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Interdisciplinary health research (IDHR):

An analysis of the lived experience from the theoretical perspective of identity

By

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Abstract

Interdisciplinarity or interdisciplinary research involves the integration of theories, concepts, methodologies or methods from two or more academic disciplines or professional practice fields into a common research framework. Interdisciplinary health research (IDHR) refers specifically to the integration of frameworks and perspectives from multiple disciplines within or allied to health. The existing empirical literature including in the health research domain, has privileged a focus on the collaborative and interpersonal aspects of interdisciplinarity resulting in a focus on the processes and practices of collaboration and the interdisciplinary team as the unit of analysis. This has meant that researchers’ voices and stories regarding their personal journey and lived experience of interdisciplinarity have largely been absent from the literature.

This thesis explores how IDHR is enacted, experienced and lived by health researchers in higher education, as well as the link between the lived experience of IDHR and identity. It uses hermeneutic phenomenological methods to gather rich idiographic data from twenty-one health researchers engaged in IDHR in the Australian higher education sector. Data interpretation occurs at two levels: a phenomenological analysis explores the essential characteristics of IDHR as a human phenomenon, while a theoretical analysis explicates issues related to identity and identification associated with health researchers’ lived experience.

The phenomenological findings of this thesis illustrate that health researchers’ lived experience of IDHR is simultaneously enabling and disabling, and thus fundamentally paradoxical in nature. These findings also show the multiplicity of levels at which health researchers enact IDHR, including the social-relational and personal-embodied level.
Theoretical interpretation of findings from the perspective of identity shows that health researchers’ engaged in IDHR encounter a tension between their institution-identity which is traditionally defined and legitimised in relation to a discipline, and their affinity-identity reflecting their personal values and preferences for interdisciplinary work. Using identity dissonance as a theoretical lens, this thesis illustrates that health researchers engaged in IDHR strive to reconcile the conflict in identities and associated feelings of vulnerability and discomfort, by constructing and negotiating their identity in different ways. Strategies health researchers use include: conformist practices aimed at aligning with dominant discipline-based values and expectations in the institution and the higher education sector; performative tactics aimed at presenting a favourable image of self to significant others; and resistive strategies aimed at affirming personal interdisciplinary preferences and values.

In summary, this thesis illustrates that the lived experience of IDHR can be conceptualised as a conflicted space within which researchers’ identities are contested, constructed and negotiated. This is the first phenomenological and theoretical account of how IDHR is experienced, enacted and lived by health researchers in the higher Australian education setting. This thesis identifies a number of practical recommendations related to the need for individual researchers and research teams to articulate and constructively manage the ambiguities and conflict in identities characterising the lived experience of IDHR. This thesis also provides an important message about how higher education institutions and the sector more broadly can transform research cultures and practices in order to foster and support integrative and creative forms of working and thinking (including about self) that transcend discipline boundaries.
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**Associated publications and presentations**


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Prologue - My personal journey

In this prologue I provide a reflexive account of my personal journey in the higher education sector, and my interests in and connections to this research study. I articulate the nature of my experiences, subjectivities and interpretive influences that may have shaped the insights presented in this thesis. This prologue addresses the research objective of adopting a consciously reflexive stance in exploring and articulating my interpretive influences and position within this study. I focus specifically on my experiences of academic research and researching in the higher education sector.

My early introduction and socialisation to the higher education sector was as a university undergraduate and then postgraduate student in a department of Education and within the specific area of Educational Psychology. Upon graduation from my Masters, I worked for several years as a researcher within a School of Education. During this time I was immersed in the knowledge frameworks, discourses and research practices related to primary and secondary teacher education. In 2005, I made a major transition in moving countries and universities, but also in terms of academic disciplines. I am currently a university academic, researcher and educator within the area of medical education, which is located within the broader field of health professions education. In the early days of this transition, I remember struggling with the new and unfamiliar knowledge, epistemologies and methodologies; language and discourses; approaches to research inquiry; and values and cultural views within the medical education field. I also recall feeling a distinct sense of anxiety about how I was going to cope with learning this new knowledge, skills and practices, some of which did not always comfortably align with my educational/psychological background, and integrating these with my prior understandings of research and researching. I also remember experiencing a sense of displacement about how and where I belonged.
Beginning in those early days, most of my research activities in the medical/health professions education field have involved collaboration with scholars in disciplines within and outside health, in the context of informal and formal teams. Disciplines within the health domain have included health sciences, public health, physiotherapy, and nursing, while disciplines allied to health have included social sciences, education, and psychology. In this context, I was faced with and continue to encounter a diversity of epistemological beliefs, cultural views, discourses and research practices. Before embarking on this thesis, however, I did not use the label of interdisciplinary to describe these collaborative research experiences. It was within this context that I became initially interested in formally exploring the notion of research collaboration across disciplines. In hindsight, I can appreciate that my initial interests about the process and practice of interdisciplinary collaboration were reflected the dominant discourse in the existing academic literature.

As I progressed with this thesis and defining the specific research phenomenon under exploration, I began to reflect on my own personal journey in academic research including the transition in disciplines, experiences of collaborating with researchers from other disciplines, and the challenges associated with navigating and negotiating my way in the higher education sector. I began to consider how my own thinking and ways of working had changed over time in response to the demands and expectations of the health research field. I began to appreciate that the exposure to and experience of collaborating with other disciplines had formatively influenced the work that I did and how I perceived myself as a researcher. I also began to understand how the particularities of the medical/health professions education field which is inherently interdisciplinary and is striving to demonstrate its legitimacy in the health domain, also shaped my experiences.
As a result of these observations and reflections on my own lived experience and journey in the higher education sector, I became increasingly curious about how researchers felt about interdisciplinary research and what their experiences in relation to IDHR looked like. Some of the questions I found myself asking and which were not satisfactorily addressed in the existing literature included: how do researchers carry out IDHR within their daily practice; how do they find the experience of working across multiple disciplines in the context of IDHR; what did they identify as the key joys and challenges of IDHR; how did the experience of IDHR on impact on how researchers’ thought of themselves personally and professionally? These questions provided the impetus for how this thesis has progressed and evolved.

My interest in the lived experience of interdisciplinary research was also influenced by my ‘insider’ status to the higher education research setting and phenomenon under exploration. As a university academic and researcher in the medical/health professions education field who has traversed disciplines and is engaged in collaborating across disciplines, I consider myself an ‘insider’ to the phenomenon of IDHR. My insider knowledge pertains to the: phenomenon being explored in this thesis; processes and practices of higher education research and health research; particularities of the higher education system; and the organisational setting in which this study is located. As an insider, I am also cognisant of the nature of the struggles and challenges faced in collaborating across different disciplines. In Chapter 3 of this thesis, I further elaborate on how this insider position has uniquely shaped my approach and interpretations in this study. By presenting this description of my professional background and experiences in the Prologue, my aim has been to illustrate how I locate myself within this thesis including in relation to the phenomenon under exploration. In order to convey my proximity and connection to this research, I have used the first person pronoun and the active voice where appropriate, in this thesis.
Chapter 1 – Introduction to this thesis

1.1 Introduction

Interdisciplinary research or interdisciplinarity refers to the integration of knowledge, concepts, theories and methods from across multiple disciplines into a common research framework. These terms are interchangeably used in the literature and within this thesis to describe the same concept. Interdisciplinarity emerged as a method of inquiry and knowledge production in response to the historical fragmentation and separation of the academic disciplines (D’Amour & Oandasan, 2005) and their scholarly communities, and a growing uneasiness with applying disciplinary lenses and interpretive frameworks to complex real world research issues (Jeffrey, 2003). The popularity of interdisciplinary research has also grown as scholars began to recognise that drawing on multiple disciplines could advance knowledge and understanding beyond that provided by a single discipline (Boix Mansilla, 2010; Choi & Pak, 2006; Hall, Long, Bermbach, Jordan, & Patterson, 2005). Furthermore, the social and applied potential of interdisciplinarity to generate findings relevant for practice and policy (Kandiko & Blackmore, 2008; Pfirman & Martin, 2010) also contributed to its increased attractiveness.

The term interdisciplinary health research (IDHR) is used specifically within the health research domain to refer to work which draws on the perspectives of one or more disciplines allied to or outside of health (Hall et al., 2006), as well as disciplines within the same or different research paradigms (Carey & Smith, 2007). The rise of IDHR in health sciences research (Canadian Academy of Health Sciences (CAHS), 2005) has been influenced by a number of factors including the shift towards cohesive forms of working in other health domains including health professional practice and education (Fiore, 2008). In addition, the translational potential of IDHR has endeared it to researchers in health, and particularly those in highly applied disciplines such as medicine, nursing, and allied health (Couturier, Gagnon, Carrier, & Etheridge, 2008; Lavis et
IDHR is the specific focus of this thesis. However, given the links between the broader concept of interdisciplinarity and IDHR, there is some shifting between these terms in this thesis.

