, professions and institutions are two different kinds of entities: the activities of professionals are located within an institutional space (Sarangi & Roberts, 1999). Professional practitioners can act as institutional representatives (Sarangi & Roberts, 1999) but, as noted, can also exercise their own powers to act. Bhaskar (1998) describes these relations as a 'position–practice' system as will be outlined in Section 7.6. Discussion in this chapter then examines how these ways of thinking and acting, or roles within interpersonal exchange are *condensed* within institutional abstractions, emphasizing institutional relations or the rules of social order which frame professional practices. It suggests that while institutional abstractions in the seminar data can be assigned grammatical agency in systemic functional terms, this is because they condense interpersonal relations and hence human agency within institutional relations. These meanings are unpacked in

classroom discourse to reveal interpersonal exchange involving conscious and non-conscious entities.

The interpersonal relations as they are produced and reproduced in unpacking institutional abstractions in classroom discourse are unavoidably partial, in the first instance because while institutional abstractions are real and have causal effects (Archer, 2000; Bhaskar, 1997), they are also a partial representation of ways of being in the world and to assume otherwise would be to commit the '*epistemic fallacy*' of assuming that 'statements about being can always be analysed in terms of statements about our knowledge (of being)' (Bhaskar, 1989:13, italics in original). As abstractions they 'isolate in thought a *one-sided* or partial aspect of an object', and what they abstract from are 'the many other aspects which together constitute *concrete* objects' (Sayer, 1992:87, italics in original). Further, they are partial because representations of interpersonal exchange between specific or generic entities in classroom discourse only partially recontextualize, and cannot logically contain, the 'constellational identity' (Bhaskar, 1975:xix) of institutional abstractions. As ideas, these abstractions are 'causally and taxonomically irreducible to the conditions of their production' (Bhaskar, 1997:143), so while they are emergent from the social world, their recontextualization in representations of the social world in classroom discourse is incomplete. This creates further conditions for partiality, because interpersonal exchanges in representations of practice in classroom discourse are mediated by the agency of lecturers.

What is represented in classroom discourse also reflects interaction between the 'official recontextualising field' and the 'pedagogic recontextualising field' (Bernstein, 2000:33), pedagogic discourse being a 'mediated ... imaginary discourse' (Bernstein 2000:33). As Bernstein argues, abstract meanings have an 'indirect relation' to a 'material base' (2000:30). That this relation is indirect rather than direct creates a '*potential discursive gap*' (p. 30, italics in original): a 'meeting point of order and disorder', that paradoxically maintains order in the system. According to Bernstein, this order is maintained through regulation of the discursive gap by 'agents who have previously been legitimately pedagogized' (p. 31). Agents achieve this order via distributive rules, which as noted in Section 2.2 function to regulate the distribution of knowledge and hence power between social groups (Singh, 2002). In this way, the '*field of production of discourse*' (Bernstein, 2000:31, italics in original)

is produced and reproduced by those who have been inducted into the field: in this study, by practitioners as lecturers. Bernstein is not specific about how distributive rules are realized in practice, although he makes the suggestion that in ‘a micro-context of control’ such as pedagogic discourse, ‘different modalities of control would act selectively on interactional realizations, and this would lead to specific emphasis on some subsystems and upon their grammar, lexis and paralinguistics’ (2000:150).

That abstract meanings in accounting are real is not to argue that they are ‘representationally real (representationally adequate)’, or necessarily ‘instrumentally useful or intrinsically good’ (Bhaskar, 1997:142). Unpacking institutional abstractions in the university classroom provides an opportunity for developing professional judgement through reflexivity: the ‘mediatory mechanism’ that links the ‘distinctively different and irreducible properties and powers of “structures” and “agents”’ (Archer, 2003:15), and likewise the powers of cultures and agents. The intention here is not to conflate elements in the cultural domain and those in the structural domain, but rather, to acknowledge that they are different and autonomous, but that each influences the other in cycles of conjunction and discontinuity that generate stasis and change within both domains (Archer, 1988).

7.1 Representing practices in the seminar data

The preliminary analytical categories of LOCAL ENTITIES, SPECIFIC ENTITIES, GENERIC ENTITIES and ABSTRACT ENTITIES in this study have highlighted basic distinctions between 1) abstract representations of practice that thematize abstract non-conscious entities; 2) specific and generic representations of practice that thematize either conscious entities or non-conscious entities within specific or generic contexts of practice; and 3) meanings that relate to conscious and non-conscious entities in the local setting of the classroom. The absence of conscious entities as topical Themes in the preliminary analytical category ABSTRACT ENTITIES can be contrasted with their presence in topical Themes in the other preliminary categories, constituting a basic difference between the kinds of meaning expressed in each category that will be considered further below. Before that, the following will explore the basis of the idea, introduced above, that practices are constituted by interpersonal exchange between conscious entities, and mediated by non-conscious entities, and

that it is these social relations that are represented in specific and generic representations of practice in classroom discourse.

Social relations are a dimension of the *context of situation*, a central construct in context theory in systemic functional linguistics that refers to the situated contexts in which meaning is exchanged: the context for language as *text*. Analysis of the context of situation reveals ‘language as a form of action, as the enactment of social relationships and social processes’ (Halliday, 1999:6). As Halliday explains, the expression was first used by the anthropologist Malinowski (1923), and was later mapped onto a theory of language by Firth (1957), before being drawn into a theory of meaning in systemic functional linguistics. The systemic functional model of context theory will be used here to suggest that interpersonal relations are condensed within abstract meanings as institutional meanings that constrain and enable professional activity. It is suggested that where Legitimation Code Theory to date has examined the condensation of meanings in terms of epistemic relations (‘epistemological condensation’) and social relations (‘axiological condensation’) (Maton, 2014:153) (outlined in Section 7.5), the condensation of meaning in professional learning in the seminar data in this study can be seen to emphasize *institutional* relations, a type of condensation that could be termed ‘institutional condensation’. This shares a premise of a constructivist view of knowledge—that knowledge is ‘a product of social practices’ (Wheelahan, 2010:113), as a systemic functional model of language is also constructivist (Halliday & Matthiessen, 1999:17). In other respects it is an emergentist, realist view rather than a reductive one that reduces knowledge to social practices. Institutional relations are emergent phenomena that are not reducible to instances of interpersonal exchange. Following Bhaskar (1998), the focus is on relations, rather than the individuals engaging in those relations.

An examination of the different kinds of entities chosen as topical Theme in Chapter 6 showed that conscious participants are more frequently thematized than non-conscious participants in the preliminary analytical categories of LOCAL ENTITIES, SPECIFIC ENTITIES and GENERIC ENTITIES. This is perhaps to be expected given that practices are social, and have their basis in human activity (Schatzki, 2012), and in the first instance require (conscious) participants (van Leeuwen, 2008:7). The conscious entities chosen as Theme in the analytical category of LOCAL ENTITIES

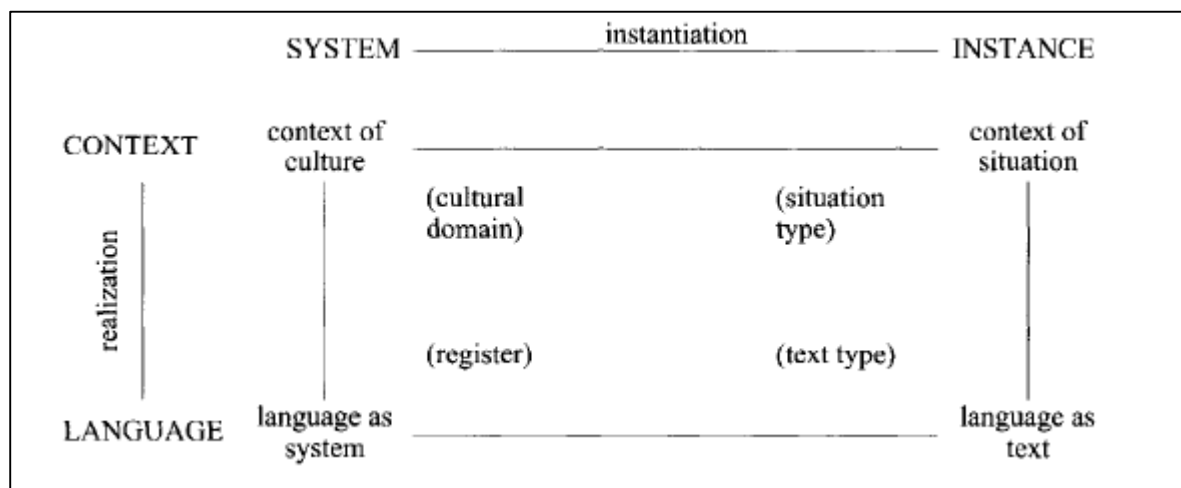
are different to those in the categories of SPECIFIC ENTITIES and GENERIC ENTITIES in that they are participants present in the local context of the classroom rather than participants in professional practice. Within the category LOCAL ENTITIES, there were only minimal differences between the seminars in use of pronouns. Relations between those present in the speech setting are realized in topical Themes through similar patterns of pronoun use, including *I*, *you*, and inclusive *we*. Choice of topical Theme in this category reflects social relations between lecturers and students that are characteristic of university classroom practices, and the pursuit of specific institutional goals (Pallotti, 2007). These social relations are part of larger patterns of language and structure that are typical of university classroom genres. As Forey (2002) observes, the ‘genre of a text influences the text’s choice of Theme’ (p.8). Some individual differences are found in interpersonal positioning—as in the (slightly) different use of inclusive *we* noted in Section 6.5.1. Another aspect of social relations that is typical of university classroom genres and that varies between lecturers is their reference to the expert authority (van Leeuwen, 2008) of the textbook: for example Appendix 10 and Figure 6.22 show more frequent choice of semiotic objects such as *the text* (IS68), or components of it (e.g. *chapter eight* (IS113) as topical Theme in the information systems seminar. These differences will not be explored in more detail here as they do not contribute to answering the questions in this study.

This connection between the social relations between lecturers and students as realized in the use of subjective pronouns (*I*, *you* and *we*) in the seminar data, and patterns of language that are typical of university classroom discourse is a connection between *instances* of language use (language as a text), and the *system* of language use (language as a system). This connection constitutes a central component of context theory in systemic functional linguistics, and will be explained briefly here as it helps to explain two sets of social relations at play in the professionally oriented university classroom. One set of social relations is that between lecturers and students, of which the use of subjective pronouns is a feature. This set of social relations is part of the context of situation in instances of classroom interaction. The other set of social relations relates to those between entities within the professional practices represented within this interaction between lecturers and students. These social relations reflect the context of situation of the professional field, but are

recontextualized for pedagogic purposes. In the process they are transformed, as social events are ‘represented at different levels of abstraction and generalization’ (Fairclough, 2003:137). These social relations, mediated by non-conscious entities are between conscious entities playing various institutional roles: practitioner, manager, client and so on.

In systemic functional linguistics the context of situation is differentiated from the ‘context of culture’, which refers to ‘the context for language as *system*’ —that is, ‘language as a form of reflection, as the construal of meaning into a theory or model of reality’ (Halliday, 1999:6, italics in original). This is the system within which ‘recognisable patterns of structure and language within texts’—or genres, evolves (Feez, 1998:6). The relation between the context of culture and the context of situation is illustrated in Figure 7.1. The context of culture is said to be *instantiated* in the context of situation, as shown by the horizontal line at the top of the diagram. This line is a continuum, and is referred to in the systemic functional model as the ‘cline of instantiation’ (Halliday & Matthiessen 1999:381).

Figure 7.1 Relations between the context of situation and the context of culture (Hasan, 2004:175)



The instantiation of context of culture in context of situation is ‘immaterial’ rather than material, a distinction that refers to different orders of system. Halliday and Matthiessen (Halliday & Matthiessen, 1999; Matthiessen, 2009) identify four different orders of system: physical, biological, social and semiotic as follows:

- i) **Material systems**
 - 1) Physical systems
 - 2) Biological systems
- ii) **Immaterial systems**
 - 3) Social systems
 - 4) Semiotic systems

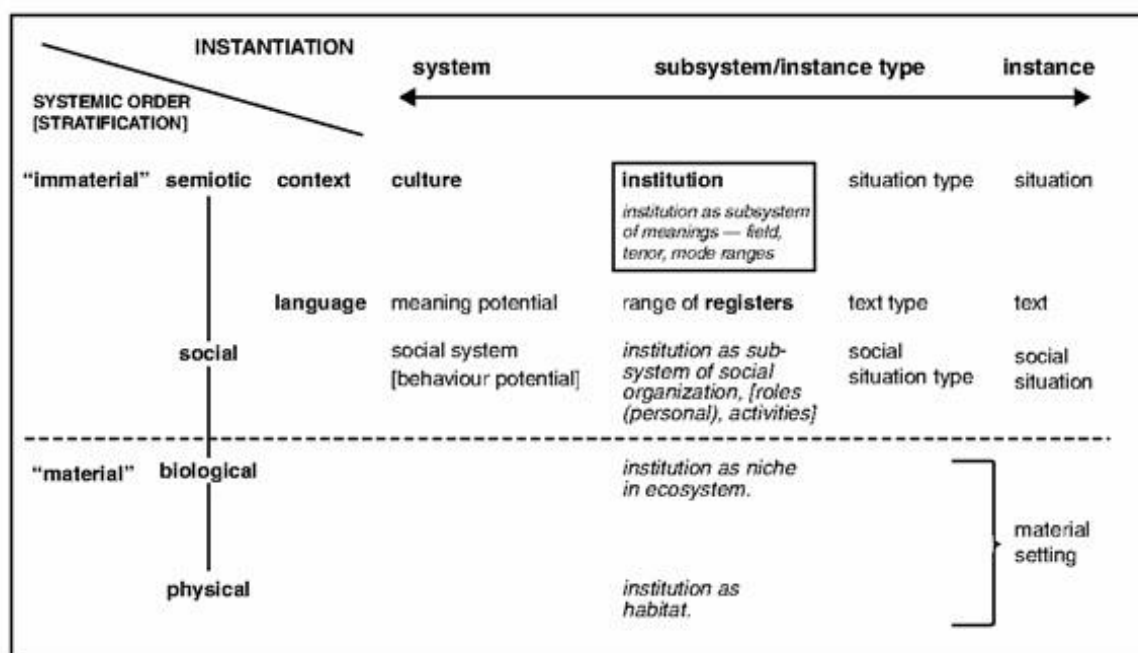
These systems are ordered from most simple (physical systems) to most complex (semiotic systems). They are also interrelated, such that:

higher order systems are also manifested as lower-order ones: biological systems are also physical systems, with the added property of “life” (ability to self-replicate, with individuation and with evolution as the mode of genesis); social systems are also biological (so also physical) with the added property of “value” (social order: networks of roles, division of labour and so on); and semiotic systems are also social (so also biological, and also physical), with the added property of “meaning” (stratification into content and expression). (Matthiessen, 2009:23)

These systems are shown in an expanded version of Figure 7.1 in Figure 7.2 from Matthiessen (2009). This expanded diagram shows that instantiation of the context of culture in the context of situation is semiotic. Moving down through different levels of system, the context of culture also manifests as language, or a system of meaning potential, and socially, as a system of behaviour potential. Working across the diagram from left to right, along the ‘cline of instantiation’, the system of meaning potential, or language is instantiated in text, and the social system is instantiated in the social situation.

The seminars in this study are social situations that instantiate the social institution of education, which is an element within the cultural and structural system (Archer, 1988) that creates conditions for meaning exchange in the classroom. Within the seminars, there is one set of social relations between lecturers and students, and another in representations of management accounting, accounting information systems and auditing practices. These representations of practice *recontextualize* the context of those practices. Recontextualization, as outlined in Chapter 2, is a construct used in the sociology of education (Bernstein, 2000), and has also been taken up in systemic functional linguistics (Halliday, 1999) and critical discourse analysis (Chouliaraki & Fairclough, 1999; Fairclough, 2003; van Leeuwen, 2008). It has been extended in Pennycook’s term *relocalization* (Pennycook, 2010), to include meanings

Figure 7.2 Characterization of institutions (Matthiessen, 2009:46)



that will become relevant later in this discussion. For the moment, the term ‘recontextualization’ will be used.

This study seeks to describe the representation of professional practices in the seminar data in order to answer the first of the three research questions introduced in Section 1.2: How are professional practices represented in university classroom discourse? In the seminar data, the recontextualization of practices involves shifts between more concrete representations and more abstract representations (Fairclough, 2003): between more concrete representations of practices as interpersonal exchange within social situations that instantiate the social system of a professional field, and more abstract representations of practice as ‘models of experience’ or institutional abstractions, that emphasize institutional relations within the context of culture. These institutional relations constitute the cultural system (Archer 1988, 2000) of a profession. Working down the different levels of system, models of experience are said by Halliday and Matthiessen to be construed at ‘two orders of abstraction’— contextually, as meanings within the context of culture, and semantically, in language. This means that a model of experience is ‘a cultural construct construed in language’ (Halliday & Matthiessen, 1999).

Institutional abstractions in the seminar data will be discussed in depth in Sections 7.4 and 7.5, contributing to answering the second of the research questions introduced in

Section 1.2. As models of experience, institutional abstractions can also be construed within the social system. The two are linked as socio-semiotic processes in the domain of field, a variable within the context of situation which refers to ‘what is happening, the social activity in which the people communicating are involved, and the topic being talked about’ (Feez, 1998). The first order (social) activity of ‘doing’, is linked with the second order (semiotic and social) activity of ‘**expounding** some general domain of experience by describing it, classifying (taxonomizing) it, explaining it and so on’ (Matthiessen, 2009:31, emphasis in original). Expanding on a textual view of field as suggested in Sections 2.3 and 4.5, connections can be made here with the idea of social structures—in the social sciences, models of experience also construe structural relations. Relations between the cultural domain and the structural domain are dialectical, and in everyday life, the two are often encountered and treated as ‘an amalgam’ (Archer, 1988:305). Archer gives the example of a school, which is both a structural and cultural institution, although its cultural and structural dimensions are not experienced ‘separately or self-consciously’ on entering one (p. 305). A more complete account of the relations between the cultural domain and the structural domain is given in Archer (1988). For the purposes of this study, they are regarded as having their own separate dynamics, but also as ‘reciprocally influential’ (Archer, 1988:305). At the simplest level these relations are contained within the statement that ‘ideas are forces in social conflict and that the socially forceful are also culturally influential’ (Archer, 1988:288), although a more complex conceptualization also describes these relations with reference to time (among many other factors not detailed here) as will be explained below.

Returning to models of experience, Halliday and Matthiessen describe the resources in language for constructing meaning scientifically within the theory of context framework, with ‘scientific models’ being ‘consciously designed’ in particular contexts of situation, ‘usually within academic institutions, to serve as resources in reasoning about the world’ (1999:573). Models are designed using the resource of metalanguage, a semiotic system with the properties of language. However, where language construes ‘our experience of the world’, metalanguage construes ‘our experience of language’ (Halliday & Matthiessen, 1999:30). Models of experience construe experience in terms of meaning, that is ideationally, and over time, these

meanings are codified, condensing into units that enter into relations with other units of meaning within the system of language.

In the progression of a scientific discipline, participants and processes are reconstrued as ‘things’ or nouns through nominalization. As Martin (1993a) explains, technicality and abstraction both use nominalization, sometimes referred to as ideational or experiential grammatical metaphor (Butt et al., 2001) as a resource. Re-construing processes as ‘things’ through nominalization provides a means by which objects that have been abstracted from the temporal, spatial and material relations of practice can be reconfigured in new sets of relations. These new sets of relations turn abstract meanings into technical meanings (Wignell, 1998) as in the construction of taxonomies, organizational charts, models, or formulae, or in theory building. Reconfiguring meanings in this way allows for the creation of ‘uniformities across time and space’ (Timmermans & Epstein, 2010:71). This process of first construing the world as abstractions then ‘mak[ing] the abstract technical’ (Wignell, 1998:312) is regarded by Wignell as a feature that differentiates social science discourse from science. It allows for the ‘generalization from more than one instance’ (Wignell, 1998:312), and occurs across texts and time. Grammatical metaphor is an expansion of meaning in that it expands the ‘semantic potential of the system’ (Halliday and Mattheissen 1999:227). Reconstruing events as grammatical metaphor generally entails a shift in grammatical rank scale, from ‘clause complex to clause, and/or from clause to nominal group’ (Halliday & Mattheissen 1999:230). In the movement from clause complex to nominal group there is ‘some loss of information’ or an increase in ‘indeterminacy’ (p. 230, 231), as the resulting nominal group is less explicit than the original clause complex, in part because the participants and processes from the congruent meaning are obscured. Martin (2013) provides examples of nominalizations from secondary school biology including ‘vasodilation’ and ‘phagocyte migration’: these terms ‘symbolize semantic figures involving both entities and the actions engaging them’ (p. 27)

Although not described by Martin (2013), seminar data in this study suggest that institutional abstractions in professional discourse similarly ‘symbolize semantic figures’ (Martin, 2013:27), contributing to answering the second of the research questions introduced in Section 1.2. Collectively, institutional abstractions describe the field of professional practice: ‘field [being] a set of activity sequences oriented to

some global institutional purpose' (Martin, 2013:24). As these activity sequences in professional practice are social activities, involving conscious entities and mediated by non-conscious entities, they are embedded within, and derive meaning from institutional orders. As an example, in unit MA4, the management accounting lecturer emphasizes institutional relations around the topical Theme *transfer price: or a transfer price is the internal selling price that is used when goods or services are transferred between profit centres and investment centres in decentralized organizations* (MA4).

In unit MA4, transfer price is established as a type of *price (internal selling price)*, potentially located in taxonomic relations with other types of *price*. *Transfer price* is also located in compositional relations with other entities involved in the process of transfer pricing: *profit centres, investment centres, and decentralized organizations*. These entities are depersonalized, condensing interpersonal exchange between individuals in departments of organizations. In this way, departments can be identified as types of things—*investment centres* and *profit centres*, and located in compositional relations with *decentralized organizations*. This condensation of meaning emphasizes institutional relations between these entities: the structural relations reflect social relations within organizations, and the roles and activities of individuals within those departments or centres are defined by their relationship to this structure. Further, this organizational structure is located within a broader social system from which it derives its meaning: this is the institutional order which creates the conditions for meaningful relations between entities. In other words, these relations—between individuals, between departments or centres, and between types of organizations derive their meaning from a broader social system that enables and constrains those relations.

As nominalizations move further from congruent meanings, Bazerman (1998:21) argues that the 'material meaning of higher order nominals becomes increasingly hard to follow and agree on'. Hence, as interpersonal relations become condensed within institutional meanings, institutions suggest a level of homogeneity and coherent integration within the cultural system and hence a degree of 'ideational homogeneity', or 'uniformity of beliefs, collective representations, central values, ideology ... and so on' among members of a culture (Archer, 2004b:1). While these institutional meanings are powerful, their powers can only be activated by individuals. Archer

argues for the importance of differentiating between the properties and powers of the cultural system and properties and powers within socio-cultural interaction or interpersonal exchange (Archer, 2004b).

The above refers to representing experience as *meaning*, that is, ideationally. With reference to the diagram in Figure 7.2, modelling experience as meaning in the sciences entails an upwards movement through different levels of system, from physical and biological systems to semiotic systems. Halliday and Matthiessen (1999) note that another kind of meaning—interpersonal meaning, is not considered in scientific theories. Interpersonal meaning is ‘non-referential’, and involves “‘modelling’” consciousness not by construing it but by enacting it’ (p. 600), in other words, language as a form of interaction (Halliday, 1999). Directly addressing the second of the research questions in Section 1.2, analysis in this study suggests that this can be seen as condensed within institutional relations. Hence it is possible to have ‘uniformities’ of semiotic meaning, as in models and formulae (institutional relations), but also uniformities of social meaning, of intersubjective being and interacting in the world in interpersonal exchanges. The idea that modelling experience as meaning, and enacting it as interpersonal exchange are two aspects of the same experience contributes to an understanding of the representation of professional practices in classroom discourse because it acknowledges a relationship between practice, or practical knowledge and theoretical knowledge.