There is growing interest and discussion about the potential of interdisciplinarity and IDHR to foster linkages between traditionally disparate and bounded disciplines, both internationally and in the Australian higher education sector. The international debate, discussion and action about interdisciplinarity is occurring mainly in North America. IDHR is being strongly advocated in the USA (National Institutes of Health, 2007) and in Canada (Armstrong, 2006; Armstrong et al., 2005; Johnston, 2006; Schechter & Armstrong, 2008). In Australia, much of the historical focus has been on incorporating interdisciplinary pedagogies into education and the restructuring of curriculum (Davies & Devlin, 2007). However, there is increasing debate about the value of IDHR and the nature of partnerships between universities, health organisations and communities (Brooks, 2009; Fisk et al., 2011; Morgan & Greeley, 2011). It thus appears timely and necessary for an exploration of how researchers experience interdisciplinarity in the Australian higher education sector, with a specific focus on the health research domain.

Despite the increasing recognition of its value and shifting discourses about it, the legitimacy and status of interdisciplinary research continues to be challenged and contested. In particular, the normative disciplinary culture (Henkel, 2005, 2009; Henkel & Vabo, 2006; Mourad, 1997; Weingart, 2010) has been identified as a significant barrier to the inclusion and acceptance of interdisciplinarity in many institutional settings and in the higher education sector more broadly (Boden, Borrego, & Newswander, 2011; Brew, 2008; Clark, Steen-Adams, Pfirman, & Wallace, 2011; Greckhamer, Koro-Ljungberg, Cilesiz, & Hayes, 2008). The discipline-based framework has also posed challenges within the health research domain (Canadian Academy of Health Sciences (CAHS), 2005). For example, concerns have been expressed that IDHR may contribute to the dilution of disciplinary traditions and research scholarship (Canadian Academy of Health
Sciences (CAHS), 2005; Laberge, Albert, & Hodges, 2009). Furthermore, within the positivist philosophical and epistemological frameworks dominant in the health research field, IDHR research situated within the interpretive paradigm continues to face additional challenges (Albert, Laberge, & Hodges, 2009; Albert, Laberge, Hodges, Regehr, & Lingard, 2008; Coast, McDonald, & Baker, 2004). In the health research context, social sciences research and in particular qualitative research is perceived as being inferior (Albert et al 2008, 2009).

Two critical observations can be made about the contemporary literature on interdisciplinarity, including in the health research domain. Firstly, and most notably, interdisciplinarity has been persistently equated with the notion of collaboration (Klein, 2010; Wagner et al., 2011) and teamwork (Fiore, 2008). This is in part reinforced by the dominant anthropological and sociological perspectives of the academic disciplines as bounded, hence focusing attention on the interaction between discrete and separate discipline boundaries (Krishnan, 2009). The dominance of the collaborative perspective is reflected in the abundance of empirical studies privileging the interdisciplinary team as the unit of analysis, and exploring the processes and practices of interdisciplinary collaboration (cf. Amabile et al., 2001; Amey & Brown, 2005; Creamer, 2005; Frost & Jean, 2003; Jeffrey, 2003; Karlsson, Anderberg, Booth, Odenrick, & Christmansson, 2008; Sargent & Waters, 2004; Vincenti, 2005; Younglove-Webb, Gray, Abdalla, & Purvis Thurow, 1999). It is a similar scenario in the health research domain, where researchers have been particularly fascinated by the processes and practices of IDHR collaboration (cf. Austin, Park, & Goble, 2008; Barry, Britten, Barber, Bradley, & Stevenson, 1999; Bindler, Richardson, Daratha, & Wordell, 2010; Jens & John Henry, 2002; Magill-Evans, Hodge, & Darrah, 2002; Nair, Dolovich, Brazil, & Raina, 2008; Priest, Segrott, Green, & Rout, 2006).

This singular focus on collaboration has been critiqued for diverting attention away from other aspects of interdisciplinarity including in the health domain. Couturier and colleagues (2008)
have asserted that a focus on the collaborative and affective aspects can effectively ‘conceal the true value of interdisciplinarity which resides in the meeting of epistemologies’ (p. 341). Others have similarly identified that a focus on collaboration and teamwork has detracted researchers from exploring the social and cognitive elements of interdisciplinarity (Wagner et al., 2011). Indeed, although interdisciplinarity has been recognised as occurring at multiple levels including at the level of the team and the level of the individual (Pfirman & Martin, 2010), the latter is yet to be adequately explored in the literature.

Due to the exclusive focus on the collaborative dimension of interdisciplinary research, little has been published about the personal and lived experience of IDHR in the contemporary academic literature. Accordingly, little is known about aspects such as: how interdisciplinarity is embedded and interwoven into the daily academic work and practices of researchers including those in the health research domain; how researchers navigate and negotiate their way across multiple disciplines in the context of interdisciplinarity and IDHR; the impact of working across and between disciplines on individuals personal and professional sense of self; and the challenges and issues faced by researchers engaged in interdisciplinarity and IDHR in the Australian higher education context. Although writers such as Manathunga (2009) have provided some insight into the experiences of researchers engaged in interdisciplinarity, her study was not located within the health research context and did not use methods aimed at describing and interpreting IDHR as an essentially human phenomenon. Thus, it is evident that accounts regarding the personal and subjective experience of IDHR are few and far in between, and need to be further advanced.

A second critical observation of the existing literature is that much of it has remained at the level of description (Belanger & Rodriguez, 2008). A key observation made by is about the distinct lack of theoretically informed accounts of interdisciplinarity and IDHR. This illustrates that the
literature on interdisciplinarity and IDHR needs to urgently move beyond simple description to theoretical analysis and interpretation in order to capture and illustrate the complexity of the phenomenon, and to coherently connect these understandings to a larger body of knowledge.

By providing this brief background, I have pointed to specific gaps in the empirical and theoretical literature on interdisciplinarity including in the health research domain. In this thesis I aim to address these gaps in contemporary knowledge and explore IDHR as an essentially human phenomenon or experience. Congruent with my focus on the health research domain, my aim is to specifically illustrate the lived experience of interdisciplinary health research (IDHR) in the Australian higher education sector.

1.2 Describing the study

This thesis explores IDHR as an essentially human experience from the perspective of the individual researcher engaged in it. The thesis is not concerned with providing an account of the process and practice of IDHR collaboration and teamwork which have dominated the existing literature.

1.2.1 Research aim and questions

The primary aim of this thesis is to present a rich and evocative account of how IDHR is experienced and lived by researchers in the Australian higher education sector. To do this, it uses hermeneutic phenomenology as the research approach which is described in detail in Chapter 3. A secondary aim of this thesis is to provide a theoretical interpretation of health researchers’ lived experience of IDHR from the perspective of identity. To do this, it uses identity as a broad analytical framework as outlined in Chapter 5 of this thesis. These aims are reflected in the research questions for this thesis.
The primary research question is:

1. What is the lived experience of interdisciplinary health research (IDHR) from the perspective of health researchers in the higher education sector?

This study also has three secondary research questions. These are:

a) How do health researchers enact IDHR?

b) How can health researchers’ lived experience of IDHR be interpreted from the theoretical perspective of identity?

c) How do health researchers construct and manage their identity in the context of IDHR?

1.2.2 Research objectives

The research questions stated above underpin a set of specific research objectives. These objectives are addressed in different parts of this thesis and include:

1) situating the study within the existing empirical and theoretical literature on interdisciplinarity and interdisciplinary research in the higher education sector, with a specific focus on IDHR

2) using appropriate methodology to capture the lived experience of IDHR from the perspective of health researchers engaged in it

3) providing a phenomenological account of how IDHR is enacted, experienced and lived by health researchers in the higher education health research setting

4) making visible the links between the lived experience of IDHR and identity, and situating this study with the relevant empirical and theoretical literature on identity
5) interpreting health researchers’ lived experience from the theoretical perspective of identity, in particular illustrating how they manage their identity in the context of IDHR

6) analysing the scholarly significance of the study in advancing contemporary understandings of IDHR, and the practical implications of findings for individuals, teams, workplaces, higher education institutions, as well as the sector more broadly

7) adopting a reflexive stance in articulating and exploring my interpretive influences and position in this study

1.2.3 Study context and participants

This thesis is situated within the health research field in Australian higher education sector. Participants are twenty-one researchers from multiple disciplines within and affiliated with health, and working in diverse organisational settings including universities, government and non-government institutions, research centers and hospitals. The main source of recruitment is a health research network spanning multiple academic institutions and research organisations in Australia. A secondary source of recruitment is nationally funded health research teams within one research-intensive higher education institution in Sydney, NSW, Australia.

1.2.4 Research approach

In order to address the research questions and objectives posed above, this study is situated in the interpretive paradigm which seeks insights into human experiences within the social world (Cohen, Manion, & Morrison, 2011; Crotty, 1998; Guba & Lincoln, 1994). In particular, given the intention of exploring the lived experience of IDHR, hermeneutic phenomenology (Grace & Ajjawi, 2010; van Manen, 1997) is used as the specific methodology. Using hermeneutic phenomenology as primarily informed by the work of van Manen (1997), provided a methodological framework within which to gather and interpret rich idiographic textual data about IDHR as an essentially human phenomenon.
The main research material for this thesis is gathered via semi-structured interviews designed to elucidate participants’ experiences of IDHR and the meanings attributed to and reflections on these experiences. The process of data interpretation is inductive and grounded in participants’ accounts of their experiences, as well as iterative in terms of moving between parts and the whole of the dataset and different phases of the analysis. The data analysis process is multi-pronged in that it involves both a phenomenological analysis of data in order to obtain insight into the lived experience of IDHR, and a theoretical interpretation of the research data from the theoretical perspective of identity. Writing is an integral aspect of the interpretive process and provided a means of crafting an authentic narrative of health researchers’ lived experience of IDHR, but also an engaging narrative that captures the reader by conveying participants’ lived experience at a level of shared humanity (MacCleave, 2006; Smith, Flowers, & Larkin, 2008).

1.2.5 Theoretical framework

The theoretical construct of identity in particular Gee’s (2000) dimensions of identity and the framework of identity dissonance (Costello, 2005) are utilised in advancing insight into the phenomenological findings generated in this thesis, and providing a richer and deeper interpretation of the lived experience of IDHR. The theoretical analysis has a particular focus on how researchers negotiate and construct their fundamental sense of self in the context of their lived experience of IDHR.

1.4 Significance of this research

This thesis advances contemporary understandings of researchers’ personal, subjective and lived experience of IDHR as an essentially human phenomenon. This research is significant in that moves beyond 1) a focus on the process and practice of IDHR collaboration to a focus on the lived experience, and 2) description of IDHR to theoretical interpretation of the lived experience including how it is managed in the Australian higher education context.
1.4.1 Methodological significance

The methodological significance of this thesis is that it provides a hermeneutic phenomenological account of IDHR, which has not previously been reported in the Australian or international literature. Using hermeneutic phenomenology as a methodology has facilitated exploration and a richer and thicker interpretation of the lived experience of IDHR. This enriches contemporary understandings about the complexity of IDHR as an essentially human phenomenon.

1.4.2 Theoretical significance

The theoretical significance of this thesis is that it makes visible the links between IDHR and identity, and uses identity as a broad interpretive lens to understand lived experience of IDHR. The application of Gee’s (2000) model and identity dissonance (Costello, 2005) as a specific theoretical lens provides insight into the conflicts and ambiguities that can be encountered in the context of IDHR and how these are managed and negotiated by researchers.

1.4.3 Practical significance

The practical significance of this thesis is that research findings have implications for individuals, interdisciplinary teams, workplaces, institutions and the higher education sector more broadly. This thesis illustrates the importance of recognising the complexities and contradictions including in relation to underpinning the lived experience of IDHR in higher education sector. Thesis findings confirm the importance of individuals and interdisciplinary research teams actively articulating the various conflicts and ambiguities they encounter and experience in the IDHR context, and the critical role of organisations, workplaces and teams in supporting researchers in constructively managing these conflicts and contradictions. Study findings also point to the important role and responsibility of higher education institutions and the sector more broadly in legitimising interdisciplinarity as a valuable form of working, as well as providing
individuals with the necessary support to develop and sustain complex ways of working and thinking (including about self) that transcend discipline boundaries.

1.5 Thesis structure

In the Prologue to this thesis, I reflected on my personal interests in and connections to the research topic being explored as well as my insider position to the phenomenon of IDHR, the study setting and the higher education sector. I discussed how the approach taken and interpretations made in this thesis are inextricably linked to and shaped by my own journey in the higher education health research setting.

In the current chapter, Chapter 1, I presented an introduction to this research topic and thesis. The chapter began with an overview of the research topic and current gaps in understandings. I then described the current study including its research aims and objectives, questions, study context and participants, and the research approach including the specific theoretical framework informing this thesis. I also outlined the methodological, theoretical and practical significance of this thesis.

Looking ahead, in Chapter 2, I situate this thesis within the empirical and theoretical literature on interdisciplinarity, with a particular focus on IDHR. I begin the chapter by outlining the literature review methodology for this study. I then discuss the academic disciplines as providing the foundation for interdisciplinarity and the dominant anthropological and sociological perspectives of the disciplines. I then provide a background to the impetus for integration across the academic disciplines. Next I discuss the continuum of integration between the disciplines and where interdisciplinarity is positioned on this continuum. I also discuss IDHR as the specific phenomenon of interest in this thesis. I then outline the multiple levels at which interdisciplinarity including in the health research domain can occur. Next, I make links between
interdisciplinarity and identity which is a core theoretical construct of interest in this thesis. Finally I explore the factors impacting how interdisciplinarity including in the health research domain, is perceived and positioned in the higher education setting.

In Chapter 3, I present the research approach taken in this thesis. I begin by describing my philosophical orientation to this study and my ontological and epistemological position. I then revisit the research objectives and questions for this thesis. Next I review phenomenology as the methodology for this study and outline its key characteristics. I then analyse hermeneutic phenomenology as the specific methodology utilised in this study and provide a rationale for using this methodology. I then elaborate and extend on the reflexive discussion about my connections to and position in relation to the research phenomenon being explored in this study, and how this has shaped the way in which study was conducted and the interpretations that have been made. Next, I outline the ethical considerations for this study. This is followed by a description of the approaches to sampling and the sources and methods of participant recruitment. I then introduce the reader to the participants in this study by providing a summary of participant demographic data as well as a short personalised narrative for each participant in this study. Next I outline the methods of gathering data and how my position as an insider to this study may have impacted the data collection process and material gathered. Also in Chapter 3, I describe the approach taken to interpreting data with reference to the various ethical considerations that characterised the process, as well as to the potential impact of my position in this study. Finally, I conclude the chapter by presenting a discussion of the quality criteria for research situated in the interpretive paradigm and the measures taken in this study to uphold these criteria and ensure research rigour.

In Chapter 4, I present the phenomenological findings of this thesis. I illustrate how health researchers experience, enact and thus live IDHR in the higher education sector. This chapter
provides insight into the pervasive sense of conflict characterising health researchers’ lived experience of IDHR. It also illustrates the multiple levels at which participants in this study enact IDHR.

In Chapter 5 of this thesis, I present identity as the broad theoretical framework for this thesis. I first provide a rational for the choice of identity as an overarching theoretical framework. I then outline what identity is as a theoretical construct and the various dimensions related to how one comes to be known as a specific type of person within a specific context. I then explicate the specific view of identity taken in this thesis. I also consider issues of identity and identification in organisations including the higher education institution. I then detail identity dissonance as the specific analytical and organising framework for this study.

In Chapter 6, I present a theoretical interpretation of the phenomenological findings of this study from the perspective of identity dissonance. I interpret the key identity conflicts experienced by health researchers engaged in IDHR and then illustrate how health researchers reconciled their conflicted identities.

In Chapter 7, I reflect on this thesis as a whole. I summarise the key findings that have emerged from this study and present a detailed analysis of the scholarly significance of this study in relation to its research objectives. I then consider in detail the practical implications of the insights generated in this thesis for individuals, teams, workplaces, institutions and the higher education sector in general. Finally, I discuss the strengths and limitations of this study and identify future research directions.
Finally, in the **Epilogue** to this thesis, I revisit how this research study began and evolved, the key insights that were generated, and the personal significance of findings. This chapter complements the Prologue to this thesis.

### 1.6 Summary of chapter

This chapter provided a background to this thesis and details of the proposed study including its research aims, questions and objectives, the research approach that has been taken to gather and interpret data, theoretical framework, and the significance of findings. In this chapter I presented a rationale for why newer empirical and theoretical accounts are needed of interdisciplinarity in the higher education health research setting. In the next chapter, I present a detailed analysis of contemporary understandings of interdisciplinarity and IDHR as articulated within the existing empirical and theoretical literature.
Chapter 2 – Contemporary understandings of interdisciplinarity and IDHR

2.1 Introduction to the chapter

In this chapter I address the first research objective of situating this thesis within the existing empirical and theoretical literature on interdisciplinarity and IDHR. In undertaking this activity, I have concurred with Eva (2008) that a literature review is not simply a systematic appraisal of all available literature aimed at ‘paraphrasing what all other researchers and scholars in the field have shown or said in the past’ (p. 853). Rather, Eva (2008) has suggested that the main of a literature review should be to ‘fundamentally redefine the way the focal question is conceived in a meaningful and insightful manner’ (p. 853) by contextualising it within existing understandings as well as any gaps in knowledge.

I begin this chapter by describing my literature search strategy and process, before proceeding to critically review the literature on interdisciplinarity and IDHR. In doing so, I explore the differentiation of knowledge into academic disciplines and the factors which have provided the impetus for integration across the disciplines. I then discuss the continuum of integration across the disciplines and where interdisciplinarity and IDHR is positioned on this continuum. Then, I discuss the multiple levels at which interdisciplinarity can occur, and the links with identity. Finally I explore the factors impacting how interdisciplinarity and IDHR is perceived and positioned in the higher education setting.