Where Bourdieu considers theoretical and practical knowledge as epistemologically separate (Archer, 2000), and they are conceptually separate in Shay’s (2012b) model of professional knowledge outlined in Section 4.3, they can be regarded as two aspects of the same experience: one construed as meaning, the other, enacted. Archer (2000) explains that while Bourdieu makes a claim for ‘radical disjunction’ between practical and theoretical knowledge, she maintains a separation only in terms of ‘the different ontological origins’ of practical and theoretical knowledge (p. 179). Archer shows that her conceptualization allows for “‘translatability’” between practical and theoretical domains of knowledge, thus showing that ‘practice is pivotal to knowledge’ (p. 197). Again, this is a premise of constructivism, which dissolves the distinction between theoretical knowledge and everyday knowledge (Wheelahan, 2010:114). However, while constructivism holds that ‘knowledge does not have transcendent features beyond the social context in which it was produced and the

social practices used to produce it' (Wheelahan, 2010:114), this view is grounded in the idea that structures and agents are not causally linked but conflated. In other words they are regarded as 'ontologically inseparable because each enters into the other's constitution' (Archer, 2003:1). The approach taken here draws from Archer's realist social theory which argues instead that culture and agency, and similarly, structure and agency are 'distinct strata of reality, [and] ... the bearers of quite different properties and powers' that are irreducible to one another (Archer, 2003:2). Considering the two separately allows for an examination of culture or structure as distinct from agency—a separation between "parts" and "people" (Archer, 1988:xiii). As described by Bourdieu (1989), this is 'constructivist structuralism' or 'structuralist constructivism', which he explains as follows:

By structuralism or structuralist, I mean that there exist, within the social world itself and not only within symbolic systems (language, myths, etc.), objective structures independent of the consciousness and will of agents, which are capable of guiding and constraining their practices or their representations. By constructivism, I mean that there is a twofold social genesis, on the one hand of the schemes of perception, thought, and action which are constitutive of what I call habitus, and on the other hand of social structures, and particularly of what I call fields and of groups. (Bourdieu, 1989:14)

In other words, this is a view of social life as being both constrained by, and actively producing and transforming social structures (Chouliaraki & Fairclough, 1999:1).

Practice involves conscious participants capable of enacting meaning, and the interpersonal metafunction is a 'resource through which we interact with other people' (Halliday & Matthiessen, 1999:600). In response to the second of the research questions listed in Section 1.2, it is argued that the model of context theory shown in diagram in Figure 7.2 helps to clarify the nature of non-referential meanings that constitute the basis for thinking and acting in professional practice, and that moving beyond a text-centred approach to 'interpersonal semantics' (Halliday & Matthiessen, 1999) provides a way of connecting context theory to sociological theory.

Matthiessen (1993) provides a complex account of the enactment of consciousness through the interpersonal metafunction, 'not primarily as theory [as in the ideational metafunction] but as *enactment*, more specifically as enactment of intersubjective experience' (p. 221, italics in original). Through the resources of the interpersonal metafunction, we are able to share both information and action with others—in other words it is oriented towards *interaction*, and interaction is constituted by social

relations with others. The interpersonal metafunction, unlike the ideational metafunction, ‘does not generate a vocabulary for talking about itself since it is not a resource for talking about but for interacting with’ (p. 223). Models of cognitive science, for example, account for the experience of the subjective individual in a manner that is grounded in the ideational metafunction: experience is construed in individual processes of sensing which are then ‘re-construed metaphorically’ (Matthiessen, 1993:232) as participants (things) in processes of doing, or being and having, which in turn can be placed in taxonomic and compositional relations within a scientific model. Matthiessen gives ‘*perception, vision, cognition, learning [and] memory*’ as examples of this metaphorical reconstrual (p. 213, italics in original). Taking the example of ‘memory’, this can be placed in taxonomic relations as in ‘*long-term/short-term memory, sensory memory, semantic memory*’ (p. 214, italics in original). He argues that the grounding of this model in the ideational metafunction leads to a subjective account of cognition, as it uses the resources of the ideational metafunction for ‘construing our experience of the world inside us and around us’ (p. 215). In this way, it overlooks intersubjectivity, because it does not incorporate the resources of the interpersonal metafunction which ‘provide us with the resources for *enacting* social reality in dialogic semiosis [that is, negotiation of meaning], for constructing dialogic text in interaction’ (p. 215, italics in original). It is through this negotiation of meaning that we ‘enact ourselves as personae or social roles—and in doing so, we enact consciousness’ (p. 215). Differences between ideational construal and interpersonal enactment are summarized in Figure 7.3 and will be discussed in the following section.

Figure 7.3 Ideational construal and interpersonal enactment (Matthiessen, 1993:232)

	ideational construal	interpersonal enactment in dialogic exchange
action	process (doing, being, etc.)	interaction
— centre	sensing, extended through saying: symbolic processing	information constituted in exchange
— 'outside'	doing & happening/ being & having	goods & services
actants	participants	interactants
— centre	conscious beings — subjective	interactants (you & me) — intersubjective
— 'outside'	non-conscious phenomena	non-interactants

7.2 Social relations in the seminar data

As noted earlier, there are two sets of social relations within the seminar data: relations between lecturers and students, contained within the analytical category LOCAL ENTITIES, and relations between conscious entities outside the context of classroom interaction in the categories SPECIFIC ENTITIES and GENERIC ENTITIES. In the category LOCAL ENTITIES, the exchange of meaning is between participants present in the speech setting of the classroom, shown in the analysis of pronouns in this category in Section 6.5.1. This dialogue is between speaker (*I*) and listener (*you*), and is a symbolic exchange in which interactants give or demand information or goods and services. In the case of interaction between lecturers and students in the classroom, (as in ‘most everyday talk’ (Matthiessen, 1993:225)) the commodity exchanged is primarily information. Matthiessen (1993) terms the interaction between speaker and listener the ‘interpersonal centre’, concerned with ‘unfolding dialogic interaction’ between speaker and listener in the ‘spatio-temporal “here & now”’ (p. 229). In the categories of SPECIFIC ENTITIES and GENERIC ENTITIES, the lecturer represents exchanges of meaning between participants not present in the speech setting of the classroom. These are ‘non-interactants’ relative to classroom interaction, but ‘interactants’ relative to representations of practice. As non-

interactants, they are represented through various ‘other roles’ in topical Themes as shown in Sections 6.5.2 and 6.5.3, including the specific actors *I, you, he, they* and *it*, and the generic actors *I, you, we*, and *they*. The exchange of meaning between conscious entities in practice is between speaker and listener within the speech setting of instances of practice. As with the speech setting of the university classroom, participants in practice ‘enact [them]selves as personae or social roles—and in doing so ... enact consciousness’ (Matthiessen, 1993:215). This is a process by which individuals ‘construct and change one another through the exchange of meanings ... [and] develop interpersonally in countless interactions as interactants’ (Matthiessen, 1993:215).

Interpersonally, we have many options open to us as we give or demand information or goods and services, including taking and adjusting a particular stance through modality, which expresses degrees of ‘probability, usuality, obligation, inclination, typicality and obviousness’ (Butt et al., 2001:113). Further options still are available through interpersonal metaphor which allow us to ‘position ourselves in different ways’ (Matthiessen, 1993:231). Butt et al. give the examples of saying ‘*I think* when we mean *probably*; or *I believe* when we mean *almost certainly*’ (p. 116). These options reflect the fact that we are not simply individuals, but people, and further ‘a complex of social roles’ (Matthiessen, 1993:231). Berger and Luckmann (1966) provide an account of institutionalization that complements Matthiessen’s discussion. They argue that ‘all institutionalized conduct involves roles’ and that roles thus ‘share in the controlling character of institutionalization’ (p. 96). As described by Ainsworth, Grant and Iedema (2009) for example, individual practitioners ‘make sense of their roles’ by ‘discursively locating themselves within organizational hierarchies’ (p. 7). Social roles are thus a means of embodying institutional meanings in individual experience:

The roles, objectified linguistically, are an essential ingredient of the objectively available world of any society. By playing roles, the individual participates in a social world. By internalizing these roles, the same world becomes subjectively real to [the individual]. (Berger & Luckmann, 1966:96)

Matthiessen’s (1993) discussion of the difference between ideational construal and interpersonal enactment, illustrated in Figure 7.3, differentiates then between conscious entities and non-conscious phenomena within ideational construal, and between conscious entities in interpersonal enactment. That they are differentiated in

this model does not mean that they are, in reality separate, but rather that they are realized simultaneously. Taken together, this accounts for the idea that ‘discursive practices involve and are productive of a whole range of embodied and materialized ... phenomena’ (Iedema & Wodak, 1999:7), a point made at the beginning of this chapter with reference to Schatzki (2012) and evident within Fairclough’s (2001b) definition of practices given in Section 4.5.

The seminar data include many examples of the various semiotic and material elements of life—that is, non-conscious entities, that mediate social interaction. In the first stage of analysis it was shown that representations of practice in the categories of SPECIFIC ENTITIES and GENERIC ENTITIES may thematize conscious or non-conscious entities. As can be seen in Appendices 11 and 12, non-conscious entities chosen as topical Theme in these analytical categories include a range of semiotic objects, particularly in the information systems and auditing seminars. In the information systems seminar, these include *software*, as well as a range of written documents: *contracts*, *agreements*, and written requests (e.g. a *request for proposal*). In the auditing seminar, these include components of both financial statements and work papers. Semiotic objects such as these play an important role in mediating professional–client interaction in accounting (Moore & Burns, 2008) and are a feature of the accounting practitioners’ role as an agent of symbolic control (Bernstein, 2000). In an analysis of the written discourse practices of accountants, Forey and Nunan (2002) found that 55% of approximately 1000 junior and senior public and commercial accountants surveyed estimated that they spent 15 hours or more each week writing, further confirming the importance of semiotic objects in accounting practice. As noted in Sections 6.5.2 and 6.5.3, there were no semiotic objects thematized in the categories SPECIFIC ENTITIES and GENERIC ENTITIES in management accounting seminar. Although working with a relatively small sample, the lack of semiotic objects in the management accounting seminar in these two analytical categories suggests some differences between the practices of management accounting compared with auditing and information systems. These differences are discussed further in Section 7.5.3. Non-conscious entities chosen as topical Theme also include a range of institutional abstractions, as reported in Section 6.6 and discussed further in Section 7.5.

Non-conscious entities are also distributed in those analytical units where conscious entities are thematized, as can be seen in the following examples from the management accounting and auditing seminars. In units MA147 to MA152 in the management accounting seminar, the lecturer summarizes key points from a group task in which students considered various scenarios that *will determine or direct [management accountants] to an appropriate transfer price* (MA143) within a production environment:

So you need to take note (MA147), **is there** an external (MA148), is there not (MA149). **Okay and we** [are] talking about external market in regards to supply (MA150), **do we** have capacity, excess or limited? (MA151) **And we** need to be able to recognize those elements (MA152).

In unit MA147, the lecturer uses *you* [generic practitioners], as her comments about the group task shift from what *you* [students] will do in the previous unit (**you** [have] *been listening*) (MA146)), to recommending a course of action to students as practitioners. The use of persuasion or ‘hortatory’ purpose (Martin, 1989) in the seminar data will be discussed further in Section 7.7. In units MA147 to MA152, the lecturer represents practitioners as taking action based on ‘*the environment in which [they] are operating*’ (MA130). This includes whether or not there is an external market of supply, previously defined using the non-conscious entity **the external market** as topical Theme as follows: **The external market** *is referring to there being suppliers in the market because it [is] related to the price that’s available* (MA135). The generic practitioner is also represented as basing their action on an organization’s level of *capacity*, and whether this *capacity* is *excess* or *limited* (MA151). *Excess capacity* is defined earlier in the seminar as follows: ***And by excess capacity I mean that in my production environment I have availability in my scheduling to produce more units than what is currently being ordered*** (MA141). Units MA147 to MA152 relate to an earlier segment of the seminar where the lecturer builds a framework in which the two elements that the practitioner needs to ‘*take note*’ of (MA147) within the production environment—*the external market* and level of *capacity* are positioned in relation to each other. The logical relations between these two elements recontextualize transfer pricing legislation, which includes guidance on both these aspects of transfer pricing, and acts as a decision-making tool within the practice of determining a transfer price.

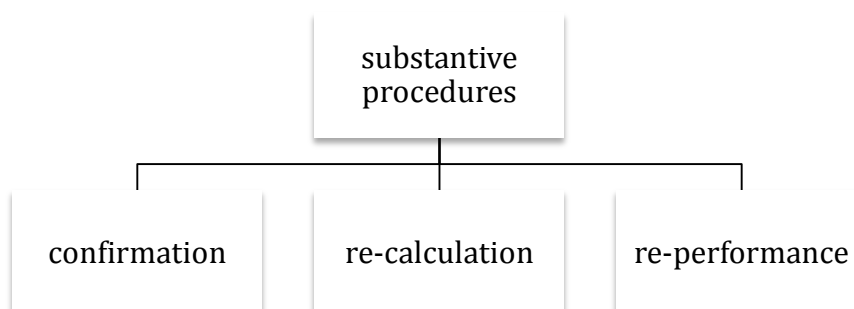
Another example of non-conscious entities mediating social interaction comes from the auditing seminar. In units AUD147 and AUD148, the actions of the generic practitioner (*look, re-calculate, make sure*) involve the non-conscious entities *invoice, amounts and computer*:

Re-calculating, you might have a look at an invoice and re-calculate the amounts (AUD147). **[You]** make sure the computer is doing it correctly, okay (AUD148).

In the category of ABSTRACT ENTITIES, these actions mediated by non-conscious entities can be seen to be reconstrued as abstract ‘things’ that can be manipulated symbolically in taxonomic and compositional relations, as in the following:

These ones here, confirmation, re-calculation, re-performance, they [are] more for what we call substantive procedures (AUD142).

Here, re-calculation is identified as a *type* of substantive procedure, a relationship that could be shown taxonomically as:



This logico-semantic relation between *types* of substantive procedures condenses interpersonal exchange, mediated by non-conscious entities within institutional meanings. These institutional meanings are part of the ‘system of representation’ (Painter, 2004:149) of the auditing field that are being recontextualized within classroom discourse. As described by Power (1995), this is ‘official auditing knowledge which is reinforced by the education systems ... [and] largely derived from regulatory pronouncements on financial accounting and from the historical codification of “best practices”’ (p. 321). This is in contrast to unit AUD148 from the auditing seminar above, in which the lecturer represents auditing as a ‘system of interpersonal exchange’ (Painter, 2004) through which practitioners recontextualize these institutional relations within the practice of re-calculating. Choices that lecturers make in representing professional practice as a system of representation or as a system of interpersonal exchange will be discussed further in relation to

unpacking and packing institutional meanings in Section 7.7. This will include a brief explanation of logico-semantic relations based on Halliday (1985).

The relations between individual practitioners and their social, semiotic and material environment in instances of interpersonal exchange in the examples from the management accounting and auditing seminars above can be understood at different scalar levels (Thibault, 2004). Thibault explains that action, or ‘our participation in situationally specific meaningful activity’ (p. 113), simultaneously realizes ‘three hierarchically organized scalar levels of organization’ that incorporate self, self interacting with non-self (‘persons, tools, symbols, things and so on’) and the ‘system of organized relations which brings self and non-self into some kind of organized relationship’ (Thibault, 2004:112):

The interaction among participants, including persons, tools, symbols, things and so on, may be taken as the focal level in any analysis of meaningful action. Below this level, there is the nature of the participants that predisposes them to certain kinds of interactions, certain ways of making meaning, and not others. This includes the neuroanatomical capacities of participants. Above the focal level, there is the larger scale system of social meanings—the ecosocial semiotic system—which by virtue of its transindividual character, always defines the parameters of any given participant’s contribution to meaningful action. In this sense, an ecosocial semiotic system, rather than individuals per se, is the repository of information about the possible forms of action in a given community. (Thibault, 2004:112–113)

While interpersonal meanings are non-referential in the sense that they are enacted in social action and exchange—interaction that extends beyond conscious participants to the broader constituents of practice (Fairclough (2001b), and that can be understood at different scalar levels (Thibault, 2004), the mechanism for their re-enactment over time in ‘meaning-making activity’ is ‘selective recontextualization’ (Lemke, 1997; Thibault, 2004:114). As described by Iedema and Wodak (1999), recontextualization within organizational practices involves shifts in meaning that are oriented ‘towards maintaining the processes of production, and therefore involve shifts towards technological or exo-somatic materialities: from talk to print, or from design to (built) construction’ (p. 13).

An insight into this process is provided in units IS27 to IS32 of the information systems seminar, as the lecturer gives an account of the emergence of the system development life cycle based on her own professional experience:

And traditionally it came about because, as I mentioned in week one, thirty years ago when we started developing systems, everything was written from scratch, so completely built as opposed to bought (IS27). **And some of this** was referred to last week, in week three, you know, the make or buy decision? (IS28). **Well we** didn't have anything to buy originally, (IS29), **we** had to um make or build everything (IS30). **So now we** have a lot of packaged software available to us (IS31), **and that means, that** speeds up obviously putting a system into a business if you choose to take packaged software (IS32).

Firstly, it is noted, with reference to the two sets of social relations operating within the classroom, that a different lecturer (or practitioner) may reveal different aspects of professional practice to those represented in units IS27 to IS32, interpreting the practitioners' role and their enactment of disciplinary and other discourses in different ways, and positioning themselves and students accordingly. With this in mind, and taking into account the fact that the seminar data does not provide detailed information, the content of this extract suggests that the *system development life cycle* originates from earlier days of information systems development, out of social practices in organizations. Rather than referring to specific events the lecturer recalls general events that Chouliaraki and Fairclough might term 'conjunctures' (1999:22): 'relatively durable assemblies of people, materials, technologies and therefore practices ... around specific social projects'. In doing so, the lecturer compares current practice with her experience from thirty years ago, when she and her colleagues built software *from scratch* (IS27).

The development of information systems can be seen as mediated by discursive interaction. In the development of information systems, texts both emerge out of, and shape practitioners' joint activity. This is exemplified earlier in the seminar as the lecturer refers to documentation associated with progression through stages of the system development life cycle: **Key deliverables, deliverables, documents** [[*which come out of each stage*]] *have to be agreed and signed off before you go to the next stage* (IS25). Workplace texts function in both the production and transfer of knowledge, but are also a means by which identities and social relations are constructed and maintained (Farrell & Holkner, 2006). While this is just one example, it demonstrates the normative role that language can play in organizations (Borzeix, 2003). As the discourse community of information systems evolves, practitioners develop and use specialized lexis (Martin, 2007:41) including specific

meanings for everyday terms, contributing to the creation and maintenance of the boundaries of their discourse community, and shaping and shaped by disciplinary, professional and organizational discourses. This use of specialized lexis can also be understood as instances of connotative meaning, as will be discussed below.

It may also be the case that practices are not mediated by specific texts but by discourses (Chouliaraki & Fairclough, 1999:46). Within the logogenetic and ontogenetic time frames, that is, as each ‘act of meaning’ unfolds in professional practice and meaning is grammatically constructed and instantiated in texts (Halliday & Matthiessen, 1999: 18), and as individuals respond to and reshape these texts, they can be seen to be ‘operationalizing’ (Fairclough, 2005) disciplinary discourses—or ‘knowledge singulars’ (Bernstein, 2000: 52) such as economics, and discourses of accounting and finance—such as *control* (IS19) and *risk* (IS227–228; IS239–241) as they operate within the discursive context of organizational structures and demands—such as demands for efficiency (IS60–62) and *quality* (IS109–110):

Control	So <u>it</u> introduces a process, a framework into an organization for <u>control</u> of systems development, especially in medium to large organizations (IS19).
Risk	now, one of your key duties [[in the organization]] [is] safeguarding assets, right (IS227) So <u>it</u> [is] all about managing <u>risk</u> (IS228). so safeguarding that asset , [[and anything around it]] is a key responsibility not only of IT but of the senior managers in the organization, and particularly finance, because finance has to use the systems to report financial information (IS239). Okay, <u>it</u> [is] a very important area (IS240). So <u>finance</u> often gets involved in this area, in negotiating a contract in particular, making sure that any <u>risks</u> to the business are safeguarded (IS241).
Efficiency	Including, if we do have to write software, <u>how</u> can we write programs faster? (IS60). How can we be smarter and more effective in the way we do it? (IS61). [How can we be] more efficient, more cost efficient, and so on. (IS62).
Quality	And of course all of the time we have to remember <u>it</u> [is] all about keeping the business objectives in mind and doing things as efficiently and effectively as possible because the CEO and the CFO are concerned, and the shareholders of course, are concerned about the best possible results in the shortest possible time (IS109), but <u>they</u> want quality, a quality product (IS110).

In turn, these disciplinary, professional and organizational discourses are interwoven with discourses emerging out of social, economic and technological changes beyond the organization. The information systems lecturer cites several examples of the impact of social, economic and technological change on practitioners' activity, including changes in the business and regulatory environment (IS46–52), internationalization (IS81–90), and the development of technological tools (IS67–70):

Regulation, deregulation	<p>Remember in week one <u>we</u> talked about all the sorts of issues that businesses face operating in today's environment (IS46) and they come under all sorts of pressures (IS47). Remember <u>we</u> talked about pressures and responses in week one? (IS48). And these are things like regulation, deregulation, competitive pressures (IS49). So if you're a bank or an insurance company, for example, you [would] be very concerned about the fact that your competitors might be doing something a lot faster than you (IS50). Or [if] you want to get a new product or a new service into the market place fast, you can't wait two years for that new system to be developed (IS51). That [is] generally unacceptable today (IS52).</p>
Internationalization	<p>You know, in my last company for example, it was about a sixty million dollar company, (IS81), the challenge was [[for us]] <u>we</u> were a global company (IS82), <u>we</u> only had about three hundred and fifty staff (IS83), <u>we</u> were very spread out (IS84) so we had to do things very cost efficiently (IS85). We had operations in Europe, America, Asia as well as Australia (IS86). Australia's where we developed all of our software which we sold globally (IS87). And the challenge was we had to start (IS88), <u>we</u> were growing (IS89), and we had to put more processes into the um budgeting and forecasting area (IS90).</p>
Technological tools	<p>So RAD includes things like the use of CASE tools (IS67) and the text talks about that in detail (IS68). I don't have time to go through all the technicalities of ah CASE tools (IS69). Basically they [are] software programs that are written to help you mock up screens, reports, generate program code from the way you design screens (IS70).</p>

The word 'reshape' is used above alongside 'respond to' to indicate that it is not only that practitioners respond to disciplinary, professional and organizational discourses, and social, economic and technological change—as individuals and as a profession they also have a role in 'creating and sustaining particular economic discourses and actions' (Boyce, Greer, Blair, & Davids, 2008). In these examples from the seminar data, it can be seen that practitioners' activity in relation to these discourses is not only discursive but material: it involves *doing* as well as saying. Lemke (1985) conceptualizes doing and saying as two interrelated aspects of meaning making: 'what

people say/write realizes a practice of saying/writing' and in the same way 'people's conduct realizes practices of behaving' (p. 292). This distinction is an important one for this study, as it expands on the systemic functional perspective on field to recognize 'saying' as part of, but not encompassing 'social and material activity', as recommended by Bazerman (1998:22), and noted in Section 2.3. This point will be discussed further in Section 7.4, and again in Section 8.1 in the following chapter.

Iedema and Wodak (1999) argue that recontextualization involves 'abstract[ing] away from interpersonal and ideational specifics' that then become part of the assumptions that underpin practice (p. 13). They summarize the potential of recontextualization as follows:

Recontextualization has the potential to turn structuring relations and meanings (interaction) into structured relations and meanings (both as socially sanctioned assumptions about action, and as spatial and technological formations: Iedema, 1997). (Iedema & Wodak, 1999:13)

These two kinds of relations and meanings, that Iedema and Wodak refer to as 'structuring' and 'structured' are the meanings addressed in this study. They are those contained with Bourdieu's *habitus* which was described in Section 2.5 as both structure and structuring, and parallel those contained within the relation between a 'system of interpersonal exchange' and 'system of representation' made above with reference to Painter (2004). A system of representation is a set of structured relations and meanings. With repetition over time within instances of professional practices then, 'structuring meanings' within interpersonal exchange become 'sedimented' (Berger & Luckmann, 1966:86; Bhaskar, 1997:147) as structured institutional meanings, and ideationally, condensed in abstract form, for example as models and formulae that emphasize institutional (rather than interpersonal) relations. As depersonalized meanings, they acquire power through their apparent objectivity. Berger and Luckmann (1966) describe this process as located within the broader process of institutionalization, and which has its basis in 'habitualization' or the repetition of action. They argue that 'institutionalization is incipient in every social situation continuing in time' (p. 71), and brings with it several gains that make innovation possible. These include the narrowing of choice—which 'frees the individual from the burden' of decision making; 'direction' and 'specialization of activity' that they argue is 'lacking' in conscious beings—which removes the tension of 'undirected drives'; and thirdly, 'a stable background in which human activity may

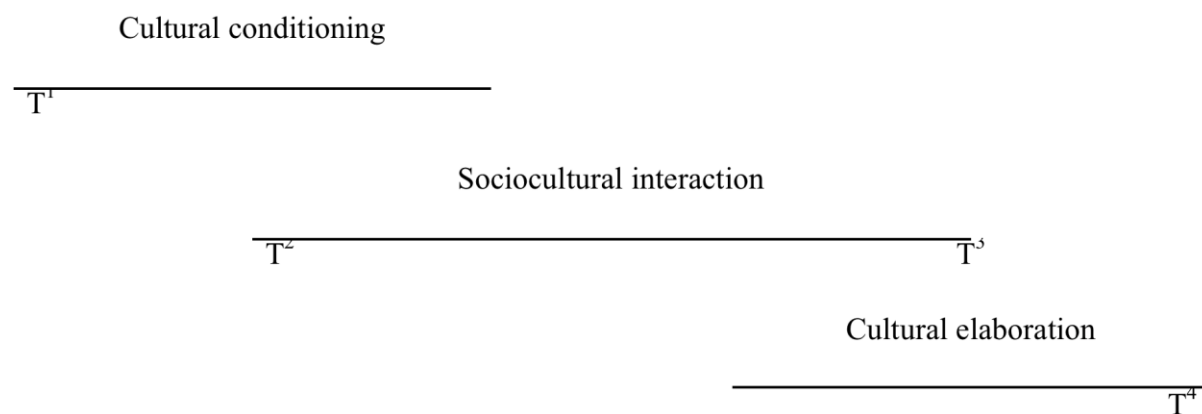
proceed with a minimum of decision-making', and energy available for decision-making when required (p. 69). Hence structured institutional meanings are recontextualized or rather, relocalized (Pennycook, 2010:35) in further instances of interpersonal exchange—that is, in professional and educational practices across time and space. The latter includes the seminars in this study, where these relocalized (and then, entextualized) meanings been interpreted as non-conscious entities in the category 'institutions' in the preliminary stage of data analysis in Chapter 6. Examples of these will be discussed in Section 7.6.

The condensation of interpersonal relations within institutions condenses interpersonal exchanges (and hence self, and interaction between self and non-self within a system of social meaning (Thibault, 2004)), and generates a theory of abstract 'things' in relation to one another, rather than of individuals in sociomaterial and semiotic exchange. In the process, the 'roles and parts' (Matthiessen, 1993:231) that individuals enact within interpersonal exchange—self, and self and non-self, become incorporated within the constellational identity of abstract meanings, the whole of which cannot logically be contained within practice but which contain a structure that expresses the principle that generates practice (Bourdieu, 1990a:74). The concept of constellationality will be discussed further below.

The difference between recontextualization and Pennycook's (2010) term 'relocalization' is that between context and location, and takes into account the issue of agency—a conscious participant's choices and intentions. As Thibault explains: 'In action, self-organization entails the emergence of a self-referential perspective. Action requires signs of the presence of viewpoints or perspectives. It requires, in other words, criteria of agency' (2004:125). Pennycook (2010) argues that recontextualization, in defining language practices as 'social practices in which other social practices have been recontextualized' leaves no space for 'human possibility ... choice, and change', whereas relocalization acknowledges both repetition and choice, as well as locality which is spatial and historical. The historical dimension of relocalization opens the possibility for the transformation of practices, and is a key element in Archer's models of both cultural and structural morphogenesis (Archer, 2003, 2004b). Archer regards relations between agency and structure as dialectical, describing the process of structural change with reference to time, with one element in the cycle necessarily preceding the next. Similarly, in her model of cultural

morphogenesis shown in Figure 7.4, the cultural system at T^1 (present time) precedes sociocultural interactions in time, and can only be reproduced or transformed at T^4 through sociocultural interaction (T^2 to T^3). The model is cyclic so that reproduction or transformation at T^4 becomes basis for the new T^1 .

Figure 7.4 The morphogenesis of culture (Adapted from Archer, 2004b)



The cycle in Figure 7.4 models processes of cultural morphogenesis (Archer, 2004b). While not shown here, an alternative cycle is one of cultural reproduction leading to cultural morphostasis (Archer, 2004b). Taking Iedema and Wodak's (1999) use of the terms 'structuring' and 'structured' above, these could similarly be mapped onto a timeline, to show that structured meanings become part of structuring and lead to new structures, replicating Archer's (1982) model of structural elaboration. This model parallels Figure 7.4 above, but illustrates 'structural conditioning' and 'structural elaboration' and hence structural morphogenesis, or alternatively structural reproduction and hence structural morphostasis (Archer, 2003:3).

7.3 Relocalizing practices: generic and specific entities

In relation to the seminar data, the idea of relocalization can be applied to examining a contrast between generic and specific representations of practice as meanings are unpacked. When meanings in the physical and biological world are unpacked through more context dependent meanings (that is, increasing semantic gravity), this means de-locating them from 'structured, complex and evolving webs of meaning—the constellations comprising ... academic discourse' (Maton, 2013:12). As Maton describes this process in the biology classroom, unpacking results in more

commonsense understandings' with a reduced range of meanings (2013:15).

Unpacking meanings in the professional classroom is a different process in many respects, but in the first instance is one that results in an expanded range of meanings in that institutional relations are expanded into interpersonal relations involving conscious entities and various non-conscious entities and these are relocalized in time and space. Each aspect of this relocalization has different implications for the representation of practices in classroom discourse.

Firstly, between the preliminary analytical categories of GENERIC ENTITIES and SPECIFIC ENTITIES there is a key difference in the kinds of conscious entities chosen as topical Theme. When representing conscious participants in generic terms, as in the category GENERIC ENTITIES, rather than in specific terms (as in SPECIFIC ENTITIES), generic participants are represented in terms of categorical attributes rather than individual characteristics and differences. These categorical attributes signify ways of thinking and acting as a practitioner associated with a professional field, and in doing so, 'connote the ... values and associations' (van Leeuwen, 2008:144) of that professional field. Associating the actions of individuals those of a group leaves no space to consider the agency of individuals, or more specifically, the extent to which they 'use their own personal powers to act "so rather than otherwise"' in a situation (Archer, 2003).

The 'intentionality' of individuals in 'defin[ing] and design[ing] courses of action in order to achieve their own ends', in the 'light of their objective circumstances' (Archer 2003:5, 6) means that an explanation of processes in the social world requires a different language of explanation to that required for processes in the natural world (Archer, 2003). In the natural world, explanations of cause and effect, for example those that might explain the workings of a biological process such as an immune response (Maton, 2013), or physical processes such as mechanisms of change in the climate system (Martin, 2013) are more straightforward, with no conscious, reflexive entity involved. As Martin observes, 'scientific sequences ... lean towards a fairly deterministic view of causality' and for this reason are referred to in systemic functional linguistics as 'implication sequences' (Christie, 2007:41). An implication sequence 'sets out steps in a process or the factors influencing a phenomenon in a logical sequence' (Macken-Horarik, 2002:22). This is important in understanding how physical and biological processes are represented in the science classroom

because part of the meaning of a non-conscious entity arises from its role in such sequences (Maton, 2013). The *composition* of structures in the physical world and biological world are similarly predictable and non-conflictual, and relatively enduring over time. Our knowledge of those structures however develops over time, and leads to elaboration of terms within the cultural system, as is the case in ‘novel areas of intensive specialization, such as radio-physics, molecular biology, experimental psychology and biochemistry’ (Archer, 2004b:5). In turn, these specializations have effects on socio-cultural interaction, for example in the institutionalization of that specialization in academic disciplines.

Where in the natural sciences, unpacking meanings allow for the experimental manipulation and observation of objects, their constituent parts and underlying mechanisms, in the social sciences these are understood by examining distinctions and relations between social objects through abstraction. Experimental manipulation of events is not possible in the social sciences, where events involve actions and social actors who are ‘conscious, intentional reflective and self-changing’ (Danermark et al., 2001:43). Instead, abstraction allows for the examination of the generative powers and mechanisms which combine to shape concrete events in the social world by isolating or ‘abstracting substance or process from space and time’ (Sayer, 2000:112), thereby removing processes from causal powers. Abstraction therefore assists the scientist in connecting the empirical, the actual and the real domains by ‘observ[ing] and identify[ing] the effect of underlying generative mechanisms’ (Danermark et al., 2001:43). Similarly, abstraction is part of the process by which structuring meanings become structured meanings (Iedema & Wodak, 1999:13) as models and formulae are developed and become part of the system of representation in accounting. This process also involves building technicality, which Martin (1993) describes as a step beyond abstraction.

Wignell (1998) associates the use of abstraction with the construal of experience in the humanities. He defines abstraction as ‘moving from an instance or collection of instances, through generalization to abstract interpretation ... shift[ing] from the “story” to what the “story” means’ (p. 301). He gives the example of abstraction in history:

[I]n history we might find individual people doing things in time and space (using tense and temporal conjunctions to order events), then move to generic

classes of people participating in general classes of activities set in time (using circumstances of location), then a shift away from the people to a focus on the events (nominalized as participants) and finally an interpretation of what the events mean (nominalization of events and reasoning realized metaphorically). (Wignell, 1998:302)

Unlike the humanities and the sciences, Wignell (1998, 2007) argues that the social sciences are technical and abstract: ‘through its initial construal of an abstract “world” and a subsequent shift into a technical construal, social science makes the abstract technical’ (1997:313). Wignell (2007) attributes this to the way that the social sciences have evolved. He argues that the social sciences

evolved over several hundred years as a discourse which had its origins in the abstract humanities discourse of moral philosophy (how people should behave), but over time that abstract discourse evolved into one which is both technical and abstract, resulting in the social sciences (how humans do behave). (Wignell, 1998:185)

The balance between technical and abstract varies across the various social science disciplines: comparing economics, sociology and political science for example, Wignell (2007) reports that economics is the most technical. Martin (1993b) describes technical discourse as concerned with both ‘definitions and the relationships among what is defined’ (p. 210). He explains that the construction of taxonomies in technical discourse ‘organize all phenomena as if they were things—because it is things rather than processes which lend themselves most readily to categorization’ (p. 212). While tending towards technicality, texts in the social sciences remain abstract, a fact that Wignell (1997) attributes in part to the basis of the social sciences in subject matter that is ‘far from tangible’ as compared to the physical sciences which have their basis in ‘the tangible, observable and measurable’ (p. 312).

In the material sense, to abstract something is to remove it. In thought, the same is achieved by considering something separately, isolating ‘one particular aspect of a concrete object or phenomenon’ by abstracting it from ‘all the other aspects possessed by concrete phenomena’ (Danermark et al., 2001:42). Danermark et al. argue that abstraction is a necessary response to the complexity of the actual: actual events being ‘constituted by a number of different elements and properties, powers and influences’ (p. 43). While abstraction can serve similar purposes in the natural and social sciences, social and natural objects are not the same. Social objects are relational in that they derive meaning through their relation to other social objects. Like natural

objects, social objects are internally related as structures: ‘the inner composition making each object what it is and not something else’ (Danermark et al., 2001:47), but the relations between them are social relations. The social relations between objects, or structures ‘are what makes [a] phenomenon exist’, and include structures at micro or macro level (Danermark et al., 2001:48). Further, as Bhaskar (1989) explains, social objects are ‘different (or emergent)’ from natural objects because unlike physical structures, social structures exist within social practices, and practices reproduce or transform those structures (p. 185). Ontological, epistemological, relational and critical differences between natural and social objects as described by Bhaskar are outlined here as they are key to understanding the condensation of meaning within professional discourse, and hence to understanding changes in semantic density in the representation of professional practice in classroom discourse.

First, at an ontological level, Bhaskar explains that social life is concept dependent, but tends to be characterized by more specific temporal, material and spatial relations, differences that flow from the ‘faster dynamics’ and ‘associated spatial features’ of social life (p. 185). Epistemologically, social systems are open systems in which mechanisms interact with each other (Danermark et al., 2001). This is unlike the natural sciences, where it is possible to ‘contrive, or observe phenomena in, locally closed (in physics and chemistry) or quasi-closed (in biology) systems’ (Bhaskar, 1989:185), for example by constructing an experiment that isolates particular generative mechanisms. For this reason, although society is real, and ‘[i]ts existence ... is a necessary condition for any knowledge’ (Bhaskar, 1989:186), some care is needed in making claims about structures and mechanisms in social systems.

A relational difference between social and natural objects is that social objects are ‘causally interdependent with the knowledge of which they are the objects’ (Bhaskar, 1989:186). This leads Bhaskar to what he describes as a ‘critical’ difference between the objects of scientific knowledge and social scientific knowledge: because it is possible that social structures can be established as a sufficient basis for ‘false, inadequate, or partial (one-sided) beliefs’, then they are open to negative evaluation, and hence can lead to action that aims to transform or dissolve them. This entails not simply a change to general states of affairs, but more fundamentally to a transformation of structures. With reference to Archer’s model in Figure 7.4 above, this critical reflection on social structures, and similarly on elements of the cultural

system, or as referred to here, the system of representation, is a generative mechanism in structural and cultural transformation. Bhaskar (1989) associates the capacity for this transformation with the idea of freedom: '[T]o be free ... is to know and possess the power and disposition to act in or towards our real individual, social, species and natural interests' (p. 187).

The extent to which critical reflection occurs in classroom discourse is in part a function of lecturers' agency in texturing representations of practice as discussed earlier. This texturing extends to the representation of practitioner roles as associated with more or less limited options through the lecturers' use of modality. Practitioner roles are represented as more typical (and therefore less arguable), with limited options available (*what you use in an organization* (IS363); *the more control testing you do* (AUD311)), to less typical (and therefore more arguable and less certain), suggesting a wider range of possible options (*what I might do* (AUD153); *what we can try to do* (AUD221)). When actions are nominalized, the actors in those practices are no longer visible, meaning they are no longer negotiable or open to question.

Bhaskar (1998) explains that in general there is 'no single correct description of an action, independent of context and descriptive purposes, of it as a particular type' (p. 96). When reasons for actions are given, these are both cognitive—associated with belief, and conative, associated with desire or intention (Bhaskar 1998:97).

Representing practitioner roles as typical reinforces that actions are based on belief—whereas representing them as less typical reinforces their basis in intention—and thus that there is a possibility of acting differently in the same situation. Rather than reflecting the lecturer's state of knowledge, this '[signals] that the meanings at stake are subject to heteroglossic negotiation' (White, 2012b). In other words, there are alternative ways of acting at stake, and those ways of acting that are represented in classroom discourse derive meaning from their relations of similarity and difference to those 'alternative meanings' (White, 2012).

Texturing also extends to the choice to represent processes generically in the simple present tense as in the category GENERIC ENTITIES, with the effect that processes are represented as general truths about processes and events in practice, or to (re)localize processes in time, as is more often the case in the category SPECIFIC ENTITIES, and in particular when lecturers draw on their own professional experience. The differences between the two allow for a difference between reflecting how the world

generally is, in generic representations, and how it *sometimes* is, in specific representations. In Archer's morphogenetic model shown in Figure 7.4, T¹ represents the present time, which is central to her approach. This is the time that we live within, but the 'ideational context ... is not of our own making' (Archer, 1988:xxiii). This is the time represented in generic representations of practice and in specific case examples (as opposed to actual examples), and effectively provides students with a vision of practice peopled by conscious entities located in the present. Although the actions of those entities are based on both the past and the future, these dimensions of time are not represented. However, in Archer's model time is central to transformation, and the presence of both past and the future in the present is what allows us to manage the tension between social conditioning and 'being able to conceive of doing [things] differently' (Archer, 1988:xxiii). It can be seen that time in Archer's model is treated as a 'theoretical variable, rather than a medium in which events take place' (Archer, 1982:8), given that structural and cultural domains operate over different time periods to sociocultural activity.

7.4 Institutions

As a category of abstract entity within Halliday and Matthiessen's (1999) typology of 'things' introduced in Section 6.3, institutions are a category of abstract things that are specialized within the social institutions of law, education, medicine and so on (Martin & Rose, 2007; Matthiessen, 2009). A difficulty considered in this study is that Halliday and Matthiessen's typology of 'things', refers only to 'things' as they are 'construed linguistically' (p. 187), hence to ideational meanings (structured meanings), rather than to meanings as they are *enacted* interpersonally (structuring meanings).

Institutions are theoretically complex. Within the systemic functional model they are described as follows. First, working from left to right across Figure 7.2 (found in Section 7.1 above), as social constructs, institutions are realized as 'patterns of organization' within social activity (Matthiessen, 2009: 43), that could be represented as 'activity sequences' (Martin & Rose, 2007: 101) within a material setting. Here, it is noted that although institutions are described as patterns of organization by Matthiessen, Fleetwood (2008a) points out that Bhaskar and Archer 'reject the idea

that institutions and social structures are patterns' of social practices, arguing that they are not patterns, but *conditions* for these (p. 242).

Returning to a systemic functional interpretation, institutions are located between 'system' and 'instance' (Matthiessen, 2009) as shown in the horizontal plane of Figure 7.2. They are also manifested within different orders of system (vertical plane in Figure 7.2), as 'patterns of organization within third-order social systems' and 'semiotic constructs—that is patterns of organization within fourth-order semiotic systems' (Matthiessen, 2009:43–44). As manifested within social systems, they are 'units of social organization characterizable in terms of distinctive systems of institutional roles and distinctive patterns of behaviour (social activity)'. As semiotic constructs, they are forms of meaning 'locatable within context', but part of the 'connotative semiotic system', that is, to do with their implications rather than their 'denotative', or more literal meaning (Matthiessen, 2009:45). This is a feature of interpersonal meaning (i.e. related to interpersonal exchange) that is 'mapped onto ideational meaning' (Halliday & Matthiessen, 1999:527) and realized lexically and grammatically. Matthiessen (2009:25), in a diagram not reproduced here, depicts connotative meaning as a feature of the context of culture (at the left hand end of the system—instance continuum in Figure 7.2) and within the semiotic system (i.e. towards the top of the vertical plane in Figure 7.2). He locates denotative meaning as also within the semiotic system, but at the (lower) level of language, rather than context. Connotative meaning is a feature of social scientific knowledge that differentiates it from scientific knowledge (Bhaskar, 1991).

Within critical discourse analysis, the relationship between system and instance is conceptualized as a relation between social structures and social events (Chouliaraki & Fairclough 1999). Fairclough (2003) regards structures as 'defining a potential, a set of possibilities' (p. 23). In this sense, structures are abstract entities, possibilities that underpin what actually happens in instances or events. Fairclough regards this connection between structures and events as mediated by social practices, which are 'ways of controlling the selection of certain structural possibilities and the exclusion of others, and the retention of these selections over time' (2003:23–24). Regarding non-conscious entities as objective structures emphasizes their availability 'beyond the expression of subjective intentions', such that the 'created stock of knowledge is social, that is ... distributed and shared across a particular community' (R. E. Meyer,

Höllerer, Jancsary, & van Leeuwen, 2013:4). The medium for this distribution is in the interaction between system and instance in social activity, that is, social practices. However this is not to say that structures are manifested as such at the right hand ‘instance’ end of the continuum shown in Figure 7.2, given that structures lack extension in time, space and matter. Here, in instances of professional practice, structured meanings within systems of representation mediate interpersonal exchange, sometimes in the form of social objects as will be discussed below, as a function of social practices within that domain of professional practice. In this study, as indicated earlier, both the system of representation (system) and the system of interpersonal exchange (instance) are relocalized as representations of practice in classroom discourse. Social objects within instances of interpersonal exchange may be relatively stable, being subject to change over a longer time frame, or provisional, negotiated between participants in instances of shared social activity as discussed in Section 7.6.1 below.

The manifestation of structure within professional practices is also captured in Bourdieu’s (1992) concept of habitus, introduced in Section 2.5. As conceptualized by Bourdieu, the habitus is constituted in practice, and is the principle of the construction of knowledge in practice (Bourdieu 1990a:52). Practices are the result of a relationship between habitus and field, defined by Bourdieu as:

$$[(\text{habitus})(\text{capital})] + \text{field} = \text{practice} \text{ (Bourdieu, 1986, in Maton, 2013:136)}$$

This relationship recognizes the sociality of practice. Habitus or dispositions are ‘a property of social agents (whether individuals, groups or institutions)’ (Maton, 2008). As summarized by Maton (2008), ‘practice results from relations between one’s dispositions (habitus) and one’s position in the field (capital), within the current state of play of that social arena (field)’ (p. 51). Socialization into a habitus is conceived by Bourdieu as “‘the imposition of form”, the imposition primarily of dominant modes of expression and ways of seeing the world’ (Bohman, 1999:137). These forms or structures give shape to the system or meaning potential of professional discourse. Acquisition of symbolic forms or ways of seeing the world (structures) equates with the acquisition of symbolic power, lending the acquirer the ‘legitimacy and authority to accomplish their goals and acquire cultural advantage and wealth’ (Bohman, 1999:137). While instances of professional practice are constituted by

interpersonal exchange (self, and self and non-self) in social activity, and as the result of a relationship between habitus and field, in classroom discourse these instances are relocalized in the social activity of the classroom as previously discussed.

Discussion and analysis thus far leads to several questions regarding institutions to be dealt with in turn in the following:

- What principles underpin the condensation of institutional meaning?
- How do these principles apply to unpacking and packing meaning in the seminar data?

In addressing these questions, some consideration will be given to how interpersonal meanings as enacted within social practices in a professional field are manifested within the cultural system as a product with properties and powers (Archer, 2004b) and how these properties and powers constrain and enable the activity of agents within those practices (Archer, 2003; Bhaskar, 1991).

In Archer's model of analytical dualism, elements within the cultural system both enable and constrain the activities of agents, and at the same time, agents both reproduce and transform elements within the cultural system (Archer, 2003). Where social structures constrain and enable the actions of agents, elements within the cultural system constrain and enable the 'ideational projects of people—the beliefs they seek to uphold, the theories they wish to vindicate, the propositions they want to be able to deem true' (Archer, 2004b:3). The causal powers of elements within the cultural system only exist to the extent that they are exercised by human agents. Just as the system of language does not determine what we say, elements within the cultural and structural system do not determine human action, as human action is 'characterized by the striking phenomenon of intentionality' (Bhaskar 1989: 79). Human action can be attributed to a person's own particular intentions, or described with reference to the 'social function or role' of that action (Bhaskar 1989:80). Here it is argued that interpersonal exchanges as they enact institutional relations, are condensed within abstract and technical meanings within a professional field, where their meaning is 'constellational' (Bhaskar 1975).

Constellationality as conceived by Bhaskar is a way of understanding relations between two levels of being, which when held together constellationally are held separately and together, through a 'real overall co-relation, emergent from its parts

and containing them, that depends on the real relation of the individual terms/entities, together with a relative autonomy between them' (Norrie, 2013:368).

Constellationality captures the idea that 'what appear to be separate categories are co-present and operate conjunctively in the world without being reducible to or separable from one another' (Norrie, 2013:368–369). The concept of constellationality appears in different guises in recent educational research, including Schatzki (2012:13), who defines practices as 'an organized constellation of different people's activities'.

Similarly, within Legitimation Code Theory, constellationality is used with reference to the condensation of meaning: 'strengthening semantic density is ... creating (or revealing) constellations of meanings' (Maton, 2014:130). It is applied by Maton in reference to 'relational systems of meaning' that describe the semantic structure of a field (Maton, 2013:11), as well as to describing internal knowledge relations within a field: various 'stances' (or 'ideas, practices, beliefs and attributes') that actors take in a field 'cluster' together in relations of similarity and difference that over time evolve into constellations of meaning (2014:152).

In this study, constellationality is used to describe the relation, condensed within institutional meanings, between the system of interpersonal exchange in professional practice and the system of representation. Drawing on Lemke's (1985) parallel between saying and doing noted earlier, Lemke (1993) explains that 'cultures are systems of interlinking, socially meaningful practices by which we make sense to and of others, not merely in explicit communication, but through all forms of socially meaningful action' (p. 245). This connects 'social acts, in particular contexts of situation ... with accounts of the dynamic processes of the social system as a whole' (Lemke, 1985a:5, cited in Iedema, 2003a:66), connecting 'patterns of relations of actions' (Lemke, 1993:246) with the activities of individual agents.