2.2 The literature review strategy and process

I have referred to the empirical and non-empirical literature across multiple academic disciplines. These include disciplines within health such as allied health, medicine, nursing, pharmacy, dentistry, and social work, as well as disciplines allied to health such as education, psychology (in all its variations), business and management, social sciences, and sociology. The
literature was sourced from a number of sites including electronic databases, databases of
digital theses, policy documents and reports not available online, print books and personal
communications. These sources are listed in Table 1 below according to type.

<table>
<thead>
<tr>
<th>Electronic databases</th>
<th>Other electronic sources</th>
<th>Other sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERIC</td>
<td>Dissertation &amp; Theses Full Text via Proquest</td>
<td>Conference papers</td>
</tr>
<tr>
<td>CIHAHL</td>
<td>Digital Thesis via the Sydney Electronic Text and Image Service (SETIS)</td>
<td>Government reports</td>
</tr>
<tr>
<td>Higher Education Empirical Research (HEER) database</td>
<td>Digital newspaper and magazine articles via Factiva</td>
<td>Personal communications</td>
</tr>
<tr>
<td>ISI Web of Knowledge (incorporating ISI Web of Science)</td>
<td>Organisational websites</td>
<td>Policy documents</td>
</tr>
<tr>
<td>Medline</td>
<td>Google Scholar</td>
<td>Print books</td>
</tr>
<tr>
<td>Proquest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scopus</td>
<td></td>
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</tr>
</tbody>
</table>

The literature search was not restricted by date apart from that pre-specified by each electronic
database. This enabled the historical and contemporary debate and discussion on
interdisciplinarity and IDHR to be captured. Reflecting the iterative nature of this thesis, I
searched and reviewed the literature during two main phases of this study. Table 2 below
outlines the key search terms used in this thesis categorised according to phase of review. Phase
1 refers to the pre-data collection, while Phase 2 refers to post-data interpretation.
During the initial stages of this thesis, my aim was to explore how interdisciplinarity or interdisciplinary research was conceived of, explored and understood, including in the health research domain. Key terms that were used to search the literature on interdisciplinarity and IDHR are listed in Table 2. In addition, I used the search terms multidisciplinary and transdisciplinary since these terms are often used interchangeably and synonymously with interdisciplinarity across different contexts and writers (Choi & Pak, 2006), researchers (Rosenfield & Kessel, 2008) and research participants (Aboelela et al., 2007; Vincenti, 2005).

During the stages of data interpretation, I returned to the literature with the aim of seeking insight into concepts and constructs of interest that were arising from the analysis. A particular emergent theme was the notion of identity. In reviewing the empirical and theoretical literature on identity, my aim was to gain understanding of how it was conceptualised and explored in the
higher education setting including in the health research domain. I also aimed to locate a theory that would enable me to interpret the lived experience of IDHR at a deeper level, compare and contrast the findings emerging from my study with the existing literature, and address any unanswered questions.

In searching, reviewing and selecting the literature, I first examined the abstract or executive summary of each document retrieved through the literature search for resonance and relevance to my thesis. I then assessed the full text of each journal article, book, chapter, report and other material which were deemed relevant. I also hand searched the bibliography or reference list of key papers and articles to capture any missing literature. Furthermore, to ensure the currency of the literature, I periodically conducted forward citation searches of key papers as well as additional searches of electronic databases specified in Table 1 using the search terms listed in Table 2. Any material not published in English was excluded from this review. The material was entered and managed in Endnote (Version X1 and Version X5) which is an electronic reference management tool.

2.3 The academic disciplines

I begin my foray into the literature with an exploration of the origin of the academic disciplines, how the discipline is commonly understood in the literature, and factors providing the impetus for interdisciplinarity or integration across disciplines.

In the latter half of the 17th century, rapid expansion in bodies of knowledge and scholarly inquiry to a newer range of subjects resulted in the differentiation of science, knowledge production, and scholarly activity into disciplines (Weingart, 2010). According to Couturier and colleagues (2008) ‘a discipline exists from the moment a set of knowledge comes to be governed by a system of rules which are applied with the purpose of transforming it into a body of
knowledge’ (p. 342). Others regard the discipline as ‘a technical term for the organisation of learning and the systematic production of new knowledge’ (Krishnan, 2009, p. 9). The academic disciplines are perceived, understood and defined from a number of perspectives (Krishnan, 2009). I have focussed on two particular viewpoints, specifically the anthropological and sociological perspectives which have bearing on this thesis.

2.3.1 Anthropological perspective

The anthropological framework conceptualises the academic disciplines in relation to their styles of intellectual inquiry, guiding paradigms, the nature of the subject matter under research (Biglan, 1973a; Kuhn, 1970), as well as their epistemological and social qualities (Becher, 1994a; Becher & Trowler, 2001). An early classification system was proposed by Kuhn (1970) who distinguished between the disciplines based on the strength of their guiding paradigm. He asserted that a paradigm reflected the extent to which a discipline possessed a clearly defined and commonly agreed upon set of problems for study and approved framework and methods for exploring these problems (Kuhn, 1970).

Kuhn (1970) viewed that disciplines with well developed paradigms, such as physics, possessed clear and unambiguous ways of defining, ordering, and investigating knowledge. In contrast, disciplines such as education or sociology, were considered pre-paradigmatic and characterised by ambiguity. Kuhn’s (1970) notion of incommensurability points to how differences in the underpinning paradigms of academic disciplines can contribute to their divergence from and conflict with each other. As an example, disciplines in the natural and social sciences can be understood as differing in terms of their philosophical, epistemological, theoretical, and methodological orientation. Although Kuhn’s (1970) typology has assisted with organising and grouping the academic disciplines based on their epistemological or knowledge characteristics, it has not considered the social or cultural features of the academic disciplines. In addition, this
typology also fails to explain how a discipline with a well developed underpinning paradigm such as quantum physics can still be characterised by a significant degree of uncertainty and ambiguity.

Perhaps the most well known classification framework is that of the disciplines as clans or tribes (Becher, 1994a; Becher & Trowler, 2001) characterised by particular epistemological and social features. Epistemological features refer to the nature of the objects under exploration, nature of knowledge sought, relationship between the researcher and knowledge, type of procedures used in the process of inquiry, extent of truth claims and criteria for making these claims, as well as the nature of results or outcomes that are the focus of a discipline (Becher & Trowler, 2001). Social features refer to the values, beliefs, attitudes, traditions, social and cultural practices, behaviours, norms, language and shared meanings, and relationships (Becher, 1994a; Becher & Trowler, 2001). Becher (1994a) grouped the academic disciplines based on their epistemological qualities and their social and cultural characteristics as illustrated in Table 3.

Hard disciplines such as the pure sciences and technologies-oriented are thought to have a well developed theoretical structure, rely on measurements, and produce cumulative knowledge and findings that are generalisable. In contrast, soft fields such as the humanities and social sciences are seen to possess unclear boundaries and focus on broad and loosely defined problems. Pure fields are seen as having the capacity to self regulate, while applied disciplines are considered to be vulnerable to external influences (Becher, 1994a). Becher (1987, cited in Frost and Jean, 2003) has described that practitioners from the hard tribes put ‘greater stock in the validity of empirical observations and the ability to draw valid conclusions of general applicability from those observations’ (Becher 1987, cited in Frost and Jean, 2003, p. 142). In contrast, those from the soft fields are seen to privilege ‘perceptions of knowledge as subject to the vagaries of structural, historical and cultural contexts’ (Becher 1987, cited in Frost and Jean, 2003, p. 142).
Table 3: Characteristics of the academic disciplines
(from Becher, 1994a, p. 154)