In relation to a professional field such as accounting, this idea obtains further meaning in relation to the concept of 'cosmology' (Maton, 2014:148) as it is used in Legitimation Code Theory. Cosmologies or 'belief systems' are described by Maton as underlying 'the way that actors select and arrange clusters and constellations of stances that, in turn, shape what is viewed as possible and legitimate within a field' (Maton, 2014:149). Constellations are understood as having 'coherence from a particular point in space and time' to actors who share a cosmology, or belief system (p. 152). Adopting Bhaskar's use of the term, that understanding can also be

understood constellationally—a practitioner’s understanding of the constellationality of systems of representation and interpersonal exchange in accounting is both within being a practitioner, but also an emergent product of being a practitioner. It is suggested here that within the semiotic system, connotative meanings, discussed above are also interpreted through the lens of a shared cosmology: that is, that cosmologies operate within the context of culture at the level of context. With reference to semantic gravity, this draws attention to the *relative* nature of context-dependence or high semantic gravity. Within a professional field, certain meanings may be regarded as context-independent because they transcend multiple contexts, but ultimately their meaning is (context) dependent on the shared cosmology of that professional field. This is a challenge dealt with in the literature on threshold concepts (Davies, 2006; J. H. F. Meyer & Land, 2003, 2006), discussed further in Section 7.8.

Maton (2014) describes cosmologies as the organizing principles by which constellational structures develop and meanings become condensed. He acknowledges different forms of condensation of meaning, and describes two, each of which condense referential meanings:

- *epistemological condensation*, where the condensing of meanings (from other concepts or empirical referents) emphasizes epistemic relations; and
- *axiological condensation*, where the condensing of meanings (from affective, aesthetic, ethical, political and moral stances) emphasizes social relations (Maton, 2014:153, bullets and italics in original)

As indicated earlier in this chapter, the analysis here suggests an additional mode of condensation: *institutional* condensation. In institutional condensation, the condensation of meaning emphasizes institutional relations. Hence, increasing semantic density in accounting knowledge practices involves condensing relations between conscious entities and between conscious entities and non-conscious entities, that is, condensing interpersonal exchange. These constellations of meaning are made visible by decreasing semantic density and unpacking institutional meanings.

As indicated above, this visibility is partial in that the constellation of meanings cannot be contained within an example, and likewise, the manner in which institutional relations are unpacked and repacked when structures are relocalized as referential meanings becomes a matter of stance—and hence reflect axiological cosmologies. In other words, axiological cosmologies influence the heteroglossic

negotiation (White, 2012) of practitioner roles in classroom discourse. Examples of this will be provided below. Firstly, lecturers exercise their agency in texturing—or making into texts (Fairclough, 2010:23), representations of practice in accordance with their understanding of what it means to be a practitioner. This understanding is a function of the ‘belief system or vision of the world’ that is contained within their particular cosmology (Maton, 2014), and their conceptions of their professional field (Reid & Davies, 2003; Reid, Petocz, & Gordon, 2010; Sin, Reid, & Dahlgren, 2011). Secondly, they do so in accordance with their understanding of educational practice, including their conceptions of learning (Marton, Dall’Alba, & Beaty, 1993) and teaching (Gordon, Reid, & Petocz, 2007; Gow & Kember, 1993; Trigwell & Prosser, 1996). The above—among other influences not considered here, but worthy of investigation, have a bearing on the ways in which lecturers texture representations of practice by representing these instances of professional practice generically, in the analytical category GENERIC ENTITIES, or specifically, as events located in a particular time and space in the analytical category SPECIFIC ENTITIES. In thematizing abstract entities, lecturers are ‘transforming’ social practices, representing them as abstractions, for example by ‘substitut[ing] elements of the actual social practice with semiotic elements’ (van Leeuwen 2008:17). This is revealed in the first stage of data analysis through an examination of lecturers’ choice of topical Theme, as they represent practice by thematizing abstract entities, generic entities and specific entities.

Where conscious entities are chosen as topical Theme, they are represented as participants in practices involving different kinds of material or semiotic entities as discussed in Section 7.2. Where non-conscious entities are chosen as topical Theme in the categories SPECIFIC ENTITIES and GENERIC ENTITIES, these entities are predominantly abstract, including material abstractions, as well as various kinds of semiotic abstractions. In unit 223 from the management accounting seminar for example, the abstract entity *it*, referring to *the bank rate of interest* is topical Theme: *so **it** [the bank rate of interest] sets an idea, a benchmark for what I expect the return on my business to be (MA223)*. In this example, the conscious participant (*I*) is present, but not thematized. A practice where the activities of a conscious participant are ‘bound up with’ (Martin, 2013) abstract entities necessitates abstraction. Lecturer agency is also implicated in their choice to ‘pack’ representations of practice by

emphasising institutional relations, or ‘unpack’ representations of practice by emphasising interpersonal exchange as shown in the second stage of analysis. Ideological stance is a way of linking instance and system, and therefore of linking the context of situation (in this case, the university classroom) ‘to the most fundamental principles for the organization of societies in the context of culture’ (Hasan, 2004:176).

In this regard, Lemke (1993) notes that as products of social systems we are ‘*pre-adapted* to model them (in strictly limited ways) as a condition of our own survival’ (p. 244, italics in original). Although Lemke refers more generally here to individuals in society at large, his comments also apply to the relocalization of professional practices through university classroom discourse. A lecturer’s theory of meaning and hence action is not individually constructed: their conceptions of learning and teaching, and of professional practice are shaped through successive instances of their participation in professional and educational communities of practice. From an ecological perspective (Lemke, 1993; van Lier, 2004), their survival in professional and educational practice has depended to some extent on their ability to model the system within their own practice. To take the metaphor further, the progression of their profession likewise relies on their commitment, and the commitment of other similarly aligned practitioners, to doing so. While a metaphor of ecology may be useful as a way of ‘drawing attention to the ways in which languages are embedded in social, economic and physical ecologies’, the analogy also carries the risk that the nature of this adaptation is necessary and inevitable (Pennycook, 2010:90). On the contrary, social systems are driven by ‘social forces’ (Crawford, 1998:155, in Pennycook, 2010:91), rather than natural mechanisms, and complicated by the matter of human agency.

7.5 Institutions in the seminar data

In the seminar data, institutions may be represented as entities negotiated within **instances** of interpersonal exchange—termed here as *tokens of exchange*.

Alternatively, institutions may be represented as abstract meanings that condense interpersonal relations within the **system** or meaning potential of professional discourse. The difference between systems and institutional relations is important here. While the former refers to the meaning potential of professional discourse, the

latter incorporates the ideas that elements in the cultural system derive their meaning from their location within institutional orders, and thus have causal powers in social activity as explained in the following section. In referring to these abstract entities as condensing institutional relations within a system of (semiotic) representation, this is recognized as ontologically distinct from social structures within the structural domain but in a mutually influential relationship (Archer, 1988).

The entities within the category ‘institution’ can be located on the horizontal continuum between system and instance shown in Figures 7.1 and 7.2 (found in Section 7.1 above), and reproduced in Figure 7.5. As shown in Figure 7.5, this generates two further subcategories within institutions: rules (including symbolic relations)—representing relations within the *system* of professional discourse, and tokens of exchange, representing entities negotiated within *instances* of interpersonal exchange. Examples illustrating each of these sub-categories will be discussed below.

Figure 7.5 Subcategories within the category ‘institutions’ in this study



7.5.1 Tokens of exchange

Token of exchange is a term used here to describe relational social objects in the seminar data that are negotiated within instances of social activity at different scales—from local to global. There are potentially many types of tokens of exchange, although those in the seminar data share several characteristics: they do not have a fixed value; and they vary in stability, being subject to change over different time frames, and in relation to a range of other variable social objects at different scales. In the seminar data they are realized sociomaterially (as in *transfer price* in the management accounting seminar, or remain virtual, as in the case of *assertions* in the auditing seminar, and in both cases, have potential casual effects within interpersonal exchange. Tokens of exchange in each seminar are listed in Appendix 15.3 in Volume 2.

In the management accounting seminar the tokens of exchange are financial entities: *transfer price, imputed interest rate, negotiated price, percentage return, bank rate of interest, residual income, and weighted average cost of capital.*

A *transfer price* for example is a token in the exchange between departments or centres in an organization:

or a transfer price is the internal selling price that is used when goods or services are transferred between profit centres and investment centres in decentralized organizations (MA4).

A *transfer price* is negotiated within the local practices of an organization with reference to a range of other variable social objects, and is relatively stable until renegotiated. The *transfer price* does not have a fixed value, but is determined by, reflects, and has causal effects on the activities and dispositions of individuals within that exchange. These meanings of *transfer price* derive from its location with professional and organizational practices associated with financial capital—practices of individuals whose roles and patterns of behaviour are legitimated by an economic rationale. This economic rationale provides a reason for particular kinds of exchanges within organizations, and the *transfer price* is a locus of that exchange. In a very direct way, a *transfer price* is an entity that mediates the ‘struggle for capital (Wacquant, 1989)’ (Oakes, Townley, & Cooper, 1998:26) in and between actors in the organizational field. These meanings are part of the identity of *transfer price*, which is understood in relation to the social system. Transfer pricing can be used to meet a range of organizational objectives, with different causal effects. Similarly, a *negotiated price* is a variable price negotiated by managers of different divisions of an organization within local practices, with reference to the variable token of exchange *market price*. The *bank rate of interest* is a token at a different scalar level of exchange, fluctuating in response to market forces of supply and demand, and affected by monetary policy and inflation, among other things.

In the auditing seminar, tokens of exchange are various kinds of *assertions*.

Assertions are defined in the *International Auditing and Assurance Standards Board Handbook* (IAASB, 2013) as follows:

Representations by management, explicit or otherwise, that are embodied in the financial statements, as used by the auditor to consider the different types of potential misstatements that may occur. (IAASB, 2013:269)

Auditors consider various aspects of financial statements, to establish whether they accurately represent the financial activities of an organization. One category of assertions (or representations) is *transactions*. Examples of assertions associated with *transactions* in the seminar data include *completeness* (AUD51–53), that is, whether all transactions are included in the accounts; *occurrence* (AUD54–55)—whether those that are in the accounts actually occurred; *cut-off* (AUD57–58)—whether transactions are recorded in the correct period, *accuracy* (AUD59)—whether the figures are correct; and *classification* (AUD60–61)—whether they are recorded in the correct budget category. Auditing assertions are a key component of the ‘auditability’ of accounts, which is not a natural property of the accounts but ‘constructed in the interaction between auditor, auditee and official knowledge’ (M.K. Power, 1995:330). Auditing assertions have causal effects, in that the auditee reacts to the audit by ‘mak[ing] itself isomorphic with the audit task’ (M.K. Power, 1995:330).

As dynamic social objects, tokens of exchange mediate social exchange and have descriptive powers. In units MA178-MA179 below from management accounting, the *return on investment* ratio is represented as measuring the effectiveness of departments in terms of their utilization of *invested capital*:

And with return on investment, it [is] not focussed on how much profit each department or investment centre has made, (MA178) it [is] about how effectively each of those departments have utilized their invested capital to generate a profit (MA179).

Tokens of exchange may also be manipulated in various symbolic relations such as formulae and models to produce further tokens of exchange. Where these objects are negotiated between individuals within the context of practice, more context-dependent meanings may contribute towards understanding the relational nature of these objects and their causal effects.

7.5.2 Rules

As noted in Chapter 6, institutional abstractions categorized as rules in the seminar data are explicit manifestations of the regulative function of the institutional order. Data in this subcategory is listed in Appendix 15.4. As can be seen in Appendix 15.4, the only item in this subcategory in SPECIFIC ENTITIES is ***their controls*** (AUD275) in the auditing seminar. The technical abstraction *controls* is a general abstraction (control) made technical with the addition of the plural *s* that establishes the

possibility for further specification of different types of controls. In unit AUD275 the lecturer gives an example of a situation in which control risk is low: **Their [the client organization's] controls are in place (AUD275) and they [have] got good controls (AUD276).** Internal controls in an organization are a point of overlap between accounting systems and organizational systems. They are part of an organization's system of governance and risk management, and are designed, implemented, operated, monitored and evaluated by accountants (International Federation of Accountants (IFAC), 2012). An organization's control system is designed to 'provide reasonable assurance about the achievement of an entity's objectives with regard to reliability of financial reporting, effectiveness and efficiency of operations, and compliance with applicable laws and regulations' (IFAC, 2012:20). In the case of an auditor's work, controls are external to their practice. An accountant may work within a system of organizational controls, and at the same time be involved in design, implementation or other activities associated with controls.

In the category GENERIC ENTITIES, it can be seen that the activities of management accountants are regulated by the *external market* (MA135, 136, 138) within the sphere of general economic and social activity. In the management accounting seminar, the abstraction *market* has a technical meaning, as indicated by the use of this term throughout the seminar. In units MA135, MA136 and MA138, the lecturer chooses a *type* of market as topical Theme—the *external market*. Other uses of market in the seminar include *open market* (MA110), *market price* (MA117), *market value* (MA235), and the *market-based method* of transfer pricing (MA106). The term *market* derives meaning from its relations to the social system or institutional order in which management accounting practices are located. The role of the *market* in regulating the work practices of management accountants, and work practices in general, is a feature of the “new work order” (Gee, Hull, & Lankshear, 1996), a discourse that is based in the ‘ideas of new capitalism and the need to constantly change products and customize them as the only way to survive in the over-competitive market place’ (Sarangi & Roberts, 1999:9).

In both the categories of GENERIC ENTITIES and ABSTRACT ENTITIES in the information systems seminar, *requirements* are thematized. User *requirements* play a key role in the exchange between systems developer(s) and user(s), even though they may not have direct contact with each other (Korpela, Mursu, & Soriyan, 2002). In

information systems then, the general abstraction *requirement* is used as a technical abstraction with a specific meaning. The identity of *requirements* is associated with its meaning within the social system or institutional order. They can be seen to have a regulative function as measures or standards by which information systems developers design and evaluate the products of their activity. They are also measures by which users of information systems determine their system needs. In the information systems seminar, reference is made to requirements of this type, including *mandatory* (IS161), *desirable* (IS162) and *optional* (IS163) requirements. These *requirements* are items in a *request for proposal*, which as the information systems lecturer explains, is *the document that stipulates all the details of what you require for every application* (IS146). Requirements are weighted when comparing software vendors as part of the process of vendor selection, as explained in units IS161–165 in the information systems seminar.

As shown in Appendix 15.4, the auditing seminar includes two regulative entities in the category GENERIC ENTITIES: *control risk* and *detection risk*. Appendix 15.4 also shows that *risk* is frequently thematized in the category ABSTRACT ENTITIES. *Risk* is particularly prominent throughout the auditing seminar, the term appearing one hundred times throughout the seminar transcript. The general abstraction *risk* is used with a specific technical meaning in auditing discourse and more generally in accounting discourse. In the auditing seminar, the lecturer identifies many kinds of risk that have a specific meaning in auditing, such as *control risk* and *detection risk*, both chosen as topical Theme in this analytical category. These are considered as regulative entities, as they are measures of the risk of auditor error in auditing financial statements. Detection risk for example is defined by the auditing lecturer as *the risk that the auditor will fail to give the appropriate opinion* (AUD241). The degree of risk shapes an auditor's practice, for example:

So the level of substantive testing is determined by the detection risk (AUD359).

The level of risk legitimates the use of the audit risk model as a guide to practice:

this risk will always exist (AUD219) **We** can't eliminate it (AUD220). **But what we can try to do** is reduce it as much as possible (AUD221), **and that** [is] why we need to focus on the audit risk model (AUD222).

In units AUD219 to AUD222, this risk is presented as inevitable and unavoidable: it *will always exist*, and auditors themselves do not have the power to *eliminate it*—only to manage it, guided by the *audit risk model*. The audit risk model is discussed further in Section 7.5.3, and the way in which it is represented in the seminar data is dealt with again in Section 7.7.

Auditors can also indirectly affect some types of risk, as seen in the following:

Auditors can't change inherent risk (AUD246), **but we** can change control risk indirectly because we, we are expected, under the auditing standards, to appreciate and have an understanding of the client's internal controls (AUD247).

In units AUD246 to AUD247, as in the previous extract, the practices of auditors are represented as being guided or regulated—in this case, by the auditing standards.

Further reference to different kinds of risk can be seen in the category ABSTRACT ENTITIES in the auditing seminar. This category also includes reference to the *audit program* that standardizes the work of auditors:

The audit program guides them to all look at the same sort of areas (AUD131) **So, if one person does an audit on this company and another person does an audit on the other company, the techniques** are still the same (AUD132).

They, when we start off on an audit, we have a program (AUD405) **and in the program it** says, you know, we've got to gather this information on the bank account, this information on receivables, this information on liabilities (AUD406).

In unit AUD321, the lecturer thematizes the auditing standards, which are central to the regulation of auditing practice:

Test of control, obviously the standards tell us we have to have an understanding of controls to guide us as to where to focus our audit attention (AUD321).

Topical Themes in this category in the auditing seminar also include less formal guidelines, as in **the rule** in unit AUD196 and the shared professional knowledge represented in AUD359:

So basically the rule is the more external written evidence you can get, that's got a higher reliability than evidence which is produced verbally from the client, okay (AUD196).

So the level of substantive testing is determined by the detection risk (AUD359).

In the management accounting seminar, transfer pricing practices are represented as regulated by an organization's *principles or policies* (MA104) on transfer pricing. The practices of management accountants are also regulated by tests such as *the first element* (MA132) and *the second element* (MA140). As noted earlier, these refer to two *elements* of transfer pricing legislation. The management accounting lecturer also thematizes various financial performance measures, emphasizing the regulating function of ratios such as *return on investment* and *residual income* used to measure organizations. An example follows:

And with return on investment, *it* [is] not focussed on how much profit each department or investment centre has made (MA178) ***it*** [is] about how effectively each of those departments have utilized their invested capital to generate a profit (MA179).

In other instances in the management accounting seminar, emphasis is on these same measures as symbolic relations—a sub-category of rules in the seminar data.

Examples of these will be described in the following section.

Although their status as institutional abstractions suggests from a systemic functional perspective that they represent 'patterns of behaviour' (Matthiesson, 2009:45), rules do not imply that all agents act alike in similar situations. Rather, any explanation of an individual agent's responses to rules needs to take into account 'the different relationships and resources available to [them], arising from the varying positions in which they stand' (Lawson, Peacock, & Pratten, 1996:145). As Bhaskar (1998) explains, social rules, are the basis for social forms, which being social,

[depend] essentially on, and in a sense [consist] entirely in, the relationships between people and between such relationships and nature (and the products and functions of such relationships) that such objects and rules causally presuppose or entail. (p. 55)

Rules can enable or constrain activity: they act as means 'through which action becomes possible and which action itself reproduces and transforms' (Lawson et al., 1996:147). Fleetwood (2008b), drawing on Hodgson (2004), argues for the causal powers of institutional rules, which become embodied via habituation within the habitual action of individuals. Institutions operating in this way can have causal effects on individuals, causing them to 'have, or change their intentions or actions' (Fleetwood, 2008b:184). These powers are causal not in the sense that they control individual behaviour, but in the sense that they affect the 'dispositions, thoughts and actions' of individuals (Hodgson, 2002:170, in Fleetwood, 2008b:188). Embodied or

internalized habits then become ‘emergent properties of agents’—tendencies and dispositions to behave in particular ways as captured in Bourdieu’s use of the term *habitus* (Fleetwood, 2008a:243, 248). Habits are not fixed states of being, but can also be exposed and made the focus of reflexive deliberation, because as individuals we are able to deliberate (Fleetwood, 2008a).

7.5.3 Symbolic relations

As described above, institutional abstractions grouped as ‘symbolic relations’ within the subcategory of rules are those that refer to logico-semantic relations within the *system* of professional discourse. Items in this category are listed in Appendix 15.5.

In the management accounting seminar, institutional abstractions that signify symbolic relations include various formulae used in management accounting practice.

Examples include the following:

- i) **I don’t know why it [outlay cost] [is] such a fancy word [because] it** is really our product cost plus our opportunity cost to the supplying division (MA125)
- ii) **And we look at the formula there [the formula is]** our profit over invested capital (MA165)
- iii) **So here, our return on investment** is profit over invested capital (MA170)
- iv) **So it [the ratio] [is]** going to give us the percentage return on investment of our profit over our invested capital (MA172)
- iv) **And the formula** is our net operating profit after tax minus our capital employed by our weighted average cost of capital (MA242)

Example i) from unit MA125, is a simple formula setting out the components of *outlay cost*, which can be shown as

$$\textit{product cost} + \textit{opportunity cost}$$

Examples ii), iii) and iv) from units MA165, 170 and 172 refer to the formula for *return on investment* (also referred to in the seminar and in practice as *ROI*), which can be shown as:

$$\frac{\textit{profit}}{\textit{invested capital}}$$

Example iv) is the formula for *economic value added* (also referred to as EVA), which could be shown as:

$$\text{net operating profit after tax} - \text{capital employed} \times \text{weighted average cost of capital}$$

These relations are expressed in rhetorical algebra (Stallings, 2000) as formulae, and are tools used by practitioners to abstract from social activity. Elements within each formula—*product cost* and *opportunity cost* in *outlay cost*, *profit* and *invested capital* in the return on investment formula and *net operating profit after tax*, *capital* and *weighted average cost of capital*, reduce the social activity of individuals within a department or other organizational entity to single numerical figures (*profit*, *invested capital*) that can be set in relation to each other to achieve a specific outcome. The entities in this category are here referred to in terms of the symbolic relations between their structural elements, but, elsewhere in the data, reference is made to the causal effects of formulae. The elements of each formula, and their outcomes are tokens of exchange as described above. Formulae provide a way of condensing and simplifying social reality by abstracting from it, ‘mathematical symbolism [having] evolved to bridge the gap between perceptual reality and linguistic descriptions’ (Lizardo, 2004). Drawing on Lemke (1998), O’Halloran (1999) notes that mathematics has greater descriptive potential than natural language in that it realizes ‘topological modalities or descriptions of continuous variation’ rather than ‘typographical modalities or categorical descriptions’ (p. 3).

Formulae are a means of institutional condensation, through which ‘the semantics of Material processes of combining and increasing, decreasing and sharing physical objects [are] replaced with arithmetical notions of adding, multiplying, subtracting, and dividing, respectively’ (O’Halloran, 1999:4–5). The latter are ‘operative processes’, that is, ‘actions performed by human Agents’ on the objects within a formula, although the human Agent is usually omitted (O’Halloran, 1999:5). As explained by O’Halloran, mathematical formulae contract interpersonal meaning, including speech functions (e.g. statement, command) and modality (e.g. the range of meanings between *might* and *will*), meaning that they do not express ‘shades of meaning’ (p. 7). The result is a shift in orientation towards representational meaning, with the ‘truth’ of the relations expressed in formulae encoded in the conventions of

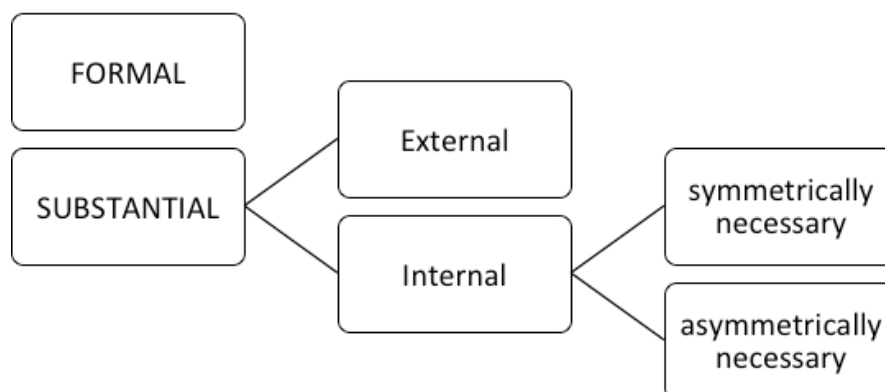
their visual display. As described by Kress and van Leeuwen (1990), cited in O'Halloran,

visual modality rests on culturally and historically determined standards of what is real and what is not, and not on the objective correspondence of the visual image to a reality defined independently of it. (Kress & van Leeuwen, 1990:52)

As part of the meaning system of accounting, formulae are social products that condense and reproduce social relations, as symbolic capital (Bourdieu, 1990a). Bourdieu regards formulae and other representations of symbolic thought as the 'product of quasi-bodily dispositions' that function as a repository for symbolic power (1990:68). This symbolic power 'works through control of other people's bodies and belief that is given by the collectively recognized capacity to act in various ways on deep-rooted linguistic and muscular patterns of behaviour' (p. 69). Drawing on O'Halloran's (1999) discussion, accounting formulae condense interpersonal relations. Formulae become a short cut for ordering social relations, containing a structure that expresses the principle that generates practice (Bourdieu, 1990:74).

An example from the management accounting seminar is the formula for *return on investment*, which establishes relations between departments, profits, and invested capital. Profit and invested capital are relational objects, in that 'they are what they are by virtue of the relations they enter into' with departments (Danermark et al., 2001:45). Danermark et al. note that 'in every concrete situation there is a complex combination of formal, substantial, external and internal relations' (p. 47). These types of relations can be classified as shown in the taxonomy in Figure 7.6.

Figure 7.6 Different types of social relations (Danermark et al., 2001: 46)



In the return on investment formula, the relationship between *profit* and *invested capital* on the one hand, and *departments* on the other is an asymmetrically necessary, internal, substantial relationship in that in the context of an organization, *departments* can exist without *profits* or *invested capital*, but the *profits* of a *department* and its *invested capital* exist by virtue of the existence of the *department*. Measuring the performance of the *department* involves examining the relationship between the objects *profit* and *invested capital*, which are connected with the objects *sales* and *expenses*. *Profit*, *invested capital*, *sales* and *expenses* are tokens negotiated within interpersonal exchange. Relations between these entities are part of the constellational identity of *return on investment*. Understanding these relations, and the causal effects of the formula are key to expert practice in this area.

As technologies of governance, numerical values and formulae become devices for ‘acting upon individuals, entities and activities in conformity with a particular set of ideals’ (Miller & O’Leary, 1994:99). Miller and O’Leary provide the example of standard costing and budgeting techniques, which are tools for both interpretation of activity and intervention in activity through measurement, ‘render[ing] visible the inefficiencies of the individual within the enterprise’ (1994:99). Measuring is a particular way of thinking and acting, based on a metaphorical interpretation of the world in numerical terms. In reducing the complexity of the social world to a single figure, certain properties of phenomena are overlooked or simplified: reducing individuals and events into measurable entities renders them accountable but simplifies or obscures other mechanisms at play in the social world. As noted in Chapter 3, Miller (1994:2) argues that making events and processes visible helps to change those events. A numerical view is regarded as an objective one (G. Morgan, 1988): the numbers themselves are apparently neutral, where in reality they are an interpretation of reality, one that is ‘heavily weighted in favour of what the accountant is able to measure and chooses to measure’ through the choice of measurement tool (G. Morgan, 1988:480).

Throughout the management accounting seminar, the lecturer represents management accounting practices as the activity of measuring: in units MA160–202, the abstract entity *financial performance measures* is unpacked into activities that involve the judgement of generic actors who are participants in mental processes: *choosing*

(MA177), *using [measures]* (MA177), *comparing* (MA180) and *evaluating* (MA202):

The importance is to think about well why would I choose one measure over another, because there [is] really no set determination as to what measure I would use (MA177)

So if you think about the outcome of or the ROI ratio I can then easily if I'm looking to compare the performance of department A and department B, I can compare them apples with apples, because this [ratio] is taking into account the fact that they could have had different amounts of invested capital (MA180)

We can use it effectively to evaluate (MA202)

Choosing one formula over another leads to a different set of accounting practices, and a different way of measuring or quantifying concrete activity. In some ways this is similar to the way in which different mathematical definitions may identify the same object, although possibly not the same concept, by way of a different set of mathematical processes towards a solution (C. Morgan, 2005). However, in the case of accounting, the formulae incorporate different social objects, and are hence complicated by human agency. Managers can undertake concrete activities to modify these objects: this is unpacked by the management accounting lecturer in representations of generic entities as participants in material processes: increasing, decreasing, reducing, not increasing, or (more congruently), not spending:

I could reduce my expenditure on invested capital (MA187)

And the key action [[that people will make]] is not increasing their invested capital, so not spending money on new machinery (MA190)

Acting to increase sales or decrease expenses in turn will affect the relation between sales and profit or expenses and profit. The activity of increasing or decreasing expenses can be condensed into the value of the abstract entity *invested capital*, a numerical value, which the lecturer goes on to examine in relation to the object *manufacturing efficiency* in units MA195–197.

The formula then condenses interpersonal relations. To activate the causal powers of the formula, the practitioner relocalizes this condensed meaning within further instances of interpersonal exchange. The activity of the practitioner is semiotic (and so also social) and involves several steps: firstly measuring by abstracting from the social activity; secondly, representing it in numerical terms as tokens of exchange; and thirdly, relating those tokens of exchange according to the formula.

Similarly, the *system development life cycle* in accounting information systems and the *audit risk* model in auditing condense interpersonal relations as representational meaning, although the seminar data suggests that the nature of the social objects they deal with differs from those of management accounting. Management accountants are represented in the seminar data as measuring social activity—or *what people do*, meanings that have a material basis in physical and biological systems as well as meaning in the social system. Evidence for this can be seen in the lack of semiotic objects in the categories of SPECIFIC ENTITIES, GENERIC ENTITIES and ABSTRACT ENTITIES in the management accounting seminar noted in Section 6.5. Semiotic objects in the category ABSTRACT ENTITIES in the management accounting seminar refer to the formulae used by management accountants: *it [residual income]* (MA229); *it [this formula]* (MA260); and *it [this formula]* (MA262). Auditors on the other hand are represented in the seminar data as being concerned with what people *say* about what they do: the entities that they are shown to be dealing with in the seminar data are more frequently conscious entities rather than in the other two seminars, and non-conscious entities are more frequently semiotic, with no material entities in the category GENERIC ENTITIES and only one in the category SPECIFIC ACTORS: *the bank balance [in the example]* (AUD195). Abstract entities include *assertions*, described above as tokens of exchange. The different nature of objects in auditing work has consequences for how objectivity is constructed in auditing. While a management accountant can achieve objectivity through quantification of sociomaterial practices involving conscious entities and non-conscious material entities, for the auditor, the task of establishing objectivity in part involves attributing *materiality* to semiotic objects. Materiality is a judgement regarding the ‘consequentiality and significance’ (Carlile, Nicolini, Langley, & Tsoukas, 2013:5) of accounting information. As defined by Law (2010),

Information is considered material if its omission from or misstatement in a financial statement could influence the decision making of its users. Materiality is therefore not an absolute concept but is dependent on the size and nature of an item and the particular circumstances in which it arises. (Law, 2010:278)

Auditors make decisions to examine the presence or absence of items in semiotic objects, based on an assessment of audit risk. Their means of abstraction is not to reduce material entities to numeric tokens of exchange that can be objectively compared and manipulated symbolically through formulae as in management

accounting, but rather to examine the material basis of semiotic objects so that they can be objectively compared. These semiotic objects are a company's financial statements, which are judged with reference to various *assertions*—what is asserted or declared in those statements. The objectivity of auditors draws in part from models expressed as symbolic relations which structure the activity of auditors. The structured process of auditing is a source of legitimacy and objectivity in auditing (Power, 2003). The auditing lecturer describes auditing practice as a series of steps:

And obviously we, we, at the beginning of any audit, [we] try to get an understanding of the client's business as well, before we do any procedures (AUD303). Because by getting this understanding, we [are] going to slowly work (AUD304) it [is] like a formula, like steps (AUD305).

As can be seen in the seminar data, the audit risk model seeks to establish a material basis for auditors' judgement. This is achieved through setting inherent risk and control risk, two components of 'risk of material misstatement' (IAASB, 2013:32) in relation to one another. It is a framework for standardising the quality of auditing procedures and hence creates an objective basis for auditors' opinion, based on the extent to which they support their opinion with sufficient and appropriate audit evidence. Audit evidence consists of both 'information that supports and corroborates management's assertions, and any information that contradicts such assertions' (IAASB, 2013:90). At the level of assertions, the sufficiency and appropriateness of audit evidence affects the extent to which they detect the presence or absence of items within semiotic objects (e.g. financial statements) which in turn are conceptualized within standardized categories of assertions:

The audit risk model is what we need to focus on because our understanding of the audit risk model will determine how and what we look at as part of the audit process (AUD202).

Risk assessment is described in the *IAASB Handbook* (IAASB, 2013), as ultimately being a matter of practitioner judgement, given that risk cannot be precisely quantified:

The assessment of risk is based on audit procedures to obtain information necessary for that purpose and evidence obtained throughout the audit. The assessment of risks is a matter of professional judgment rather than a matter capable of precise measurement. (IAASB, 2013:90)

The audit risk model will be examined further in Section 7.7 where it will be used to illustrate the unpacking of interpersonal meanings in the seminar data.

In the information systems seminar, practitioner activity is also described as processes and cycles, and steps within these. The *system development life cycle* for example is a series of steps followed by practitioners in organizations:

The system development life cycle, in my experience, most organizations will follow the steps of the system development life cycle (IS259) but some steps now may be faster than others (IS260). I doubt that you [would] ever really miss any of those steps (IS261). **Very important they [are] all done for a reason, which is what the text talks about in chapter six (IS262).**

In unit IS259, the generic entity *most organizations* represents both the location of material action and the social actors participating in that action. Organizations are represented as following *steps*—a process that takes place in time, and that is legitimated by the lecturer's expert authority (in my experience) and the authority of conformity (most organizations). The action *will follow* is in the present tense, indicating that it is habitual—the action of following these *steps* is the habit of *organizations* (and by extension, individuals within organizations). In IS260 the social activity associated with *the system development life cycle* is condensed. This condensation is achieved by objectivating social activity through temporalization (van Leeuwen, 2008:63), representing that activity as *steps*. In other words, the time associated with the action, as represented by the concept *steps*, is substituted for the action itself. The objectivation of *steps* through temporalization allows a focus on one aspect of the social activity to be examined in the New component of unit IS260: *steps* are Subject of a figure of Being that refers to their speed: *some steps* *now may be faster than others*. In unit IS262, the use of the passive (*are done*) elides the social actors, but represents the steps as processes that unfold in time *for a reason*. As explained by the information systems lecturer, the purpose of this formal structure is for *keeping control over the development process* (IS251).

In condensing interpersonal relations as symbolic relations, models, formulae and procedures simplify and standardize the activity of practitioners, so that a particular set of steps can be repeated in multiple settings with similar effects. This has implications for the agency of practitioners: the causal powers of the models or formulae are not intrinsic to either, but mediated through the agency (Archer, 2003) of practitioners. M.K Power (2003) notes, with reference to Dirsmith and Haskins

(1991), that while auditing may be presented as ‘a naturally coordinated series of technical steps’ (Power, 2003:381), it is actually socially constructed. Power also draws on Francis (1994), who argues that structured audit methodologies undermine auditors’ professional judgement. Francis describes the scientific representation of auditing through the audit risk model as an ‘empty abstraction’: a ‘planning aid [that] cannot tell an auditor what to do or how to do it in any meaningful way because it is contextless’ (Francis, 1994:255). Power argues that the structured audit process influences the extent to which auditors rely on reflexivity and practical reasoning (Francis, 1994). Drawing on the philosophy of Gadamer (1975), who in turn draws on the Aristotelian idea of ‘phronesis’ or practical reasoning, Francis claims that increased privileging of ‘objectivist knowledge and technocratic rationality (i.e. pseudo-scientific knowledge or scientism) over and against subjective understanding or what has traditionally been characterized as the auditors’ professional judgement’ has deformed practical reasoning (1994:236). Further, he argues that this has eroded the basis for ethical practice in auditing: ‘in an Aristotelian ethical sense, to be a good or virtuous auditor requires a good understanding (the intellectual virtue of phronesis), and a good understanding is achieved through a hermeneutically informed audit, not from a scientist audit’ (pp. 236–237).

7.6. Agents and structures

As indicated in Section 6.3, one of the distinctions made by Halliday and Matthiessen between different kinds of ‘things’ relates to the capacity of things as participants capable of effective action. This capacity is a characteristic of the agency of participants within an ergative model of transitivity³. In systemic functional grammar, the Agent is the instigator of a Process. As outlined by Martin and Rose (2007), the ‘essential experiential pattern’ is that of ‘people and things participat[ing] in a process’ (p. 91). A Process may include simply a core participant (Medium) and the Process (e.g. *the boat (Medium) sailed (Process)*), or there may be other

³ The ergative model of transitivity can be compared with a transitive model. The latter is ‘one of extension or impact: a process is acted out by one participant, the Actor (e.g. the lion ran), and it may extend (‘transcend’) to another participant (the Goal) (e.g. the lion hunted the tourist)’ (Matthiessen et al., 2010:232). In these two examples, the former is intransitive and the latter is transitive.

participants involved, including one that instigates the process—the Agent (e.g. *Mary* (Agent) *sailed* (Process) *the boat* (Medium) (examples from Halliday, 1985:146).

Sociological agency is not necessarily consistent with grammatical agency (van Leeuwen, 2008), and may be realized in a number of different ways. To this end, van Leeuwen defends an approach to agency that is not strictly tied to its grammatical realization, arguing that a narrow focus on the linguistic realization of agency may miss other, sociological realizations of agency, such as the examples of instrumentalization from the seminar data below. Archer (2003) argues that while there is lack of agreement regarding the nature of agents and structures in social theory, there is agreement ‘that *in some sense* “structure” is objective, whilst *in some sense* “agency” entails subjectivity’ (p.1, italics in original). Hence, while linguistically, a social structure such as an institution can be Agent as in the example shown below in Figure 7.7, sociologically speaking, to regard ‘the government’ as having agency as in this example amounts to “transcending” the divide between objectivity and subjectivity’, viewing agents and structures as ‘ontologically inseparable’ (Archer, 2003:1).

Figure 7.7 ‘Institution’ as Agent (Halliday 1985:152)

it	‘s	been done	away	with	by the government
Medium	Process				Agent

In contrast, realist social theory is “against transcendence”: structure and agency are ‘irreducible to one another’, being ‘distinct strata of reality, as the bearers of quite different properties and powers’ (Archer, 2003:2). Central to this is the idea that as conscious beings, agents possess ‘properties and powers’ that are ‘applicable to people, but never to social structures or cultural systems (Archer, 2003:2). This is consistent with Durkheim’s position that ‘neither material nor non-material objects produce the impulsion that determines social transformations, because they both lack motivating power’ (Durkheim, 1982 [1985]:136, cited in Carlile et al., 2013:6).

It was explained in Section 6.3 that Halliday and Matthiessen’s (1999) typology of ‘things’ (Figure 6.14 in Chapter 6) has been used in this study in a manner consistent with analytical dualism: that is, only conscious entities are considered as agents, and all other entities are dealt with as different kinds of institutional abstractions or

semiotic objects. Hence, the category of institutional abstractions in the seminar data includes abstract entities that are represented as ‘do-ers’ in material processes. In these processes, the (sociological) agency of conscious participants is ‘impersonalized’ (van Leeuwen, 2008:46). Van Leeuwen describes two forms of impersonalization: abstraction, where conscious participants are represented as abstract qualities, and objectivation, where they are ‘represented by means of reference to a place or thing closely associated either with their person or with the action in which they are represented as being engaged’ (van Leeuwen, 2008:46). Instrumentalization is one of several forms of objectivation. Another kind of objectivation was referred to above, in discussing the system development life cycle in the information systems seminar. Instrumentalization is defined by van Leeuwen as the representation of conscious participants ‘by means of reference to the instrument with which they carry out the action in which they are represented as being engaged’ (p. 46). Two examples from the management accounting seminar follow. In these examples, the entity *transfer pricing* is attributed with the capacity to affect the behaviour of managers.

It [transfer pricing] [is] really trying to promote positive managerial skills, you know in negotiating and acting like real business people (MA83)

It [transfer pricing] [is] driving that behaviour, that motivation (MA85).

Transfer pricing can be used by practitioners as a tool to achieve a range of organizational objectives, some of which are explored in the management accounting seminar. Law (2010) provides a brief summary of transfer pricing objectives, each of which can be seen to have causal effects on social activity:

- to provide information that motivates managers to make good economic decisions;
- to provide information for evaluating the managerial and economic performance of divisions;
- to maintain divisional autonomy;
- to move profits between divisions, which may involve moving profits from one country to another to minimize tax on profits. (Law, 2010: 419)

As described by Berger and Luckmann (1966), ‘the development of specific mechanisms of social controls’ is ‘necessary with the historicization and objectivation of institutions’ (p. 81). Mechanisms of control as described by Berger and Luckmann are a means by which institutions claim authority over individuals and their subjective meanings in any situation. With greater condensation of interpersonal relations, that

is, with increasing institutionalization of social activity, comes increasing predictability and simplification of the complexity of activity. The more this is taken for granted, ‘the more possible alternatives ... will recede, and the more predictable and controlled conduct will be’ (Berger & Luckmann, 1966:81).

Maintaining a distinction between structure and agency is important when considering both the place of university classroom discourse in preparing students for professional practice, and the contribution of professional learning to the reproduction or transformation of professions, because it puts the onus on the agency of individual practitioners. This will be discussed further with reference to professional learning in Section 7.8. As described in in Section 7.2, Archer’s model of structural morphostasis (reproduction) or structural morphogenesis (elaboration) is grounded in analytical dualism, or separation of agency and structure. Archer is concerned with both ‘*how* structural and cultural powers impinge upon agents, and secondly [with] ... *how* agents use their own personal powers to act “so rather than otherwise”, in such situations’ (2003:3, italics in original). As previously noted, in this study, the construct ‘agency’ applies both to representations of practitioners’ agency in professional practice, and to the agency of lecturers in ‘texturing’ those representations of agency, exercising their own causal powers of ‘meaning-making’ (Fairclough, 2003:23).

Thibault’s (2004) conceptualization of agency is one that takes into account ‘viewpoints or perspectives’, as outlined above. As he explains, these are implicated in the process of self-organization, which is a requirement for meaningful action:

Self-organization is ... a dialogic-interactive process ... Without this, we could not recognize other selves, for the emergence of a self-referential perspective depends on the dialogic and social ability to recognize and identify with other viewpoints and perspectives of other selves. (Thibault, 2004:125)

This process, using Thibault’s scalar model introduced earlier, simultaneously realizes self, self and non-self, within the ‘system of organized relations which brings self and non-self into some kind of organized relationship’ (2004:112). Maton’s (2014) work on cosmologies can be seen as relevant at the level of system in that it conceptualizes a system by which stances or viewpoints are ‘differentially characterized and valued within a field’ (p. 152). He explains that ‘[d]ifferent cosmologies may generate different constellations’ of meaning, and ‘[t]hus, which stances are included in a

constellation, and relations within and between constellations, may vary according to different actors, change over time and be the subject of struggles' (p. 152).

A further model for considering relations between structure and agency is provided in Bhaskar's 'position–practice' system (Bhaskar, 1998:55). The position–practice system as conceived by Bhaskar mediates between structure and agency: it is a system that provides the spaces in the social structure that agents inhabit in order to reproduce that structure. The position–practice system then consists of both the '*positions* (places, functions, rules, tasks, duties, rights, etc.)' that are taken up by individuals, and the '*practices* (activities, etc.)' in which they engage' (Bhaskar, 1998:55). The position–practice system is relational: neither groups nor agents are continuous, but relations are (Bhaskar, 1998). Although social relations include 'relationships between people and nature and social products (such as machines and firms), as well as interpersonal ones', what is of interest to Bhaskar in the social sciences is the relation between positions and practices, rather than 'the individuals who occupy/engage in them' (p. 56). This point will be considered in relation to the 'interpersonal first' principle (Painter, 2004) discussed in the following section.

7.7 Unpacking and packing institutional meanings

The concept of 'semantic waves' Maton (2013:8) was introduced in earlier chapters as a term used in Legitimation Code Theory to describe movements between more context-independent, condensed meanings (low semantic gravity, high semantic density) and more context-dependent, congruent meanings (high semantic gravity, low semantic density) in educational practice. As explained in Chapter 6, these varying strengths of semantic gravity and density underpin the structure of the language of description developed through data analysis in this study. The first stage of data analysis in the previous chapter provides examples of the ways in which different strengths of semantic gravity and density are realized in the relocalization of professional accounting practices in university classroom discourse, focussing on the choice of topical Theme. The interpretation of non-conscious entities chosen as topical Theme as condensed interpersonal relations has consequences for the nature of the 'waves' of unpacking and packing of institutional relations examined in the second stage of analysis. Through these shifts, lecturers are providing different perspectives on accounting practices: from a more synoptic, context-independent

view that objectifies practice: abstracting from and condensing disparate and sometimes incoherent and contradictory aspects of practice, to a more partial, context-dependent view of specific aspects of practice. These shifts from condensed, more context-independent meanings to simplified, more context-dependent meanings in the representation of professional accounting practices in classroom discourse have earlier been described as shifts between different kinds of transformations (van Leeuwen 2008, Fairclough 2003) of professional practice as a function of lecturers' agency in texturing classroom discourse.

In the first stage of data analysis, an examination of topical Themes in the seminar transcripts showed movements between different representations of entities within professional practice: between thematic focus on abstract entities, generic entities, specific entities and local entities. In the preliminary analytical category ABSTRACT ENTITIES, the agency of conscious participants is not thematized. Processes in this category are frequently relational identifying processes. Examples of material processes, where abstract entities are represented as 'do-ers' are given in Section 7.6. In terms of the system–instance continuum in Figure 7.2, more context-independent professional meanings could be regarded as representations of institutional relations as they are manifested within the **system** of professional discourse. In other words, these meanings are oriented towards what the system *is*. In the management accounting seminar for example, *transfer pricing*, an element within the system of professional discourse, is legitimated as an autonomous structure—an entity with agency, independent from the activities of practitioners, an idea that is consistent with a functionalist view of professions discussed in Chapter 2.

Condensing interpersonal relations within institutional abstractions abstracts relations from time and place and construes relations between different aspects of the practice. Relations within and between aspects of the practice can be represented schematically through 'instruments of eternization—writing and all the other techniques for recording and analysing, theories, methods, diagrams etc. that have been accumulated in the course of history' (Bourdieu, 1990:83). Representing practice in this way makes visible, for example in diagrammatic form, relations that are not all apparent in the moment of practice itself, and in doing so creates a new set of relations. The fact that practice in reality unfolds in time creates a pressure on practice that works against all aspects of that practice being 'mobilized together' (Bourdieu, 1990:83).

Representing practice as an object however affords the opportunity for a ‘synoptic’ view (Bourdieu, 1990:11), and creates a new set of relations between aspects of that practice that would not coincide in time—for example ‘simultaneity, succession or symmetry’ (Bourdieu, 1990:83).

More context dependent meanings on the other hand could be regarded as representations of social structures as they are manifested within **instances** of professional practice. At this end of the continuum, more context-dependent professional meanings are oriented towards what practitioners and others *do* in the world of social activity, a distinction that has its basis in the differences between esoteric and mundane knowledge (Bernstein, 2000). This doing, or social activity involves interaction mediated by social objects or structures, which, as described by Archer (2003, 2004b) are reproduced and transformed within the context of that activity, that is, within social practices. The nature of this reproduction or transformation in professional practice is a function of the agency of practitioners, which in classroom discourse is further reproduced or transformed as a function of the agency of lecturers in generic and specific instances of practice.

As semantic gravity decreases and semantic density increases, there is a shift in agency, from human agency to metaphorical agency. The agency of individuals is depersonalized, as within the mechanism of transfer pricing, the formula for return on investment, the audit risk model or the system development life cycle. The activities of participants within the context of social activity in the case of formulae are reduced to numerical values that can be calculated through various formulae and techniques. These numerical values, formulae and techniques themselves are represented as technologies (Miller & O’Leary, 1994) or agents of governance. In the case of procedures in information systems and auditing, the activities of participants are reconstrued as steps as described in 7.5.2.

Unpacking causal effects

Just as physical structures can be unpacked through defining, elaborating or exemplifying technical meanings using more congruent meanings, the same can be done for institutional relations. These more congruent meanings represent interpersonal exchanges within generic or specific instances of professional practice.