<table>
<thead>
<tr>
<th>Disciplinary grouping</th>
<th>Nature of knowledge</th>
<th>Nature of disciplinary culture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pure sciences</strong> (e.g. physics): <strong>Hard-pure</strong></td>
<td>Cumulative; atomistic (crystalline/tree-like); concerned with universals, quantities, simplification; impersonal, value free; clear criteria for knowledge verification and obsolescence; consensus over significant questions to address; now and in the future; results in discovery /explanation</td>
<td>Competitive, gregarious; politically well-organised; high publication rates; task-oriented</td>
</tr>
<tr>
<td><strong>Humanities</strong> (e.g. history) and pure Social Sciences (e.g. anthropology): <strong>Soft-pure</strong></td>
<td>Reiterative; holistic (organic/river-like); concerned with particulars, qualities, complication; personal, value-laden; dispute over criteria for knowledge verification and obsolescence; lack of consensus over significant questions to address; results in understandings/interpretations</td>
<td>Individualistic, pluralistic; loosely structured; low publication rate; person-oriented</td>
</tr>
<tr>
<td><strong>Technologies</strong> (e.g. mechanical engineering, clinical medicine): <strong>Hard-applied</strong></td>
<td>Purposive; pragmatic (know-how via hard knowledge); concerned with mastery of physical environment; applies heuristic approaches; uses both qualitative and quantitative approaches; criteria for judgement are purposive, functional; results in products/techniques</td>
<td>Entrepreneurial, cosmopolitan; dominated by professional values; patents substitutable for publications; role-oriented</td>
</tr>
<tr>
<td><strong>Applied social sciences</strong> (e.g. education, law): <strong>Soft-applied</strong></td>
<td>Functional; utilitarian (know-how via soft knowledge); concerned with enhancement of [semi-] professional practice; uses case studies and case law to a large extent; results in protocols/procedures</td>
<td>Outward looking; uncertain in status; dominated by intellectual fashions; publications rates reduced by consultancies; power oriented</td>
</tr>
</tbody>
</table>
The epistemological values (ways of knowing) and social and cultural practices (ways of behaving, interacting and believing) of a disciplinary clan or tribe are seen as influencing how its members perceive and understand the world. Although the impact of history and geography has been acknowledged, the epistemological and social characteristics of the academic disciplines are thought as being reasonably stable, transcending institutional and sometimes national boundaries, and relatively universal (Becher, 1994a; Becher & Trowler, 2001). Gerholm (1990) has reflected on the normative influence of the disciplines’ epistemological and social features by identifying that

‘I am an anthropologist, and I suspect that I have been sufficiently formed or deformed by my profession to find it difficult to do anything but look for things from that perspective’ (p. 263).

In the research setting, these shared epistemological and cultural values and knowledge can include views about what constitutes an appropriate research question, the methods for generating and analysing information, what constitutes evidence, as well as the norms, attitudes, and values related to research practice. Researchers from the same discipline can also share similar philosophical values (Giacomini, 2004; Hall et al., 2005; McCallin, 2006), understandings about research methodology, analysis, and dissemination (Hall et al., 2005), interpretations about research questions (Bracken & Oughton, 2006; McCallin, 2006); and knowledge of the theory and practice relevant to their discipline, as well as the appropriate methods for finding solutions, and criteria for establishing the validity of solutions (Hagoel & Kalekin-Fishman, 2002). Although there is some recognition of the potential for overlap between disciplines including their constituent elements, interests, intellectual boundaries and socio-cultural characteristics (Becher, 1990), this aspect has not been explored in depth.
In the interdisciplinary setting, the epistemological and cultural differences between the academic disciplines and their scholarly communities can be understood as engendering particular challenges and tensions, for individual researchers and teams. Writers have observed that the different ways of thinking and doing have tended to ‘generate considerable bewilderment, if not suspicion in interdisciplinary discourse and reduce its potential benefits’ (Frost & Jean, 2003, p. 142), and hamper integrative and cohesive forms of practice (Smith, Mitton, Peacock, Cornelissen, & MacLeod, 2009). It is widely regarded that successful interdisciplinarity can only be accomplished if individuals are helped to understand the basic knowledge and values of other disciplines (Clark, 2006; McCallin, 2006; Petrie, 1976).

### 2.3.2 Sociological perspective

The sociological perspective of the academic disciplines has focused on the notions of professionalization and professionalism. Krishnan (2009) has defined professionalization as a ‘social process through which an activity becomes a means for people to make a living’ (p. 26).

The professions are defined according to a number of key characteristics. These include their ownership of an area of expertise and body of specialist knowledge that is not available to everyone, possession of extensive education and training in a particular area which is linked to the ownership of knowledge, ability to apply these specialist knowledge and skills to a specific context, service orientation and commitment to public welfare, a commitment to regularly updating their qualifications and knowledge, and abiding by a code of ethics which regulates conduct and behaviour (Evetts, 2003; Johnson, 1972). Due to their increased responsibilities, the professions are generally accorded a higher status, public esteem and societal recognition, autonomy in work practices including the authority to define problems and potential solutions in an area, and the power to negotiate and bargain with the state in order to further the interests of their membership (Downie, 1990; Evetts, 2003, 2006).
The professions are also defined by a professional culture sustained within and by their professional community which typically serves an internal function of maintaining and coordinating professional norms, and an external function of representing their members’ economic, political, and social interests. This professional culture includes values, attitudes, and behaviours (Berger & Luckmann, 1966). This, in part, is consistent with how Freidson (1994) interpreted the notion of profession and professionalism:

‘I use the word ‘profession’ to refer to an occupation that controls its own work, organized by a special set of institutions sustained in part by a particular ideology of expertise and service. I use the word ‘professionalism’ to refer to that ideology and special set of institutions’ (p. 10)

The professional status of the academic disciplines can be understood in terms of their key defining characteristics which mirror those of the professions. These characteristics include having:

- a particular object of research
- a body of accumulated specialist knowledge related to the object of research
- theories and concepts that underpin the organisation of this specialist knowledge
- specific terminology, language and discourse
- specific research methods
- a presence and legitimacy within institutions, academic departments and professional association (Krishnan, 2009, p. 9)

The discipline conveys a notion of rigorous and extended training in a particular field and ownership of knowledge, compliance with authority, and self governance and control. Enders (1999) has noted that ‘academics are in charge of generation and transmission of complex
knowledge, they have a professional culture of cognitive rationality, and their job roles are characterised by a high degree of disposition as regards the goals of their work and procedures employed to pursue these goals’ (p. 72). The disciplines are also thought to be characterised by a moral dimension (Foucault, 1991) in that members are expected to display particular disciplinary attitudes and behaviours and display a commitment to disciplinary values and ethos. Through the membership of various interlinked disciplinary communities which sustain and legitimise the professional interests and powers of the disciplines, academics have come ‘to see themselves as belonging to a distinct sector of society, the normative power of which is sustained in part by a nexus of myths, socialisation processes and regulatory practices’ (Henkel, 2005, p. 157). Within the sociological framework, socialisation can be understood as a process by which individuals gain cultural capital or forms of knowledge, skills and other educational advantages that elevate their status and standing within an academic or professional community (Bourdieu, 1975, 1997).

Greckhamer and colleagues (2008) have suggested that ‘the control and socialisation of the members of a discipline, and the means of establishing this control, are central themes in the definition and operation of any discipline’ (p. 311). Weingart (2010) has suggested that the establishment of formal training and accreditation systems also function to maintain a degree of influence, specialisation and autonomy as they represent ‘attempts to secure a monopoly for a certain sector of the professional or semi-professional market’ (p. 9). The academic disciplines can also be understood as being ‘quite influential as they control the resources of academic departments, access to the profession by awarding degrees and through employment, and as they ultimately define what is good practice in the profession’ (Krishnan, 2009, p. 27).

Within the sociological framework, a second associated concept is that of professionalism, which is generally viewed as a normative value system for how the professions think and conduct themselves in social systems including their workplaces, and in relation to their others. Hodges
and colleagues (2011) have conceptualised professionalism as an ‘individual characteristic, trait, behaviour or cognitive process’ (p. 356), an ‘interpersonal process or effect’ (p. 358), or a ‘societal/institutional phenomenon’ (p. 360). Evans (2002) has made a distinction between the notion of professionalism which reflects an individual’s professional values and orientation as opposed to a group’s professionalism values and ethos. She has suggested that a group’s professionalism can only be understood by examining an individual’s professionality orientation. She has proposed a continuum of researcher professionality which ranges from restricted to extended and spans a number of dimensions (Evans, 2010). Her framework is outlined in Table 4.

The professionality dimensions listed in Table 4 can be summarised as including: research rigour; research skills; methodological competence; methodological adaption; theoretical competence; analytical skills and competence; reflexivity; and publication profile. An additional dimension not included in Table 4, but which is also proposed, is that of identity. Evans (2010) has discussed identity specifically in relation to being a European educational researcher. In the context of this thesis, however, identity can be understood as encompassing aspects related to being a health researcher in the Australian higher education sector. Evans’ (2010) model of individual researcher professionality is based on generic skills and competences which ‘transcend specific epistemological and methodological traditions, stances and allegiances’ (p. 13). It is unclear how this continuum and dimensions of researcher professionality can be used as an analytical lens in the interdisciplinary research setting and in particular to the interdisciplinary collaborative context, which can be characterised by complex and sometimes competing disciplinary demands and expectations in relation to research inquiry and knowledge production.
Table 4: Characteristics of restricted and extended professionality

(from Evans, 2010, p. 670)