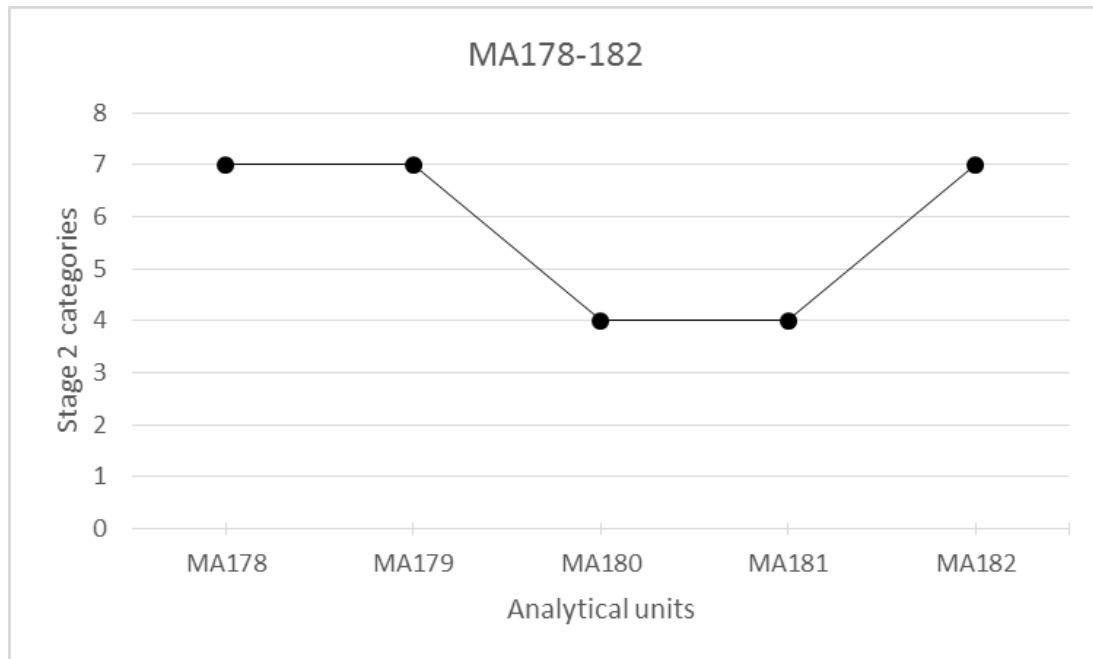
That the institutional meanings themselves are social objects means that their value in any instance may be contingent on other (contingent) social objects. Further, practitioners have the agency to employ tools such as formulae as generative mechanisms, with causal effects within different orders of systems including material or social systems (the vertical plane in Figure 7.2 earlier in this chapter). Abstracting from sociomaterial reality while maintaining an awareness of the contingent nature of social objects, and a critical understanding of the causal (sociomaterial) effects of formulae when employed as mechanisms are dimensions of expert practice that call for professional judgement. Movements between abstract, context independent meanings, and more congruent, more context-dependent meanings provide an opportunity to explore the relational nature of social objects and to examine the causal effects of structures. These effects include the intended effects, for example where a formula is used as a mechanism to order social activity in a particular way to achieve a specific outcome. Effects may also include less desirable outcomes, where the use of a formula may have negative material consequences as in the discussion of return on investment below. The capacity to use formulae as mechanisms to order social activity is a key component of professional expertise in the accounting field in general and in management accounting in particular.

Units MA178–182 and MA189–199 below provide an example of semantic waves or shifts from more context-independent to more context-dependent meanings in the management accounting seminar made by the lecturer in examining the causal effects of the *return on investment* formula. Shifts downwards exemplify more context-independent meanings, and include interpretative commentary from the lecturer.

Units MA178–182 follow, and the unpacking and packing of meaning in these units is illustrated in Figure 7.8.

And with return on investment, it [is] not focussed on how much profit each department or investment centre has made (MA178), it [is] about how effectively each of those departments have utilized their invested capital to generate a profit (MA179). So if you think about the outcome of or the ROI ratio I can then easily if I'm looking to compare the performance of department A and department B, I can compare them apples with apples, because this [ratio] is taking into account the fact that they could have had different amounts of invested capital (MA180). So how well have they used that to generate a profit that's contributing to my overall organization (MA181). So ROI is a very effective tool (MA182).

Figure 7.8 Unpacking and packing return on investment in units MA178 to 182 in the management accounting seminar



In Figure 7.8, analytical units from the seminar are shown on the horizontal axis, indicating movement in time through the seminar. Categories from the expanded language of description developed through the second stage of data analysis are shown on the vertical axis, using the numerical code for each category. These are reproduced here for reference:

8	Abstract entities
7	Unpacking abstract entities
6	Packing generic entities
5	Generic entities
4	Unpacking generic entities
3	Packing specific entities
2	Specific entities
1	Unpacking specific entities
0	Local entities

In units MA178 and MA179, coded 7. UNPACKING ABSTRACT ENTITIES, the lecturer refers to the purpose of return on investment as a financial performance measure, with thematic emphasis on the abstract entity *it [return on investment]*. Here, *return on investment* is topical Theme of a relational process: being **about** something in the context of social activity, rather than capable of effective action. This is exemplified in MA180 and MA181 with reference firstly to the activity of generic practitioners, a downwards shift to 4. UNPACKING GENERIC ENTITIES:

So if you think about the outcome of or the ROI ratio I can then easily if I'm looking to compare the performance of department A and department B, I can compare them apples with apples (MA180)

and secondly, by reformulating with reference to generic departments:

so how well have they used that to generate a profit that's contributing to my overall organization (MA181).

In MA182, the lecturer summarizes this with a comment on the effectiveness of ROI, a shift upwards to 7. UNPACKING ABSTRACT ENTITIES. Although ROI is not grammatically Agent, ROI is here referred to as a tool with the capacity for effective action.

The next analytical units in the seminar demonstrate the role of return on investment as a social mechanism with causal effects within social systems (on the behaviour of generic managers) and subsequently on physical systems (on production). In MA183–188, the lecturer elaborates on how managers can act to improve their return on investment, thematising generic managers:

[I can] increase my sales (MA185);

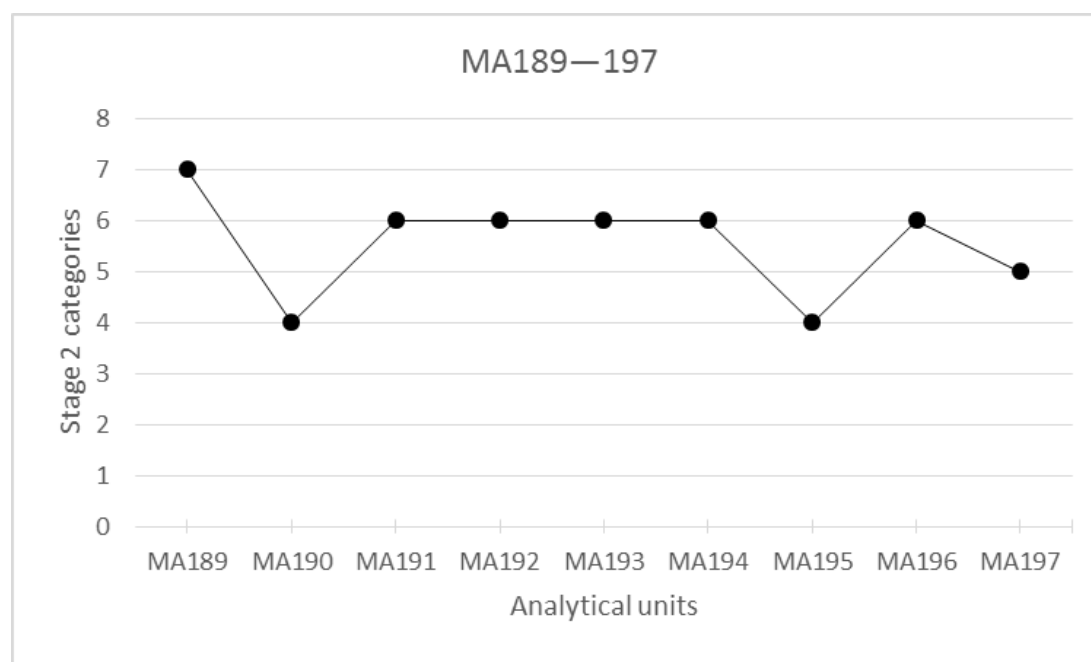
I could reduce my expenditure on invested capital (MA187).

The lecturer then touches on the material consequences of this in units MA189–197:

Now some of the negatives [[if we think about the implications of using this ratio as a performance measure]] [are that] I can take action that will be with the intention of the sole purpose of influencing the outcome (MA189). **And the key action** [[that people will make]] is not increasing their invested capital, so not spending money on new machinery (MA190). **Okay because what what effect** is that going to have on my return on investment? (MA191). [**Will my return on investment**] increase or decrease? (MA192) (*Increase*). [**Will my return on investment**] increase or decrease? (MA193). **So if I increase my expenditure on my invested capital, I** would decrease, I would decrease my rate of return (MA194). **So if I'm evaluated on my ability to have a favourable number compared to my colleagues I** may choose not invest in machinery (MA195). **And in the long term what, what** [is] going to happen do you think? (MA196) (*Student answers*). **My manufacturing efficiency** will reduce over time because I [am] using old out dated technology or my machine is continually breaking down so my production line is stopped (MA197).

The unpacking and packing of meaning in MA189 to MA197 is illustrated in Figure 7.9.

Figure 7.9 Unpacking and packing return on investment in units MA189–197 in the management accounting seminar



Material consequences are introduced with the discrete abstraction, *the negatives* in unit MA189. Here the lecturer refers to action that will be with the intention of the sole purpose of influencing the outcome. This action unpacked with reference to generic activities in unit MA190 (*not increasing their invested capital*), which is then glossed as *not spending money on new machinery*. This activity is then repacked with a WH-interrogative seeking information about its effect on return on investment (unit MA191). This question is reformulated in units MA192–193 as the lecturer continues to elicit a response. In units MA194–195 the causal effects of return on investment are summarized with reference to the activity of generic managers. This meaning is then repacked into the longer-term consequences on manufacturing efficiency in units MA196–197. In units MA198–199, the lecturer makes a recommendation to students, first establishing this measure as an effective entity (unit MA198), then indicating that practitioners should take this effect into account (MA199).

Looking beyond the unpacking of causal effects as detailed earlier in this section, this study touches the surface of another theoretical problem—the evolution of professional registers as a complex semiotic system of institutional meaning that is emergent from, but not reducible to, interpersonal exchange. As Matthiessen (2004) observes, ‘registers evolve together with socio-cultural evolution’ (p. 46).

Professional registers both reflect and re-shape socio-cultural development and

change, although as Matthiessen points out they are not ‘linguistic subsystems’ but rather, ‘socio-cultural contexts of use’ within the ‘total linguistic system’ (p. 46). The mechanisms by which professional registers evolve, or that shape the development of complexity in meaning potential (Matthiessen, 2004) reflect those of the development of the broader linguistic system, which in turn, mirrors to some extent the development of language in the individual (Matthiessen, 2004). The development of professions can be described in terms of processes connected with the creation of meaning, or in systemic functional terms, semantic change, or ‘semogenesis’ (Halliday & Matthiessen, 1999:17). Halliday and Matthiessen describe semantic change as occurring within three time frames. The longest of these, occurring over the course of generations, is phylogenesis, or evolution of the language. Next is ontogenesis, which relates to the development of language in the individual. The shortest of the three time frames is logogenesis, which describes the development of meaning within a text. Beck and Young (2005) argue that over time, or over what Halliday and Matthiessen might term the phylogenetic time frame, the links between professions and their knowledge base gives rise to a degree of autonomy in training and accreditation, standards and conditions and the institutionalization of a knowledge base in higher education curriculum. Further, many professions also develop codes of ethics as standards of professional accountability, and professional training that extends to socialization into the values and standards of a professional community (Beck & Young, 2005), the latter being the point where phylogenesis, or ‘expansion of the culture’ (Martin & Rose, 2007:318) creates the environment for ontogenesis, or development of the individual speaker.

A theme developed within G. Williams and Lukin (2004) is the ‘fundamentally interpersonal, rather than intrapersonal’ nature of language development within both the individual and the language system, with ‘our social experience’ being the ‘generative principle for the evolution of language, in both phylogenetic and ontogenetic timeframes’ (Lukin & Williams, 2004:7). Literature on the development of language in the individual, and the development of language as a system, and the relations between the two hold potential both for understanding the process of ‘becoming’ a practitioner, and for understanding the condensation of institutional meaning in the development of a professional register. In turn, this contributes to an understanding of how institutional meanings are represented in the seminar data. This

will be illustrated below with a discussion of findings from the second stage of data analysis.

In the development of language in the individual, while language is both a resource for construing and enacting consciousness through the resources of the ideational and interpersonal metafunctions, Painter (2004) argues for the principle of ‘interpersonal first’:

the trajectory of language development is in various ways driven by the making of interpersonal meaning ... it is the interpersonal that leads the way. It is charged with personal response, the power-play of interpersonal negotiation and the exploitation of dialogic construals of meaning that move the child’s language into new territory. (Painter, 2004:153)

To put this in more concrete terms, Painter argues that the development of ‘logical semantic-relations’ in language, that is different ways of expanding clauses by connecting them to other clauses in relations of elaboration, extension and enhancement that express relations of ‘time, place, manner, cause or condition’ (Halliday 1985:211), is ‘an ideational resource centrally implicated in processes of cognitive organization and reasoning’ but a resource that developed in the first instance not ‘in the service of reflecting on or thinking about the world, but in order to act in it’ (Painter 2004: 144). Halliday likens these three types of expansion—elaboration, extension and enhancement to ‘three ways of enriching a building: i) elaborating its existing structure; ii) extending it by addition or replacement; and iii) enhancing its environment’ (1985:203). In expanding on her principle of ‘interpersonal first’, Painter makes a further contribution that is relevant to this study: that ‘interpersonal’ needs to be understood to include ‘not only the “inter” (between persons) but the “personal” (attitudinal or emotional aspects of the term’ as originally argued by Halliday (1978) (Painter, 2004:138).

Here, viewpoint or stance, as a correlate of agency (Thibault, 2004) can be seen as contained within the interpersonal metafunction of the systemic functional model, and a connection can be made to Bhaskar’s (1998) position–practice system outlined in Section 7.6. Although not referring to Bhaskar, Iedema, Degeling, Braithwaite, and White (2004) provide an example of the way in which individual practitioners manage to exercise their own powers to act while simultaneously acting as institutional representatives (Sarangi & Roberts, 1999), thereby managing their ‘boundary position between profession and organization’ (Iedema et al., 2004:15).

One mechanism for this is practitioners' use of appraisal (Martin, 2000): lexical and grammatical resources that speakers and writers use to 'evaluate, to adopt stances, to construct textual personas and to manage interpersonal positionings and relationships' (White, 2012b). Iedema et al. (2004) report on the ways in which a practitioner positions themselves across different profession-specific discourses in a medical setting 'within the social and linguistic dynamics of a ... stream of talk' (p. 15). These profession specific discourses include 'clinical medicine, resource-efficiency, and systemization discourse of management' on the one hand, and an interpersonalizing discourse' through which the practitioner expresses their position in relation to these discourses on the other (p. 16). Through this interpersonalizing discourse, the practitioner manages the 'disjunction between his reluctance to impose organizational rules on his ... colleagues and his perception that such rules, in the future (to some extent at least), will be the appropriate means for managing the clinical work, and through that, the organization' (p. 16). The ability to manage this interpersonal positioning is clearly a dimension of professional expertise, and further work in this area would both complement and extend on the few existing studies of practitioner-client interaction in the field of accounting, including Burns and Moore (2007, 2008). Along with work by Burns and Moore, this study demonstrates the importance of a more nuanced understanding of the scope of professional communication skills in accounting—one that extends beyond a focus on generic skills.

The same principles of construing experience that apply to the ontogenesis of language in the individual also apply more generally, albeit on a different time scale to phylogenesis, or the evolution of human language (Matthiessen, 2004), and likewise, as inferred by Matthiessen, are reflected in the condensation of institutional meaning. While condensed institutional meanings such as procedures, models and formulae represent the world through logico-semantic relations—as a 'system of representation' (Painter, 2004:149), these representations also have their basis in interpersonal exchange. The seminar data provides an insight into the way that institutional meaning is construed within the logogenetic time-frame, through the 'unfolding' of the classroom text (Christie, 2002:97). As an example, *the audit risk model* in the auditing seminar is (re)construed through various logico-semantic relations such as elaboration, as in unit AUD223, where the three components of the

model are exemplified in *inherent risk, control risk, detection risk*: ***Now the audit risk model has got three components, inherent risk, control risk, detection risk*** (AUD223).

In unit AUD225, two clauses are linked through the logico-semantic relation of enhancement, where *if inherent and control risk go one way* is a reason (or cause) for *detection risk going the other way*: ***So often the inherent and control risk work in the same direction and what will happen is, if inherent and control risk go one way, often detection risk goes another way*** (AUD225).

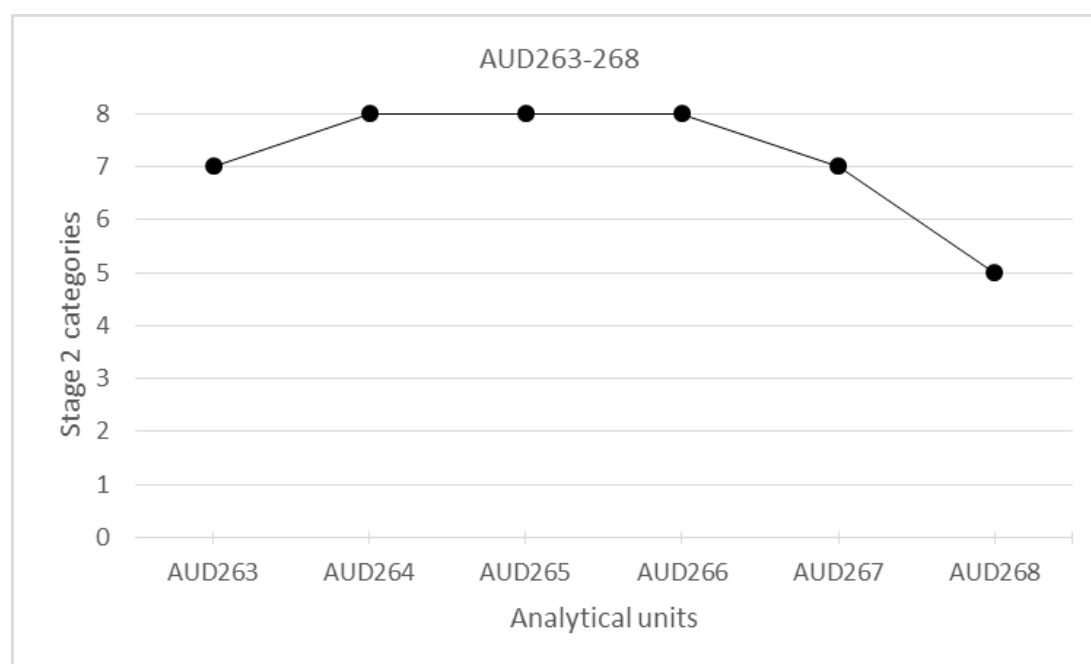
Similarly in unit AUD265 and AUD266, *if our inherent risk is high* is a reason or cause for *our control risk is high* (AUD265) and *if our inherent risk is high* is a reason or cause for *our detection risk is low* (AUD266):

Let's assume control risk is high (AUD263). **In the middle** [of the model] is what happens to our detection risk. (AUD264). **So, if our inherent risk is high, our control risk is high**, (AUD265). **[if our inherent risk is high] our detection risk is low** (AUD266).

These relations are represented theoretically, revealing institutional meanings as a 'system of representation' but have their basis in interpersonal exchange, as revealed when these meanings are unpacked to show professional practice as a 'system for interpersonal exchange'. This can be seen in the semantic waves shown in Figure 7.10 which illustrates the packing, then unpacking of the meanings in units AUD263 to AUD266 (in the extract above) and continuing on through units AUD267 and AUD268 (in the extract below).

In Figure 7.10 it can be seen that there is a shift from UNPACKING ABSTRACT ENTITIES (7) in unit AUD263 upwards towards ABSTRACT ENTITIES (8) and then back down again through UNPACKING GENERIC ENTITIES (7) to GENERIC ENTITIES (5). While the topical Theme of unit AUD263 is the abstract entity **control risk** (which is shown to be in the sub-category of abstract entities: 'institution' in Chapter 6), this unit is coded as UNPACKING ABSTRACT ENTITIES as it introduces a scenario to explain the abstract entity (*Let's assume*). Topical Themes of the next three units are all types of abstract entities: **in the middle** in AUD264 (categorized as a semiotic object in Chapter 6); **our control risk** in AUD265 (institution) and **our detection risk** in AUD266 (institution). The next two units in the seminar are as

Figure 7.10 Unpacking the audit risk model in the auditing seminar



follows:

The reason [for this relationship between inherent risk and control risk] is if we have high inherent and control risk, we try to compensate by doing a lot more substantive testing (AUD267). **By doing a lot more substantive testing, we** decrease our detection risk, which is a risk that the auditor will give an inappropriate opinion. (AUD268).

In unit AUD267 the lecturer begins to unpack the logico-semantic relation between the different types of risk established in the previous units. This unit is coded UNPACKING ABSTRACT ENTITIES, and its topical Theme is a discrete abstraction: **The reason** [for this relationship between inherent risk and control risk]. This introduces a rationale for this relationship, which is based on the role of practitioners: *if we have high inherent and control risk, we try to compensate by doing more substantive testing* (AUD267). In unit AUD268, this rationale is further exemplified with reference to the practitioner's role: **we** decrease our detection risk. This unit is coded GENERIC ENTITIES as the exclusive *we* [generic practitioners] is chosen as topical Theme.

Logico-semantic relations are the basis for the objective meaning of the audit risk model: the meaning of the model as an object in its own right, and the source of its power within auditing practice. As shown in the examples above, the lecturer may unpack these meanings for analytical purposes, to show the basis of these meanings in

interpersonal exchange. Unpacking these meanings reveals institutional condensation within the audit risk model: the role of practitioners that is condensed within the logico-semantic relations of the model is revealed through unpacking.

The audit risk model is presented in the auditing seminar as both a model for interpretation (as in the sequence above), and a model for action:

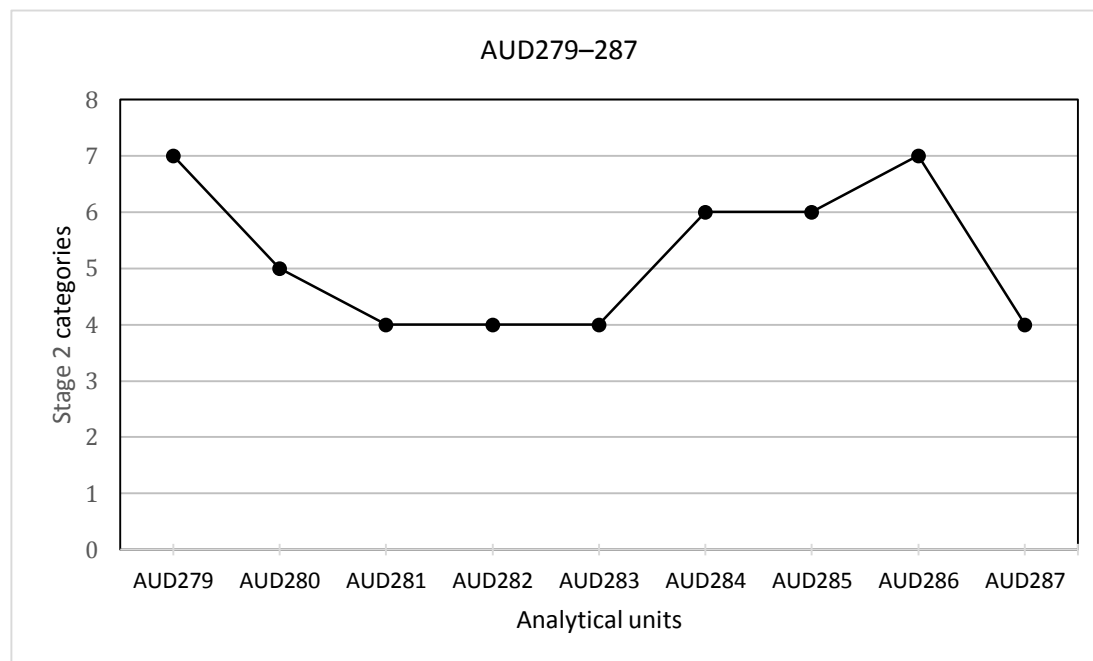
The audit risk model is what we need to focus on because our understanding of the audit risk model will determine how and what we look at as part of the audit process (AUD202).

[Audit] risk will always exist. (AUD219). **We** can't eliminate it (AUD220). **But what we can try to do** is reduce it as much as possible, (AUD221) **and that [is]** why we need to focus on the audit risk model (AUD222).

In the following sequence, from unit AUD279 to AUD287 illustrated in the semantic wave in Figure 7.11, unpacking the audit risk model starts out with an analytical purpose (explaining) and then shifts into a hortatory purpose. The difference between these two purposes is connected with social relations in the classroom between lecturer and student, rather than those social relations being relocalized in representations of practice. The choice of textual form for representing purpose is a feature of the textual metafunction—the third of the three metafunctions within the systemic functional model. The term ‘hortatory’ is used within systemic functional linguistics to describe texts that have the purpose of persuasion, as distinct from argument, which has an analytical purpose (Coffin, 2004). Coffin, with reference to Martin (1989), describes hortatory texts as those with the purpose of ‘provoking some form of action on the part of the reader [or listener]’—in other words that ‘argue about how the world should be’ (p. 231). In analytical texts, the writer or speaker seeks to ‘analyse and argue about how the world is’ (Coffin, 2004:231): analytical purpose is aligned with argumentative purpose. Coffin (1997) describes explanation as ‘a category which forms a linguistic bridge between narrative forms and those of argument’ (p. 201). As described by Coffin, narrative, explanation and argument are all ‘textual forms and linguistic resources’ used in the ‘interpretation and construction of social experience’ (1997:201)—in her case in secondary school history. In this study, explanation will be regarded as serving an analytical purpose. In analysing or persuading, a writer or speaker is simultaneously drawing on the meaning resources of the three metafunctions—ideational, interpersonal and textual: to ‘represent the world (ideational meaning)’; to ‘take a position on the world, interacting and aligning

as needed (interpersonal meaning)'; and to 'organize and package representations of the world (textual meaning) (Coffin, 2009:522).

Figure 7.11 Unpacking and packing in units AUD279 to AUD287 in the auditing seminar



In unit AUD279 shown below, as in units AUD267 to AUD268 above, the auditing lecturer has the analytical purpose of explaining detection risk with reference to the role of practitioners: *And, because we're doing less detailed audit procedures, it [is] normal that our detection risk will go up, okay* (AUD279). In unit AUD279, the topical Theme is the empty subject *it*. This unit is coded UNPACKING ABSTRACT ENTITIES (7) as the lecturer uses the empty subject *it* to present her evaluation of the impact of generic practitioners *doing less detailed procedures* on *detection risk*—that is, that this is *normal*. The fact that *detection risk will go up* is explained with reference to the role of generic practitioners in AUD280, with exclusive *we* chosen as topical Theme. This is represented as a statement of how practitioners act—or how the world *is*, reinforcing *normal* in unit AUD279 with the authority of conformity (van Leeuwen, 2008), and is coded GENERIC ENTITIES (5): *Because you can't test everything* (AUD280).

At this point, the lecturer's purpose shifts from analytical to hortatory, as indicated by the stance she takes in unit AUD281, realized in the Finite which expresses modality of obligation: *have to*. Rather than representing how practitioners act (GENERIC ENTITIES (5)), this unit is coded as UNPACKING GENERIC ENTITIES (4), as it

presents a comment on how practitioners *should* act, or how the world *should* be. The following unit (AUD282), while representing how practitioners act (*you choose*) is also coded as UNPACKING GENERIC ENTITIES (4) rather than GENERIC ENTITIES (5) because it is linked to the previous unit with the causal conjunctive adjunct *so*. Similarly, in unit AUD283 the lecturer elaborates on AUD282, clarifying the choice that is made. Here the choice is legitimated through moral evaluation (van Leeuwen, 2008): *to get that end result the best way possible*, so the unit is coded UNPACKING GENERIC ENTITIES. In unit AUD284, the lecturer draws together her previous comments in a generalization, introduced with the causal conjunctive adjunct *so*. This is framed as a rhetorical question seeking an abstract circumstance (*why*)—a move upwards coded as PACKING GENERIC ENTITIES (6). This generalization becomes the topical Theme of the following unit (AUD285) in the verbal deictic *that*, also coded as PACKING GENERIC ENTITIES (6). In unit AUD286, the lecturer makes an upward shift to UNPACKING GENERIC ENTITIES, returning to the relationship expressed in the audit risk model. The extract ends with a shift downwards to UNPACKING GENERIC ENTITIES to indicate how practitioners should act, expressed as an imperative. Here, the imperative form and omission of the subject provides a measure of objectivity:

and you have to do an efficient order, audit I should say (AUD281) **and so you** choose (AUD 282), **it's like you, you** choose a formula that works to get that end result the best way possible (AUD283). **So, if controls are good, why** don't you use them? (AUD284). **That** [is] what you should do, not then re-do detailed testing, okay (AUD285). **So there** is an opposite relationship, an inverse relationship (AUD286), [**you**] always look at control and inherent risk and often your detection risk will be the opposite way (AUD287).

This examination of packing and unpacking of meaning in the seminar data shows that within the (logogenetic) time frame of a seminar, classroom discourse can be both analytical and hortatory in purpose. In this study, the language of description shows packing of meaning to be oriented towards analytical purposes, and the unpacking of meaning to be oriented towards hortatory purposes. Over the phylogenetic and logogenetic time frame, Wignell (1998) describes the development of a field within the social sciences (he uses the example of economics) as a progressive shift in meanings from ““this is why”” to ““this is how””. This is a movement from a hortatory type of text, oriented towards ‘what people *should* do’, to an analytical type of text, oriented to ‘what people *do* do’ (Wignell, 1998:306, italics

in original). With this in mind, it is possible to interpret the frequency of unpacking in the seminar data as a feature of a developing professional register.

7.8 Implications for professional learning

Professional accounting practices differ in orientation to academic accounting practices, the latter being a broader set of practices including university classroom discourse. Academic accounting practices are oriented more specifically towards disciplinary knowledge, while retaining an orientation towards the professional field, a characteristic of the regional nature of the discipline as explained in Chapter 2. These two orientations, towards knowledge and towards the profession are related, at the very least in the sense that each legitimates the other, but also in the sense that each is recontextualized, or, more specifically, as described by Pennycook (2010), ‘relocalized’ in the other (p. 35). This relocalization can be understood in terms of practices, in the sense that practices ‘prefigure activity: they are not reducible to things we do, but rather are the organizing principles behind them’ (Pennycook, 2010:29). Hence, practices oriented towards knowledge, or knowledge practices on the one hand, and practices oriented towards the professional field, or professional practices, on the other. Knowledge practices relocalize professional practices, and professional practices relocalize knowledge practices.

The distinction between knowledge practices and professional practices is similar to that made between “learning *about*” and “learning *to*” (Dyke & Bryant, 2012), or between declarative and functioning knowledge (Biggs & Tang, 2011). In accounting and business education, this can be expressed as a distinction between ‘education *about* business’ and ‘education *for* business’ (Lucas & Milford, 2009:384, italics in original). Education *about* accounting entails practices oriented towards knowledge, and is oriented towards declarative knowledge: ‘public knowledge, subject to rules of evidence that make it verifiable, replicable and logically consistent’ (Biggs & Tang, 2011:82). Education *for* accounting entails practices oriented towards fields of professional practice, and is oriented towards functioning knowledge, or the use of ‘theory to inform ... decisions on what to do in their professional context’ (Biggs & Tang 2011:82). The relocalization of professional practices within knowledge practices and vice versa hinges in part on a relation between declarative and functioning knowledge, as functioning knowledge ‘requires a strong foundation of

declarative knowledge' (Biggs & Tang 2011:82). This only represents part of the equation, as the idea of declarative knowledge as it is described by Biggs and Tang appears to assume a relatively stable and neutral knowledge base, rather than taking into account the dynamic and relational nature of social objects. Where the demands of an 'uncertain and unstable' world (Barnett, 2012:9) are considered in higher education literature, emphasis tends towards learning as an individual project, calling for a different kind of learner, and a focus on the dispositions this requires (Barnett, 2012:9).

The limits of knowledge as a basis for professional expertise outlined in Section 2.6 have motivated a focus on 'becoming' a practitioner in professional learning—an approach that takes knowledge as a means rather than an end. As indicated in Chapter 1, a body of recent literature on professional education takes into account the socio-materiality of practice and the ongoing process of identity construction in 'becoming' a practitioner, advocating the application of new theoretical approaches to learning that consider the importance of collaborative activity in professional practice (e.g. Bleakley, 2011). This can be seen in a recent collection of papers on professional learning edited by Scanlon (2011b) that uses the metaphor of 'becoming', rather than one of acquisition, construction, or participation as contained in much of the literature on learning (Hager & Hodkinson, 2011). In Shutz's, formulation (1964, cited in Scanlon, 2011a:15), becoming a practitioner is a process of socialization, by which individuals progress from having 'knowledge about' a professional context that in practice expands to become 'knowledge of' that context, and again, in an ongoing cycle. Hager and Hodkinson (2011) argue that Hodkinson et al.'s (2008) application of the 'learning as becoming' metaphor overcomes several dichotomies, including that between structure and agency. Hodkinson et al. argue that '[l]earning theory often fails to fully incorporate wider social and institutional structures' (p. 32). As with research on accounting practices reviewed in Chapter 3, Hodkinson et al. are concerned with relations between structure and agency rather than emphasizing either agents or structures. Ultimately however, their orientation is towards relations between objects in the field of *learning*, using Bourdieu's concept of field. For them, *what* is learned is outside this field. They give the example of 'principles of academic psychology' which have an independent existence, but which learners develop 'their own partly idiosyncratic and partly shared understanding of'

(p.41). In this way, they see learning as capable of ‘chang[ing] or reinforce[ing] the habitus of the learner’ (p. 41).

The language of description developed in this study provides a tool for considering the dynamic nature of professional practice by considering relations between objects in a professional field, rather than relations between objects in the field of learning. The condensation of institutional meaning in procedures, models and formulae, tokens of exchange and social mechanisms have several implications for professional learning. Firstly, as non-referential meanings, institutional meanings are enacted within practices that are mediated by tokens of exchange. Those institutional meanings and tokens of exchange are contextual and localized, being located within instances of practice within the social system of accounting practice, but retain their constellational identity. Because institutional relations are condensed within abstract entities, these are relational social objects, and have causal effects within the social system. Becoming a practitioner involves both understanding and producing these casual effects in the social world. This is not a matter of students learning simply to (re)recontextualize practices in their own future practice, but involves relocalization, which incorporates professional judgement based on reflexivity, which in turn is emergent from ‘space, history and society’ (Pennycook, 2010:140).

In representing professional practices in university classroom discourse, ‘troublesome’ knowledge (J. H. F. Meyer & Land, 2003) may be represented as stable, neutral, and incontrovertible, meaning that principles of its formation are hidden from view. Students may be presented with tools, formulae and procedures as ‘ritual knowledge’ (Perkins, 2006:37), without reference to the causal powers of social abstractions and social mechanisms. Presenting students with more abstract, synoptic views of practice, with disparate aspects of social activity condensed as tools and formulae may pose challenges for students in understanding the more complex ‘real-world relationships’ that these represent (Shanahan & Meyer, 2006:103). In the words of the management accounting lecturer, students may be able to *plug in the numbers to the formula* (MA175) to get the answer, where the ability to *choose one measure over another* (MA177) is a component of expert practice in the use of this formula.

When institutional relations are unpacked in generic or specific representations of practice in classroom discourse, this reveals only part of their constellational identity,

and relations between entities are context dependent. These representations transform or (re)create simplified and selective instances of interpersonal exchange for the purposes of exemplification. They are based on assumptions designed to ‘make [a] problem tractable’ (Davies, 2006:77). While only some aspects of interpersonal exchange may be contained within examples, these are expanded upon in ways that are relevant to the particular context. Generic examples and specific case examples produce generalizable outcomes, making it possible to ‘examine outcomes from many interactions that do not simply replicate the outcomes that would arise’ in a specific setting involving specific participants (Davies, 2006:79). In this way they are ‘integrative’, in that they ‘integrate a way of thinking about a range of contexts’ (Davies, 2006:80).

This can be seen as providing opportunities to develop students’ understanding of key concepts through discerning specific aspects of social activity: for example, understanding an aspect of social activity in terms of its difference to other aspects of social activity, or as the outcome of a relationship between other aspects of social activity. Each of these changes in understanding of key concepts could be considered as ‘basic’ to developing disciplinary understanding (Davies & Mangan, 2007:713), but are not sufficiently generalizable to form the basis for thinking and practising as a practitioner. An understanding of relations only at this level runs the risk of generalizing from a partial understanding of the constellational identity of institutional meanings. Making this partiality more explicit through exposing the principles by which institutional relations order interpersonal relations has potential for knowledge building and transformation. This recognizes that our understanding of relations between social phenomena is different to our understanding of relations between natural phenomena, given that our understanding of the latter is not necessarily related to our understanding of what these relations *should* be (Davies & Lundholm, 2012). Further, it recognizes that while ‘social practice is concept-dependent does not mean that it is identical to the concepts on which it is dependent’ (Sayer, 2000) p. 34). As Sayer explains,

[i]f all knowledge is fallible, the lay knowledge on which social practices depend cannot be exempted. While the concepts used by actors, whether implicitly or explicitly, are necessary for an explanation of their situation, they are not sufficient, for they are likely not only to be flawed but to mask or misrepresent certain aspects of what happens (Gellner, 1968). (Sayer, 2000:34)

Moving up the scale, when institutional meanings are represented at a more abstract level, there is potential for building more context-independent meanings, and for revealing (or constructing) superordinate relations between entities. Objects that may be represented as unrelated at a subordinate level, may be shown to be related at superordinate level (Biggs & Tang, 2011:67). When related at a superordinate level, concepts that are grounded in the context of generic or specific interpersonal exchange that may appear to students to be ‘irreconcilably different’ can be shown to be ‘different instances of the same higher order principle’ Biggs and Tang (2011:68). Further, a social realist perspective recognizes ‘(a) the *necessary objectivity* of knowledge as a condition for any kind of enquiry or reliable prediction about the future and (B) that knowledge is *emergent from* and not *reducible to* the contexts in which it is produced and acquired’ (Young & Muller 2010:14, emphasis in original). An understanding of the system of institutional relations at superordinate level can be seen to underpin the capacity for professional judgement; as the basis for choosing one tool over another depending on social conditions, or as the basis for choosing one method over another to produce a specific result. Focusing at a lower, context-dependent level on the other hand, allows students to appreciate the differences between entities, and specific relations between entities within interpersonal exchange.

Between knowledge practices and professional practices in the accounting field, that is, knowledge *about* professional practice and knowledge *for* professional practice, there is a tension between knowledge practices and professional practices. Knowledge practices control the ‘selection of certain structural possibilities’ (Fairclough 2003:23) from structures within the system of professional discourse (models, formulae and principles) for the purposes of generating a better understanding of the ‘mechanisms that produc[e] the events in the world’ (Danermark et al., 2001:43). Professional practices on the other hand are regulated by the institutional order, which controls the possibilities for selecting from these structures to produce mechanisms that generate events or outcomes by ordering objects, or different aspects of social activity in particular ways. In its simplest terms, this is a tension between *explaining* the world (these are our attempts at *understanding* the mechanisms that produce events) and *making* the world (these are our attempts at *producing and reproducing* mechanisms to produce events). The tension between

professional practices and knowledge practices in accounting is characteristic of the regional nature of accounting (a topic explored in Chapters 2 and 3). As a knowledge region, accounting faces inward towards knowledge (understanding the mechanisms that produce events), and outwards towards fields of practice (producing and reproducing mechanisms to produce events).

While more abstract meanings in the analytical category ABSTRACT ENTITIES are more generalizable across a range of professional contexts than those in the categories GENERIC ENTITIES or SPECIFIC ENTITIES, they remain context-dependent in relation to the context of culture: they are meanings that serve to delimit the boundaries of professional practice. Acquiring the connotative meanings of a professional field that are generated by the organizing principles or cosmology of that field presents challenges that are addressed in literature on threshold concepts. These meanings can be described in terms of the *characteristics* of threshold concepts, or at least with Davies' (2006) interpretation of these, which, unlike more constructivist interpretations (e.g. Perkins, 2006), is compatible with a critical realist philosophy. Connotative meanings are 'bounded' in the disciplinary sense, and potentially 'troublesome', in that they may vary from everyday meanings (J.H.F. Meyer & Land 2003:5).

The potential for transforming practice depends on going beyond connotative meaning to address the reflexivity through which individual practitioners exercise their agency in mediating the 'causal powers of social forms' (Archer, 2003:2). In the first instance, this requires an acknowledgement that mechanisms are real, so that the form of these mechanisms can be revealed (Wight, 2004). A relational and integrated conception of the constellational identity of phenomena such as mechanisms involves not just an understanding of their interpretive power (as causal mechanisms) but also their powers and effects in the social system (as control mechanisms). While the former may be achieved through an emphasis on context-independent meanings, the latter requires emphasis on context-dependent meanings that 'narrate the sequence of events and processes (the causal complex) that lead to events' (Wight, 2004: 290). Drawing from discussion above, it will be seen that narration itself is insufficient, and that unpacking abstract meanings such as accounting formulae calls for attention to the institutional relations condensed within them, allowing for an exploration of practitioner agency in mediating causal powers and effects.

At the centre of ways of thinking and practising in accounting practice, and underpinning professional judgement in accounting are the principles by which practitioners abstract from aspects of social activity, which are driven by institutional orders. These principles are fundamental to professional accounting discourse, which can be seen as a way of ordering the world by creating ‘pseudo-closed system[s]’ which ‘increase the possibility of dealing with existence in a controlled manner’ (Danermark et al. 2001:186). Professional accounting practices, regulated by the institutional order, order social activity. When interpreted from a realist perspective, accounting practices can be seen as creating ‘constant conjunctions of events’ such that ‘what happens once will, under a sufficient degree of similarity of circumstance, happen again’ (Bhaskar, 1989:13). This similarity of circumstances creates order, which is sustained by institutional abstractions in professional accounting discourse. As institutional abstractions, models, formulae, principles and procedures in professional discourse each constitute a specific selection of different aspects of social activity placed in relation to one another for particular purposes. These are represented as ‘natural’ elements within professional discourse: the ‘scientific’ ordering or interpreting of experience through these abstractions constitutes a way of thinking that constitutes and legitimates professional boundaries. Without attention to the principles of this ordering, as regulated by the institutional order, structures may be privileged over professional judgement: with apparently scientific methods supplanting the need for practical reasoning (Francis, 1994, Power, 2003).

As noted earlier, generic representations are intended to produce generalizable outcomes, that ‘integrate a way of thinking about a range of contexts’ (Davies, 2006:79). This gives generic representations of professional practice a particular importance in classroom discourse. Given that generic representations are removed from actual participants and processes, they legitimate ways of thinking and practising as a practitioner that could be generically applied across a range of contexts, without reference to the place of these actions within a larger social system. For students these representations are potentially ‘troublesome’ (J. H. F. Meyer & Land, 2003) in two respects: firstly because the representations themselves may be ‘counter-intuitive’ or ‘alien’ to students’ own experience of the world (Davies, 2006:75), and secondly because they generalize or obscure the activities of

individuals within the context of interpersonal exchange, presenting a partial view of professional practice rather than a critical view.

A realist view of the stratified individual (Archer, 2000) demonstrates the importance of reconciling the tension between explaining the world and making the world, showing it to be a tension that has implications for professional learning, as well as for the profession itself. The analysis presented here provides a framework with potential for reconciling this gap. The capacity for cumulative learning in subject areas oriented towards disciplinary knowledge lies in the student's capacity for generalization and abstraction, that is, in context-independent, disciplinary meanings. Further, expertise in general is based on abstract concepts—in being able to 'recognize similarities and patterns in events, and ... predict events on that basis' (van Leeuwen, 2009:17). An accounting program that evaluated students on their capacity for expression of context-independent, disciplinary meanings however would overlook an important basis for thinking and practising in accounting: an understanding of the relation between context-independent professional meanings and context-dependent professional meanings in professional practice and learning.

Chapter 8 Concluding remarks and future directions

In keeping with the realist approach underpinning this study, which understands the social world as an open system, and social activities as interdependent and historically situated (Bhaskar, 1998) this chapter suggests that earlier chapters prepare the ground for future research. The main theoretical and practical contribution of this study is to propose a pattern that charts the representation of professional practices in the seminar data. This pattern has applicability beyond this study as a descriptive tool with the potential to reveal the ways in which individual lecturers exercise their agency in texturing representations of professional practice, as well as differences between professional practices.

The study has found that classroom discourse in professional learning can be described as movements between two dimensions of institutional meaning: upwards movements that emphasize institutional relations within a ‘system of representation’ (Painter, 2004:149) and downwards movements that emphasize interpersonal relations within a ‘system for interpersonal exchange’ (Painter, 2004:149). Both are central to the formation of consciousness in ‘becoming’ a practitioner as professional discourse is regulated by institutional orders. Analysis has been oriented towards understanding the ways in which relations between structures and agency in professional practice are represented in teaching practice, where others have examined these relations in an analysis of learning–teaching interaction itself (e.g. Ashwin, 2008; 2009). In this way, the analysis has maintained a focus on knowledge practices, an approach that social realist researchers in education maintain is vital to moving beyond a focus on ‘knowing or knowers’ (Maton & Moore, 2010a:6), towards educational practice that explicitly supports knowledge building.

Early chapters chart the development of this framework through a review of the literature on disciplinary and professional knowledge in educational practice, locating the study broadly within a Bernsteinian approach to the recontextualization of knowledge in pedagogic discourse. With reference to the literature on the sociology of education and then the sociology of professions, a case was made for differentiating professional knowledge from disciplinary knowledge, emphasizing the social basis of professional knowledge. The study has examined two sets of social relations in the professional classroom: those between lecturers and students, and those within interpersonal exchange in professional practice that are relocalized in

representations of practice in classroom discourse. While the social relations in classroom discourse are in part a function of relations between instructional and regulative discourse—the two components of Bernstein’s (2000) model of pedagogic discourse, it can be seen that this same relation between the discursive (instructional) order and social (regulative) order obtains in professional practice. That is, professional discourse is embedded in and regulated by institutional orders, and relations between the two are dialectical. As practitioners, the lecturers in this study ‘project’ (Christie, 2002:25) the instructional, professional register through the regulative, institutional register in classroom discourse.

The review of literature on professionals and professionalism in Chapter 2 provided a number of perspectives on the process of professionalization, including early work by Jamous and Peloille (1970) and the more recent work of Abbott (1988). The descriptions of professionalization contained within the work of each have a common basis in recognizing that professional practices are legitimated by ‘social forces’ (Jamous & Peloille, 1970:112) or social structure (Abbott 1988). As outlined in Section 2.6, Abbott (1988) describes the process of professionalization as a shift from legitimation on the basis of character, to legitimation on the basis of technique, towards legitimation on the basis of social structure. The progression that Abbott describes maps loosely onto the development of professional registers as systems of meaning—a process described here as one through which professions develop from a system of interpersonal exchange to a system of representation. Although Abbott sets character and technique in opposition to one another, in any semiotic system, interpersonal exchange and representation do not preclude each other. Rather, a mark of maturity within a semiotic system such as a professional register is that it simultaneously instantiates a system of interpersonal exchange, and a system of representation, organized into a ‘coherent whole’ (Butt et al. 2004:5) through textual meanings. This system of meaning is located within institutional orders—Jamous and Peloille’s (1970) social forces or Abbott’s (1988) social structure, which create conditions for the activities of practitioners.