<table>
<thead>
<tr>
<th>The educational researcher located at the ‘restricted’ extreme of the professionality continuum typically:</th>
<th>The educational researcher located at the ‘extended’ extreme of the professionality continuum typically:</th>
</tr>
</thead>
<tbody>
<tr>
<td>conducts research that lacks rigour</td>
<td>conducts highly rigorous research;</td>
</tr>
<tr>
<td>draws upon basic research skills</td>
<td>draws upon basic and advanced research skills;</td>
</tr>
<tr>
<td>fails to develop or extend her/his methodological competence</td>
<td>strives constantly to develop and extend her/ his methodological competence</td>
</tr>
<tr>
<td>utilises only established research methods</td>
<td>adapts established research methods and develops methodology</td>
</tr>
<tr>
<td>fails to develop basic research findings</td>
<td>generates and develops theory from research findings</td>
</tr>
<tr>
<td>perceives research methods as tools and methodology as a task-directed, utilitarian process</td>
<td>perceives research methodology as a field of study in itself</td>
</tr>
<tr>
<td>applies low level analysis to research data</td>
<td>strives constantly to apply deep levels of analysis to research data</td>
</tr>
<tr>
<td>perceives individual research studies as independent and free-standing</td>
<td>recognises the value of, and utilises, comparative analysis, meta-analysis, synthesis, replication, and so forth</td>
</tr>
<tr>
<td>perceives individual research studies as finite and complete</td>
<td>constantly reflects upon, and frequently revisits and refines, his/her own studies</td>
</tr>
<tr>
<td>struggles to criticise literature and others’ research effectively</td>
<td>has developed the skill of effective criticism and applies this to the formulation of his/her own arguments</td>
</tr>
<tr>
<td>publishes mainly in ‘lower grade’ academic journals and in professional journals/magazines</td>
<td>publishes frequently in ‘high ranking’ academic journals</td>
</tr>
<tr>
<td>is associated mainly with research findings that fall into the ‘tips for practitioners’ category of output</td>
<td>disseminates ground-breaking theoretical issues and contributes to, and takes a lead in developing, discourse on theory</td>
</tr>
<tr>
<td>perceives research activity as separate and detached from wider contexts requiring interpersonal, organisational and cognitive skills</td>
<td>recognises the applicability to a range of contexts (including, in particular work contexts) of generic skills, developed within and alongside research activity</td>
</tr>
</tbody>
</table>
2.3.3 Socialisation to the discipline

The process by which new or emerging members are oriented to the epistemological and cultural values of a discipline, its knowledge base, and identity is referred to as socialisation. Through the process of socialisation, emerging members acquire disciplinary epistemology or ways of knowing (Becher & Trowler, 2001; Clark, 1997; Clouder, 2003; Davies & Devlin, 2007; Reich & Reich, 2006). This typically involves the acquisition of theoretical or practical knowledge. Socialisation also involves learning about the more implicit aspects of a discipline such as its’ behaviour, attitudes, professionalism values, cultural rules and norms (Becher & Trowler, 2001; Clark, 1997; Clouder, 2003; Davies & Devlin, 2007; Gerholm, 1990; Reich & Reich, 2006; Wackerhausen, 2009). This implicit or tacit knowledge can include information about how problems are defined, judgments of relevance are made, and the scholarly language that is utilised within a discipline (Weingart, 2010). It can also include awareness about the importance in upholding and practicing institutional norms, how to handle conflicting messages, departmental folklore and mentality, and scientific discourses, their characteristics and uses (Gerholm, 1990).

The process of socialisation fundamentally shapes individuals’ feelings of belonging to a particular disciplinary or professional group or community (Hall 2005). Institutional discourses and frameworks can also influence the socialisation process. Expert practitioners from the discipline or profession, professional associations, role models and mentors, and peers are perceived as key socialising agents in demonstrating the culture as well as the expected professionalism values of a discipline (Coulehan, 2005). Although traditional understandings are of socialisation as a linear or uni-directional process resulting in increased participation and feelings of belonging, the literature has shown that it can also involve conflict, in-authenticity, marginalisation, exclusion, and instances of unbecoming (Colley, James, & Diment, 2007).
Despite the insights offered by the anthropological and sociological perspectives of the academic disciplines, they have been critiqued for their lack capacity to offer insight into the contact, exchange and integration between academic disciplines as occurs within the interdisciplinary context. Anthropological frameworks have been critiqued for privileging a notion of the academic disciplines as bounded and discrete (Krishnan, 2009), separate and differentiated, and characterised by fixed and rigid conceptions of identity (Brew, 2008; Pinch, 1990). In fact, in discussing the limitations of the classic view of the disciplines as tribes or clans, Becher (1990) has conceded that ‘the study of the disciplines, as conventionally defined, yields a misleadingly simplified account of the nature of knowledge fields, and of their associated academic communities’ (p. 335).

In particular, Brew (2008) has asserted that anthropological metaphors are limited in their utility for describing academic identity. She empirically illustrated that the interdisciplinary affiliations and conceptions of self expressed by university academics in her study, were at odds with dominant anthropological metaphors of identity. Specifically, participants in her study expressed nested conceptions of identity which were flexibly and interchangeably used depending on context, as well as confluent conceptions of identity that were ‘free floating in no particular discipline but between various disciplines or sub disciplines’ (p. 431). Others have also noted that academic identities are becoming increasingly characterised by ‘hybridity in relationship to discipline and place’ (Clegg, 2008, p. 340). This illustrates an urgent need for alternative frameworks for exploring the complexity and multiplicity of academic identity. Brew (2008) has specifically called for the use of newer and more flexible metaphors of academic identity which can ‘capture the shifting and questioning uncertainties that give expression to the rhetorical and reflexive nature of academics’ disciplinary affiliations’ (p. 423).
The sociological perspective of the academic disciplines has engendered a focus on the status and position of the academic disciplines within a larger social, economic, political, and geographic context (Krishnan, 2009). Accordingly, much of the empirical and theoretical literature has privileged a focus on the power differentials between established and less established disciplines, the struggle between disciplines for authority or competence, and issues associated with the contact among disciplines drawing on Bourdieu’s (1975, 1997, 2004) theoretical concepts of field, habitus, and capital. For example, in the health research context, Albert and colleagues (2009) illustrated that e.g. bio-medical types of knowledge and knowing, which are more dominant and socially valued function as a cultural boundary to the inclusion and acceptance of other forms of inquiry e.g. social sciences research within the health research context. Despite these insights, sociological frameworks have been critiqued for their failure to attend to how the intellectual and cultural contact and exchange between disciplines can impact or shape identity formation and negotiation within the context of interdisciplinarity (Bleakley, 2011; Helmich & Dornan, 2012).

2.4 The impetus for integration across the academic disciplines

The expansion of scholarly inquiry to a newer range of subject matters and disciplines as discussed earlier (Weingart, 2010), resulted in increasing specialisation and differentiation between the academic disciplines. The separation between the disciplines and their scholarly communities also exacerbated the abstract nature of the knowledge that was being produced, division between the specialist and lay communities, and underpinned a breakdown in communication and intellectual exchange between the disciplines (Vincenti, 2005; Weingart, 2010). These factors provided the initial impetus for unification and integration among historically differentiated and fragmented disciplines (D'Amour & Oandasan, 2005).
Starting in the 1930s, universities and their scholarly communities developed an increasing awareness that drawing on multiple academic or professional disciplines could advance knowledge and understanding of research issues and their solutions in a way that a single discipline could not (Boix Mansilla, 2010; Boix Mansilla & Gardner, 2005; Choi & Pak, 2006; Hall et al., 2005). In addition, a growing uneasiness with the application of narrow disciplinary insights into complex real-world questions which ‘do not come in disciplinary boxes’ (Jeffrey, 2003, p. 539) functioned as an additional driver for intellectual exchange across disciplines. Some writers have in fact argued that the process of knowledge production and research inquiry must necessarily be underpinned by a framework informed by multiple disciplines because the causal field (i.e. antecedents and consequents) of any phenomenon is ‘partly or entirely outside the epistemic reach of any individual profession or scientific discipline’ (Wackerhausen, 2009, pp. 457, original author italics). From this perspective, it can be clearly understood that no phenomenon can be satisfactorily explored or explained from the perspective of a single discipline (Wackerhausen, 2009).

2.5 The continuum of integration across disciplines

The integration across disciplinary boundaries and knowledge domains in the research context is thought to occur along a continuum. As identified earlier, multidisciplinarity, interdisciplinarity, and transdisciplinarity (Aboelela et al., 2007; Choi & Pak, 2006, 2007; Klein, 2010; Lattuca, 2002; Rosenfield, 1992) are used to denote various positions along this continuum. These labels are typically ‘poorly differentiated and interchangeably used across different disciplinary contexts and by different authors’ (Choi & Pak, 2006, p. 359), as well as variably understood by researchers (Rosenfield & Kessel, 2008) and research participants (Aboelela et al., 2007; Vincenti, 2005). Klein (2010) has identified that these labels need to be interpreted and applied with caution as they are ‘not permanent, nor complete and their boundaries [continue to] change’ (p. 15). I begin by outlining the nature of integration between discipline boundaries at
the extreme ends of the continuum, before focussing on what occurs at the middle of the continuum.