While it has been argued by Halliday and Martin (1993, cited in Martin, 1998:10) that discourses ‘do not arise for reasons of status’ but rather for functional reasons (Martin, 1998:10), a discourse can acquire status the more functional it is, functionality being associated with political and economic utility (Martin, 1998). In

the case of accounting discourse, this functionality can be seen as connected with a capacity for ordering and control as discussed in Chapter 3. As a discourse acquires status, it may reach the point of being ritualized—or as described by Martin, ‘used in contexts where it is not functional, but used simply for reasons of status’ (Martin, 1998:10–11). Status can be equated with power, which derives from the potential for a discourse to be used for control of material and other resources. In the case of science discourse, as described by Martin, this power carries risks that science education has a responsibility to address, by challenging the status quo through deconstruction and critique, and by increasing access to scientific discourse. Martin constructs this challenge at the level of power relations, arguing for subversion of relations of class and gender in the recontextualization of science discourse. In this study, potential for change, in the sense of challenging and transforming the status quo in professional practice, is seen as associated with the deconstruction of *institutional* relations. It is argued here that professional learning has a responsibility to make explicit the principles by which practitioners *compare apples with apples* (MA180), that is, professional learning needs to address the ways in which diverse elements of social activity are selected and ordered through professional practices.

A problem at the centre of this study is the split between practical and theoretical knowledge: the difference between the ‘material world and the immaterial world’ that is bridged by abstract meanings which have an indirect (context-independent) relation rather than a direct (context-dependent) relation to their material base (Bernstein, 2000:29, 30). Shay’s (2012a) model of professional knowledge outlined in Chapter 4 argues for a fundamental difference between context-dependent and context-independent knowledge. The difference is one that is at stake in the distinction between singular and regional disciplines outlined in Chapter 2: between singular disciplines oriented towards knowledge, and regions at the ‘interface’ (Bernstein, 2000:9) of knowledge and practice. Discussion in Chapter 7 has drawn on Archer (2000) to argue for translatability between practical and theoretical knowledge, and further, for the importance of practice.

Drawing together the various threads of this review, analysis in Chapter 6 has established a framework for describing the representation of professional practices in university classroom discourse, in line with the first of the research questions posed in Section 1.2. Chapter 7 has addressed the remaining two research questions,

considering the implications of the representation of professional practices for professional learning theory and practice. Discussion in Chapter 7 has explored the idea that institutional meanings emerge out of interpersonal exchange in professional practice. This exploration has drawn on the ‘interpersonal first’ principle (Painter, 2004), a foundational principle in systemic functional linguistics that originates in Halliday’s work on ‘learning how to mean’ (Halliday, 1993:93). This principle has been applied to examining the unpacking and packing of meaning in the seminar data, showing professional practices to be represented as systems of representation or interpersonal exchange. In moving between different representations of practice, lecturers texture these representations as a function of axiological cosmologies (Maton, 2014), offering more or less typical representations of practice that engage or not with the ‘basic heteroglossic nature of social reality’ (White, 2012a).

8.1 Implications for professional learning theory and practice

In Chapter 1, the idea of professional learning was positioned at the interface between two perspectives on educational research and practice—one oriented towards ‘becoming’ a practitioner, and the other oriented towards knowledge. This opposition constituted a rationale for investigating the representation of professional accounting practices in university classroom discourse, and then considering the implications of this for professional learning theory and practice, a course of action that was charted in the three research questions set out in Section 1.2. The research has demonstrated that in the case of professional learning, these two positions are complementary. The basis of this complementarity can be found in Lemke’s (1985) conceptualization of *doing* and *saying* as interrelated aspects of meaning making.

Developing as an academic writer can be described as developing a ‘textual or authorial voice’, or academic voice, through which ‘alternative socio-semiotic positions’ (White, 2012b) are negotiated. This is described by White as choosing between different kinds of *meanings*. A shift from *doing* work to ‘talking about doing’ work is noted by Iedema (2003a:198) as a feature of work practices in contemporary organizational environments. Participating in spoken interaction in professional settings, for example in client consultations and meetings requires ‘fluency’ in the various discourses that are interwoven (Iedema, 2003a) through an interpersonalizing discourse, as well as the interpersonal resources to manage this

interweaving. In this way, professionals negotiate their position with respect to different organizational and profession-specific discourses. This interpersonalizing discourse could be described as a professional ‘voice’ in that it draws on the same resources of engagement described by White (2012a, 2012b) within appraisal theory. The use of an interpersonalizing discourse as described by Iedema et al. (2004) relates specifically to instances of talk—that is, it is concerned with position taking within spoken interaction. However, as Iedema (2003a) explains, and as noted above, Lemke’s (1985, 1993) work connects *saying* with doing, or ways of acting. Just as practitioners negotiate their position in relation to different professional discourses through expressing their stance in an interpersonalizing written or spoken discourse, they also negotiate their position in relation to different professional ways of behaving, through their *actions*. The mechanism for expressing position in spoken or written interaction, is to some extent ‘visible’ in that it is realized in language, through the resources of engagement. Developing the ability to use these resources effectively is integral to becoming an academic writer or speaker, or more specifically, in learning to take a position in a ‘social world dominated by heteroglossia, by a diversity of “voices”’ (White, 2012a). These are resources used by lecturers in texturing representations of professional practice in classroom discourse. However this study has also considered what is at stake in becoming a professional *actor*: one who chooses one course of action over another, within the constraints and enablements of instances of practice. Where stance-taking in written and spoken interaction is achieved through the resources of engagement, the mechanism for stance-taking or expressing position through action is internally mediated through *reflexivity*—by choosing one action over another, and activating the causal powers of social constraints and enablements (Archer, 2003:6), described here as *institutional* constraints and enablements. Action in this way is meaningful as a form of positioning. This meaning is not inherent in the action itself, but ‘arises from the extent to which it realizes difference in relation to what was or what is: “a particular production of meaningful social action will take a definite position relative to all the others” (Lemke, 1985a:11)’ (Iedema, 2003a:67). Where Matthiessen (1993) describes the interpersonal resources for ‘enacting [of] social reality in dialogic semiosis’ in textual form, this study has drawn on an expanded view of field (Bazerman, 1998; Lemke, 1985, 1998) to suggest that action, or more particularly,

choosing one action over another, is a complementary form of position taking. This complementary approach aims to overcome the '*logocentric fallacy*' (Luke, 2002:103, italics in original) of overlooking dialectical relations between 'situational, institutional and social settings ... and discourses' (Wodak, 2001:66). The complementarity of *doing* and *saying* underpins Wodak's summary of these dialectical relations: 'discourses as linguistic social practices can be seen as constituting non-discursive and discursive social practices and, at the same time, as being constituted by them' (p. 66).

The condensation of interpersonal relations within institutional relations in professional practice is sustained through relocalization (Pennycook, 2010). In instances of practice, this process could be conceived of as linear and unidirectional. Applied in a broader context, across multiple sites crossing structural boundaries (Fairclough, 2010), the potential for recursion, transgression or transformation expands with each relocalization, leading to a complex range of possible meanings shaped by the activities of social actors within the constraints and demands of each new instance of practice. Some of these meanings might be characterized by a shift towards non-negotiability or materiality (Iedema, 2001), where others might suggest a movement in different directions—perhaps reflecting the different intentions of practitioners, different organizational demands, or technological or other change beyond the organization.

Berger and Luckmann (1966) claim that the 'transmission of the meaning of an institution is based on the social recognition of that institution as a "permanent" solution to a "permanent" problem of the given collectivity' (p. 90). They argue that 'potential actors of institutionalized actions must be systematically acquainted with these meanings' which necessitates education that enables 'institutional meanings [to] be impressed powerfully and unforgettably upon the consciousness of the individual (p. 90). From a realist perspective, models of reality such as the *audit risk model*, and other models, the formula for *return on investment* and other formulae and the *system development life cycle* and other procedures, all condense institutional meanings through logico-semantic relations, but are necessarily fallible. From this perspective, professional learning and the potential future transformation of practice requires more than impressing institutional meanings upon students. The representation of professional practices in classroom discourse in professional learning is a powerful

mechanism in the production and reproduction of institutional meaning. As such, professional learning plays a key role in constructing, perpetuating, transforming or destroying (De Cillia et al., 1999) ways of acting in professional accounting practice.

The transmission of institutional meaning through the relocalization of practices in classroom discourse relocalizes institutional relations within an imaginary (Bernstein, 2000:33) pedagogic discourse. Rendering institutional meanings visible and open to critique through unpacking and repacking meanings in classroom discourse has the potential to move students beyond tacit acceptance and re-enactment of relocalized interpersonal meaning to develop professional judgement through reflexivity, enabling them to participate in transformation of disciplinary, professional and organizational discourses in their future professional lives. It is acknowledged that for students, professional learning represents only the beginning of a 'trajectory of professional knowledge formation' (Reid, Abrandt Dahlgren, Petocz, & Dahlgren, 2011:3), a pathway that socializes students into the *gaze* (Maton 2010, 2014) of their profession as discussed further in the following section.

8.2 Future directions

The key to the progression of professional fields, as Archer would describe it, lies in part in the relationship between theoretical knowledge and practical knowledge, where the 'dynamics of growth' in knowledge are located (Archer, 2004a:123). As Archer argues, 'without the injection of theory, then practice is condemned to stagnation' (Archer, 2004a:123). In accounting, the orientation of research towards theoretical knowledge or towards practice is contested, as evidenced in the body of literature that attests to the 'gap' between the research priorities of academics and the research interests of the profession (e.g. E. Evans, Burritt, & Guthrie, 2011; Parker, Guthrie, & Linacre, 2011). Debate centres around whether the purpose of accounting research is to 'improve accounting practice' or to 'describe, understand or critique it' (Parker et al., 2011:6). Given that accounting research is a social science, Chua (2011) regards strong connections between accounting research and practice as a 'necessity', in order for accounting research to 'make a positive contribution to the communities and societies that sustain it' (p. 28).

In keeping with the ideas that knowledge is fallible, and that practice is condemned to stagnation without theory, this study has generated a number of issues and questions that warrant further investigation. Firstly, Maton's work within Legitimation Code Theory examines knowledge building as progression away from concrete meanings towards abstraction, and his model is suited to the aims of an educational environment that has the explicit aim of 'enabling students to acquire higher order principles of knowledge' (Maton, 2009:44). As discussed in Chapters 3 and 7, professional education tends to have different aims, oriented towards linking theory and practice, with an emphasis on 'becoming' a practitioner. As noted, this study has found these two approaches to be complementary. The focus of this study has been on professional practices in the accounting field, which are shaped by, and shape the social system in which they are embedded. While the regulative function of the institutional order has particular consequences for interpersonal exchange and the representation of meaning in accounting that are reflected in the representation of professional practice in the postgraduate accounting classroom, the interplay of these relations in other professional domains presents many avenues for further research. It is noted that analysis and discussion in this study has considered the influence of institutional orders on professional discourse in the accounting field, but not the contribution of accounting discourse to the architecture of the 'new work order' (Gee et al., 1996). Sarangi and Roberts (1999) describe the impact of the new work order on the work of professional practitioners in general, which extends to include redefinition of workplace roles and identities, and a general de-stabilization of professional identity, as 'more and lower levels of accountability are introduced' (p. 10).

In terms of research within the accounting field, this study contributes to a growing body of research on accounting discourse, which as to date has not been as well researched as other fields of professional communication (Moore & Burns, 2008). The work of Archer and Bhaskar also offer theoretical perspectives on agency and structure to the existing body of research in accounting that understands accounting practices as embedded within, and contributing to, a broader social system. Archer's analytical dualism provides an alternative perspective on practitioner agency to that found in the extensive body of research in accounting based on Giddens' (1979, 1984) structuration theory (Englund et al., 2011). As described by Englund et al., Giddens'

work contributes a perspective that ‘dissolves the separation of agency and structure’ (2011:507), where Archer’s model emphasizes the importance of maintaining a distinction between the two.

Methodologically, this research has generated a framework that describes the representation of professional practices in classroom discourse. Rather than focusing on the representation of practice within each individual seminar, the study has sought to develop a model that describes the representation of practices across all three seminars. The approach taken to identifying analytical units within each seminar transcript is based on the systemic functional concept of periodicity as explained in Chapter 5. In an analysis of an individual seminar or lecture transcript, this could be extended to more detailed examination of the packing and unpacking of meaning within the macrostructure of ‘information waves’ (Martin & Rose, 2007) throughout each seminar. Martin and Rose use the term information waves to describe the information flow within a text. As discourse can be analysed according to Theme patterns at clause level, it can also be analysed for Theme patterns at text level, using the same idea of periodicity. Martin and Rose use the terms HyperTheme and HyperNew for text level theme patterns, as distinct from Theme and New at clause level. HyperThemes are similar in nature to topic sentences, and mirror the function of Theme at clause level: at text level, HyperThemes function as an orientation to what follows. Likewise, HyperNew functions at text level in the same way as New at clause level, ‘distilling new information’ on the topic introduced by the HyperTheme (Martin & Rose, 2007:191).

Examining the unpacking and packing of meaning within the structure of information waves bounded by HyperTheme and HyperNew would provide a means of tracking shifts between analytical categories as a topic is introduced, discussed and concluded. As noted in Blackwell (2011), HyperTheme and HyperNew in university lectures are often closely linked to, and may also contain similar wording to, text on lecture slides, handouts or other materials. A more detailed examination of the packing and unpacking of meaning within the structure of information waves in classroom discourse would require simultaneous analysis of these, recognizing the increasing multimodality of university learning environments (Wood, Joyce, Petocz, & Rodd, 2007), which in turn reflects a ‘blurring of boundaries’ (Iedema, 2003b:33) among different modes of meaning resulting from sociocultural changes including the

proliferation of electronic media (Iedema, 2003b; Kress & van Leeuwen, 1996). Such an analysis could consider aspects of meaning in addition to ‘language-in-use’ (Iedema, 2003b), including still and moving images that are incorporated within university lectures.

Future research possibilities lie in applying the relation between institutional relations and interpersonal exchange to conceptualizing the progression of a professional field, drawing on the concept of ‘gaze’ within Legitimation Code Theory (Maton, 2014). Maton’s work in this area extends on Bernstein’s definition of gaze as ‘a particular mode of recognizing and realizing what counts as an “authentic reality”’ (Bernstein, 2000:164), by identifying and describing different types of gaze and their relation to the progression of fields. The analytical work of this study has applied a realist understanding of social science to interpreting the activities of practitioners as abstracting and ordering aspects of social activity. Their practices are regulated by the institutional order, and hence practitioners embody institutional relations in their interpersonal exchanges. Drawing on Maton’s discussion of gaze, it is suggested here that the ideal knower in accounting holds an *institutional gaze*. This gaze is a function of institutional relations that constitute conditions for meaning making as a practitioner: the ‘heteroglossic nature of meaning making becomes constrained’ (Iedema, 2003a:70) by the rules of social order that frame professional practices. Within these constraints, and enabled by them, practitioners exercise their own casual powers of reflexivity. This can be seen as underpinning the capacity for professional judgement in the profession. Although judgements are ‘grounded in the local’ (R. Moore, 2010:151), they are made ‘against the backdrop’ (Collins, 2000:27), of the practices of the past and present professional community and their ‘historically evolved rules of collective evaluation’ (Moore, 2010: 153). Attaining an institutional gaze is part of ‘becoming’ a practitioner.

From a critical perspective, representations of professional discourse as a system of representation and as a system of interpersonal exchange in classroom discourse can be seen to be legitimated with reference to institutional orders. Work by van Leeuwen (2008) on legitimation strategies provides tools for potential examination of the ways in which each is legitimated. He recognizes ‘all representations of the world and what is going on in it, however abstract’ as ‘representations of social practices’ (p, 5). The framework developed in this study, drawing on the resources of Legitimation Code

Theory, allows for further differentiation between more abstract representations of practice (emphasizing institutional relations) and more congruent representations of practice (emphasizing interpersonal relations) which could inform a systematic analysis of legitimation strategies in classroom discourse. An examination of the legitimation of more abstract and more congruent representations of practice has the potential to inform educational practices that contribute to the transformation of professional practice, by exposing the space in which ideology comes to play as discourses are relocated (Bernstein, 2000) or relocalized (Pennycook, 2010). This analysis would complement, and be complemented by, an examination of the resources of engagement that lecturers use in texturing representations of professional practice in classroom discourse.

Such an approach could recognize the key role that accounting plays in sustainable development, a role that was touched on in Chapter 3. Hazelton and Haigh (2010) argue that ‘accounting has long been implicated in perpetuating unsustainable practices’ (p. 160). In the broader context of social, economic and environmental sustainability, the scope of technically oriented approaches to accounting education, and more generally, business education, compared with that of critically oriented approaches is seen as insufficient to move beyond current unsustainable (Tilbury & Ryan, 2011) or unethical (Boyce et al., 2012) practice. Boyce et al. argue that while there have been some short term attempts to prioritise ethics and social responsibility in accounting education in the wake of Enron and other corporate collapses in the early 2000s, these have not shifted the ‘perception that the traditional technical content still constitutes the *substance* of accounting’ (2012:48). The focus on sustainability in accounting and business education mirrors a broader sustainability agenda within higher education, as reflected in the proliferation of research on education for sustainable development prompted by the UN declaration of a *Decade of Education for Sustainable Development* between 2005 and 2014. The literature on education for sustainability questions the fundamental role of a university education: Tilbury and Ryan (2011) for example argue that business education in general focuses on ‘reproducing and improving current practice, rather than questioning it, seeking alternatives or transforming business activity so that it takes a more responsible approach that aligns with sustainability’ (p.138).

Muller (2000) notes that within higher education, knowledge is often seen in terms of its place in preparing citizens capable of either ‘cultural and political participation’ or ‘economic participation’ with little common ground between either ‘citizenship’ (p. 41). Further, he documents the historical tendency towards ‘antiutilitarianism’ in education, before global economic changes and neoliberalism demanded that higher education be geared to the demands of the economy. The tension between these two conceptions of the role of higher education can be seen in debates within accounting education referred to in Chapter 3. Within literature on professionalism, Malin (2000) argues that the ‘discourse of enterprise challenges occupational, functional and professional segmentation, monopoly and division’ and instead ‘celebrates integration and flexibility, the deregulation of professions and monopolies of competence’ (p. 2). He links this trend to a shift in emphasis from ‘productive behaviour’ to the ‘total behaviour, attitudes and self-understandings’ of professionals, thereby affecting, or even threatening the culture of a profession (2000:2). Within the accounting profession, Lander et al. (2013) have described marketization as creating a tension between a more traditional ‘trustee—or fiduciary—logic’ and ‘an increasingly pervasive commercial—or corporate—logic’ (p. 130). Muller (2000) believes that the gulf between ‘cultural and political participation’ and ‘economic participation’, and negative views of a more utilitarian approach, may stem from an ‘implicit distinction between productive and critical-reflexive knowledge’ (2000:42), but sees that a meeting point for these two seemingly opposing views may be found in reconsidering the nature of knowledge and its production. Research within the sociology of education and social realism, as in this study, has a more central focus on knowledge in education and provides a balance to these tensions by providing tools to examine the structure of knowledge and its recontextualization in pedagogic discourse.

When practices and procedures are legitimated as natural through ‘complementary’ discursive relations in pedagogic discourses, the ‘truths’ (Archer, 2000:175) of these practices are not challenged, but rather, are reinforced. As a result, students ‘confront no ideational problems, [and] are propelled to no daring feats of propositional elaboration’ (p. 175). Instead, students are presented with an image of professional practice as working ‘according to a situational logic fostering the protection of consistency’ (p. 175). Although this study has assumed a single and homogeneous institutional order, Fairclough’s early work on institutional orders regards them as

“pluralistic” and sites of ideological struggle (Fairclough, 2010:42). As Archer (2000) explains, the cultural system, or ‘propositional culture’ is an emergent entity, having an ‘objective existence and autonomous logical relations amongst its component items (theories, beliefs, values arguments)’ (p. 173). This system is the emerging product of socio-cultural interaction, but has an independent existence. It also has causal influences on the socio-cultural level.

Relations between elements of the cultural system are described by Archer in terms of ‘logical consistency’, or the ‘degree of consistency between the component parts of a culture’ (x equals y or x does not equal y). Logical relations are the basis of ‘cultural stability and change’ (Archer, 1988). Logical relations include consistency, contradiction, and independence, and these relations are independent of claims made by social actors (1988:109). These include the causal properties between material artifacts or between parts of material artifacts that ‘cannot be reduced to the ideas maintaining between people’ (Archer, 2000:167). They also include the relations between propositions. The situational logic of practice may be characterized by *complementarity*—there is no contradiction, ‘truths are not challenged but only reinforced’ (2000:175). This results in a ‘substantial increase in “cultural density”’, described by Archer as being ‘rich in fine and subtle distinctions’ including an ‘elaborate and often technical vocabulary to describe [these distinctions] and a complex body of concepts to manipulate or capture them’ (p. 175). Alternatively, relations of *contradiction* influence the socio-cultural system by presenting actors with an inconsistency: two apparently inconsistent ideas apply within a given situation. In this situation, according to the logic of the situation, the inconsistency is addressed through ‘*syncretic* redefinitions’ (2000:175, italics in original), which generate new propositions. Thus, practice can produce new knowledge, and a critical approach can be seen as supporting the progression of a professional field.

Professional learning constitutes a meeting point between institutional orders that regulate professional practice and those that regulate educational practice, a relation that in this study has been captured in the idea that the instructional, professional register is projected through the regulative, institutional register. Professional learning is a site where discursive and ideological practices can operate to both maintain and resist the dominance of the institutional order. The professional classroom provides room for exploring both *complementarities* and *contradictions*

within practice (Archer, 2000). Complementarities are the means by which practice condenses knowledge. Contradictions, on the other hand, are the means by which practice generates *new* knowledge—or lead to discursive, and constellationally, ideological, restructuring (Archer, 2000; Bhaskar, 1997; Fairclough, 2010). This complements recent research in accounting education that draws on a theory of cognitive dissonance to support deep approaches to learning in accounting (Boyce & Greer, 2013). The study has highlighted the importance of critique and reflexivity in professional learning. As Coad and Glyptis (2013) suggest, while contradictions ‘might explain when and why agents come to question existing practices, it is the concept of praxis which provides the mediating mechanism between institutional embeddedness, contradictions and change’ (p. 18). According to Bhaskar (1998), praxis, or ‘doing or acting’ is both reflexive and active, in that it involves ‘causally intervening in the natural (material) world, subject to the possibility of a reflexive monitoring of that intervention’ (p. 83).

A theme throughout this study has been the relationship between theoretical and practical knowledge. Archer’s work, for example, rests on separating out practical knowledge and theoretical knowledge—‘insist[ing] upon their different ontological origins’ (2000:179) rather than epistemological differences. However, as Joseph (2004) argues, more important than differentiating between types of knowledge, is looking at knowledge ‘across its various forms and determinations’ (p. 156). A feature of Legitimation Code Theory is that it emphasizes the need for ‘conceptualiz[ing] the organizing principles that generate ... diverse kinds of knowledge practices’ (Maton, 2013:10). Using tools from Legitimation Code Theory to differentiate between representing language as a system for representation and as a system for interpersonal exchange in classroom discourse suggests a productive line of investigation that is not caught in a dichotomy between practical and theoretical knowledge, and that further, has practical value in informing professional learning. In this study, the examination of patterns by which professional practices are relocalized in classroom discourse provides insight both into the way institutional meanings condense interpersonal relations, and the ways in which either systems of representation or systems of interpersonal exchange can be emphasized in classroom discourse. The framework developed through this study has potential as an analytical tool that can be applied to improving classroom practice. For professional educators,

including, but not limited to accounting lecturers, the framework provides a tool for understanding, reflecting on and potentially transforming the ways in which they represent professional practices in the classroom. For academic developers, the framework provides a guide to facilitating and documenting this transformation.

This study suggests that, as with learning language, the system of representation within professional registers is ‘only learnable because it is equally a system for interpersonal exchange’ (Painter 2004: 149). Hasan (2005) proposes that socio-cultural theories of learning are ‘heavily biased in favour of the experiential function’ (p. 146), the experiential being that part of the ideational metafunction that is concerned with action, rather than logical relations. Hasan argues that in order to do justice to the social nature of interaction, a theoretical framework such as the systemic functional model of language, that deals with ‘social relations and the positioning of the interactants’ (i.e. interpersonal function) and ‘the nature of semiotic and material contact between the discursive participants’ (i.e. textual function), is required. This study has attempted to overcome the shortcomings of an experiential bias by considering the selection of one course of an action over another in professional settings as a form of position taking, internally mediated through *reflexivity* in the context of *institutional* constraints and enablements. The research suggests that developing students’ extended abstract understanding (Biggs & Collis, 1982) of the constellational identity of institutional meanings through ‘unpacking’ systems of representation and ‘packing’ systems of interpersonal exchange, revealing the principles by which practitioners *compare apples with apples*, or choose one course of action over another, is central to professional learning, and may ultimately be key to the transformation of practice.

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