2.5.1 Multidisciplinarity

On the far left of the continuum, multidisciplinarity refers to a situation where multiple disciplines contribute independently, usually in parallel or in sequence, to a program of research (Choi & Pak, 2006; Flinterman, Teclemariam-Mesbah, Broerse, & Bunders, 2001; Rosenfield, 1992). Multidisciplinarity is characterised by the disciplines remaining separate and retaining their original identity and existing structures of knowledge, and coming to together only to link research results or outcomes (Klein, 2010). In the context of multidisciplinarity, disciplinary contributions are perceived to be complementary or additive rather than integrative (Amey & Brown, 2004; Fiore, 2008). Aboelela et al (2007) have used the analogy of ‘parallel play’ to describe multidisciplinarity as a situation in which individuals commonly work side by side but with little attempt to integrate.

2.5.2 Transdisciplinarity

On the far right of the continuum, transdisciplinarity is described as an advanced form of integration in which boundaries between and beyond disciplines are transcended to produce a single framework of knowledge (Amey & Brown, 2004; Flinterman et al., 2001). Transdisciplinarity is thought to involve the deconstruction of traditional discipline knowledge frameworks, and their reconstruction into new knowledge fields.(Choi & Pak, 2006) resulting in the development of new hybrid disciplines. The final product or outputs of the transdisciplinary research process can be substantially different to its inputs.
2.5.3 Interdisciplinarity

Positioned in the middle of the continuum, interdisciplinarity or interdisciplinary research involves the linking, blending, and integrating (Klein, 2010) across two or more disciplinary areas or fields of specialised knowledge or practice (Aboelela et al., 2007; Choi & Pak, 2006, 2007; Flinterman et al., 2001; Giacomini, 2004; Porter, Roessner, Cohen, & Perreault, 2006). In this thesis, I use the terms interdisciplinarity and interdisciplinary research interchangeably to refer to the same concept. Since, interdisciplinarity involves working across and between discipline boundaries, it is commonly described in the literature using terms such as: border crossing (cf. Enders, 2005; Hagoel & Kalekin-Fishman, 2002; Petersen, 2007; Spanner, 2001); boundary crossing (Kerosuo & Engeström, 2003); or boundary work (Albert et al., 2009).

There are various understandings of what constitutes interdisciplinarity. Klein (1990) has noted that it is ‘…neither a subject matter nor a body of content. It is a process for achieving an integrative synthesis, a process that usually begins with a problem, question, topic or issue’ (p. 18). Others have more recently suggested that interdisciplinarity is a meta-concept or higher-order framework for ‘organising knowledge and action’ (Clark et al., 2011, p. 109). Couturier and colleagues (2008) have suggested that key underpinning characteristics of interdisciplinarity are multiple disciplines being ‘co-active’ (p. 342) and ‘transformation in the way objects are seen’ (p. 346).

Different forms of interdisciplinarity have been identified in the literature based on the nature of academic fields that are involved (O’Sullivan, Stoddard, & Kalishman, 2011). Others have distinguished between forms of interdisciplinarity according to the epistemological proximity of the disciplines involved (Repko, 2008). Epistemologically close disciplines e.g. economics and sociology, are those that may share similar understandings and assumptions about the nature of knowledge and knowing, while epistemologically distant disciplines e.g. biology and sociology,
may differ markedly (Repko, 2008). Newell (1998, cited in Klein, 2010) has similarly distinguished between narrow interdisciplinarity which occurs between disciplines with compatible methods, paradigms, and epistemologies such as history and literature, and broad interdisciplinarity which occurs between disciplines with little or no apparent compatibility such as science and the humanities.

2.6 Interdisciplinary health research (IDHR)

The term interdisciplinary health research (IDHR) has been coined specifically to describe integrative and synergistic forms of working among multiple disciplines, in the health research field. IDHR is the specific focus of and provides the context for this study. Hall (2006) has suggested that IDHR can involve disciplines allied to health as well as those outside the field such as business and management, economics, education, epidemiology, ethics, law, psychology, political science and the social sciences. Similarly, Carey & Smith (2007) have identified that IDHR can draw ‘on the perspectives of one or more health related disciplines. This includes disciplines within the same paradigm, for example two disciplines that are both based in the social sciences, and disciplines that span across paradigms, such as the social sciences and medical sciences’ (p. 49). The breadth of these perspectives clearly illustrates that any discipline with conceptual frameworks, theories, or methods that can contribute to the research process and provide richer perspectives of a research problems and its solutions, can be incorporated into IDHR.

IDHR as a form of knowledge production and approach to research inquiry is gaining increasing prominence in the health sciences research context (Canadian Academy of Health Sciences (CAHS), 2005). Internationally, IDHR is being advocated by a range of research institutions, funding bodies and policy makers (Laberge et al., 2009). In North America, the US National Institutes of Health has championed the agenda by establishing an interdisciplinary research
consortium in 2007 (National Institutes of Health, 2007). In Canada, the Canadian Institutes of Health Research (CIHR) and the Canadian Academy of Health Sciences (CAHS) have been instrumental in drawing attention to the need for and benefits associated with interdisciplinary collaboration in health sciences research and education (Armstrong, 2006; Armstrong et al., 2005; Johnston, 2006; Schechter & Armstrong, 2008).

In the health research domain, integration across disciplines has been influenced by a specific set of drivers. In particular, the difficulties associated with disseminating and translating discipline-specific research into health care policy and practice (Terpstra, Best, Abrams, & Moor, 2010) provided the initial impetus for integration across disciplines. The social and applied potential of interdisciplinary research (Kandiko & Blackmore, 2008; Pfirman & Martin, 2010) in terms of its capacity to enhance the relevance, application, and uptake of research findings (Lavis et al., 2005) has endeared it to researchers in highly applied disciplines or professions such as allied health, medicine, nursing (Couturier et al, 2008). Furthermore, the capacity for IDHR to provide sustainable solutions to local health problems through collaboration and joint participation by researchers and institutions with local communities (Aagaard-Hansen & Ouma, 2002) has also contributed to its popularity.

An additional driver of the integrative approach to health research, has been the shift towards synergistic and cohesive forms of learning and working in the health education and professional practice domains (Fiore, 2008). In the health education context, Freeth and colleagues (2005) have used the term interprofessional learning (IPL) to describe ‘learning arising from interaction between members (or students) of two or more professions’ (p. 15), and interprofessional education (IPE) to denote ‘occasions when two or more professions learn from, with and about each other to improve collaboration and the quality of care’ (p. 15). In the health professional practice context, interprofessionality refers to ‘cohesive practice between professionals from
different disciplines’ (D’Amour & Oandasan, 2005, p. 9), while *inter*professional practice (IPP) reflects a situation when ‘all members of the health service delivery team participate in the team’s activities and rely on one another to accomplish common goals and improve health care delivery, thus improving patient’s quality experience’ (Learning and Teaching for Interprofessional Practice Australia, 2009, p. 6). The push for IPE and IPP is gaining considerable academic legitimacy, momentum and following in the health education and professional practice contexts.

Despite the variation in terminology across the health education, professional practice, and research domains, Couturier and colleagues (2008) have suggested that the prefix of *inter* is underpinned by a number of fundamental and shared principles such as integration, synergy and cohesion, thus rendering these concepts similar. The focus of this thesis is on integrative and synergistic forms of work in health research as opposed to the health education and professional practice domains. Thus I will not be referring to the latter contexts and concepts at any great length.

A particular model of interdisciplinarity that is being advocated in the literature is the Academic Health Science Centre (AHSC) due to its potential to enhance the translational aspects of health research (Brooks, 2009; Watts, 2009). Lozon and Fox (2002) have described the AHSC as ‘a relatively recent label given to the relationship that exists between university-level health/clinical education programs and affiliated hospitals/health regions that provide the physical facilities necessary for research and education’ (p. 12). This model has been embraced by many countries including Canada, the UK and Holland for its potential to transform the linkages between health research, teaching and treatment, and enhance translation of research innovation into the patient population and the broader community. Progress towards the
uptake of the AHSC model in Australia has been somewhat slower (Brooks, 2009; Daly, Davidson, & Duffield, 2011).

2.7 The multiple levels of interdisciplinarity

Interdisciplinarity has been theorised to occur at different levels (Pfirman & Martin, 2010), most notably in the form of collaboration among researchers from different disciplines in formal or informal collectives, as well as in the form of individual research activity and scholarship. The multiple levels of interdisciplinarity are illustrated in Figure 1. I begin by describing the collaborative level of interdisciplinary research which has largely dominated the literature.

2.7.1 Interdisciplinarity at the interpersonal level

Interdisciplinarity at the interpersonal level is conceptualised as involving collaboration among researchers from different disciplines (Pfirman & Martin, 2010) most commonly in the form of a team (Fiore, 2008). Lattuca (2002) has articulated that this collaboration can be formal or informal, with the former involving participation in interdisciplinary research teams, and the latter involving engagement in cross disciplinary conferences and other scholarly events. Interdisciplinarity at the interpersonal level is regarded as being characterised by a parallel disciplinary orientation in which multiple disciplinary paradigms guide how the research problem is viewed, interpreted and solved; how members use their disciplinary knowledge and the role they play within the group; the group orientation to work; and approach to leadership (Amey & Brown, 2004, 2005).

The interpersonal level or collaborative dimension of interdisciplinarity has been privileged in the existing literature (Klein, 2010; Wagner et al., 2011). For example, writers have noted that ‘conventional wisdom (particularly in policy-making) has often implicitly equated IDR [interdisciplinary research] practice with IDR collaboration’ (Wagner et al., 2011, p. 15).
Accordingly, much of the empirical literature has tended to emphasise the process and practices of collaboration and the interdisciplinary team as a unit of analysis. Aspects of interdisciplinarity that have been empirically explored include the:

- phases of interdisciplinary collaboration (Amey & Brown, 2005)
- characteristics of collaborative team, environment and processes (Amabile et al., 2001)
- tensions and conflicts associated with interdisciplinary teamwork (Creamer, 2005)
- intellectual interaction across disciplines (Frost & Jean, 2003)
- discursive tools used in the collaborative process (Jeffrey, 2003)
- social nature of interdisciplinary learning (Karlsson et al., 2008)
- mechanisms influencing academic research collaborations (Sargent & Waters, 2004)
- facilitators and inhibitors of interdisciplinary interactions (Vincenti, 2005)
- team dynamics (Younglove-Webb et al., 1999)
- interdisciplinary collaboration and identity (Lingard et al., 2007; Cox Curry et al., 2009)

This privileging of the collaborative dimension of interdisciplinarity is echoed in the health research domain (Canadian Academy of Health Sciences (CAHS), 2005). Aspects of IDHR that have been empirically explored include the:

- processes and practices of collaboration in the context of bioethics (Austin et al., 2008)
- qualitative health research teamwork (Barry et al., 1999)
- communication and information management strategies in health sciences (Bindler et al., 2010)
- management of field-based health research projects (Jens & John Henry, 2002).
- task, personnel and environment of collaboration in neuroscience research (Magill-Evans et al., 2002)
- interdisciplinary relationships in health research (Nair et al., 2008)
- collaboration in nursing research (Priest et al., 2006)
The exclusive focus on the collaborative dimension of interdisciplinarity has been critiqued. In particular, concern has been expressed that a focus on the collaborative aspects of the phenomenon may result in ‘conceal[ing] the true value of interdisciplinarity which resides in the meeting of epistemologies’ (Couturier et al., 2008, p. 341). Similarly, Wagner and colleagues (2011) have lamented that a focus on team-level practices and processes of collaboration can detract researchers from exploring the social and cognitive aspects of interdisciplinarity.

<table>
<thead>
<tr>
<th>Intrapersonal:</th>
<th>Interpersonal:</th>
<th>Inter-departmental:</th>
<th>Stakeholder:</th>
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<tr>
<td>Cognitive connections</td>
<td>Collegial connections</td>
<td>Cross-field connections</td>
<td>Community connections</td>
</tr>
<tr>
<td>Cross fertilization – adapting and using ideas, approaches, and information from different fields and/or disciplines</td>
<td>Team-collaboration – collaborating in teams or networks that span different fields and/or disciplines</td>
<td>Field creation – topics that sit at the intersection or edges of multiple fields and/or disciplines</td>
<td>Problem-orientation – problems that engage multiple stakeholders and missions outside of the academy, for example that serve society</td>
</tr>
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Figure 1: The multiple forms of interdisciplinarity
(from Pfirman & Martin 2010, p. 389)

The literature has shown that a key outcome associated with interdisciplinary collaboration (whether with research colleagues or stakeholders) including in the health research setting is the positive impact on researchers’ attitudes to, and appreciation and acceptance of colleagues from other disciplines (Albert et al., 2008; Frost & Jean, 2003) and different methods of inquiry (Albert et al., 2008). Frost and Jean (2003) showed that formal and informal collaboration across
disciplines positively influenced the quality of researchers’ scholarly and professional activities such as research, teaching, and service. It was not clear, however, how these authors defined quality in their study. The literature has also reported that interdisciplinary collaboration can enhance researchers’ continuing personal and professional development (Priest et al., 2006). The interdisciplinary research team has been identified as a site where researchers can gain insight into collaborative research practices and processes, develop new research skills, and establish relationships (Choi & Pak, 2006; Flinterman et al., 2001). Studies have also shown that interdisciplinary collaboration is associated with higher productivity and better quality outputs (He, Geng, & Campbell-Hunt, 2009; Priest et al., 2006).

2.7.2 Interdisciplinarity at the intrapersonal level

Interdisciplinarity at the intrapersonal level refers to the individual researcher making links or connections across multiple disciplines (Pfirman & Martin, 2010; Rhoten & Pfirman, 2007a, 2007b) or stepping ‘outside the borders of his or her field’ (Allendoerfer, Adams, Bell, Fleming, & Leifer, 2007, p. 2). Empirical exploration of the intrapersonal level of interdisciplinarity including in the health research domain, has remained scarce. Questions that remain unanswered include: what does interdisciplinarity or IDHR at the interpersonal level look like; how do researchers enact interdisciplinarity or IDHR at the interpersonal level; how does it impact researchers both personally and professionally; and what are some of the challenges and struggles associated enacting interdisciplinarity or IDHR at the intrapersonal level in the higher education setting?

2.7.3 Other levels of interdisciplinarity

As illustrated in Figure 1, Pfirman and Martin (2010) have also differentiated between interdisciplinary activities involving inter-departmental interactions and stakeholders outside the academic institution. Rhoten and Pfirman (2007b) have defined the former as involving ‘the bridging of existing research domains to form new disciplines, subdisciplines or interdisciplines
at their intersections’ (no page number, online article), and the latter as serving ‘multiple stakeholders and broader missions outside of [the] academe’ intersections’ (no page number, online article). It is not clear, however, why these forms of interdisciplinarity have been differentiated from the interpersonal or collaborative level since they all involve interaction and collaboration across different disciplinary groups or stakeholders.

2.8 Interdisciplinarity, IDHR and identity

Identity is an image of self that specifically answers questions such as: Who am I? What are my values and beliefs? What is my purpose? How am I seen as by others? It is not a static, permanent or fixed entity, rather, is flexible, multifaceted, and in a continuous process of formation and transformation (Giddens, 1991; Sveningsson & Alvesson, 2003). Identity is also regarded as being open to change and relatively sensitive to situational influences (Swann Jr, Johnson, & Bosson, 2009). It is thus conceptualised as a state of ‘becoming, rather than being’ (Alvesson, Ashcraft, & Thomas, 2008, p. 15).

Identity encapsulates how one defines oneself to oneself and to others (Lasky, 2005). As such, the literature has distinguished between two forms of identity: an internal, personal or self-identity; and an external or social identity. The former can be understood as referring to attributes of self such as characteristics, abilities and traits that distinguish one individual from another. It is regarded as ‘the self as reflexively understood by the person’ (Giddens, 1991, p. 53, author italics). Others see it as reflecting our self concept i.e. ‘the knowledge a person has about him or herself’ (van Knippenberg, van Knippenberg, De Cremer, & Hogg, 2004, p. 827). Van Kippenberg and colleagues (2004) propose that this information encompasses the knowledge of one’s competencies, attitudes, beliefs and values, likes and dislikes, and aspirations. Alvesson and colleagues (2008) have suggested that it encapsulates subjective meanings and ‘thereby entwines feelings, values and behaviours’ (p. 6). Expressions and conceptions of self-identity can
be understood as being influenced by a person’s cultural background, gender, the historical, political, economic and social context they are situated in, and many other factors. From this perspective, identity can be understood as being personal, embodied, and internalised and reflecting an own ‘personal consciousness of ourselves as a human being’ (Payne, 2006, p. 140). It has been suggested that how an individual conceives of their identity has a significant influence on the way in which they act in specific situations (Goffman, 1973).

The second form of identity can be understood as being embedded, constructed and developed with social interactions and relationships with others (Jenkins, 1996; Monrouxe, 2010). Jenkins (1996) has argued that internalised images and understandings of self are not constructed in isolation from the social world, rather how we know and understand ourselves and how we know and understand others are intrinsically intertwined (Jenkins, 2000). Monrouxe (2010) has similarly observed that an individual’s identity is ‘developed within relational settings through activities’ (p. 44). As such, identity can be regarded as a ‘socially situated accomplishment’ (Caldas-Coulthard & Iedema, 2008, p. 6). From this perspective, identity can be understood as being constructed and shaped in and through the dynamic and evolving social relationships and interactions with others within a particular socio-cultural, political, and institutional context.

Couturier and colleagues (2008) have theorised that interdisciplinarity is associated with a profound ‘transformation in the self’ (p. 342), while others have suggested that ‘interdisciplinary scholarship by its very essence requires the deconstruction of knowledge and identity, which is then reconfigured into new forms of knowledge and action’ (Hall et al., 2006, p. 764). This alludes to the links between the experience of interdisciplinarity and understandings of self. However, there is not much empirical work substantiating these theoretical propositions about interdisciplinarity and identity, including in the health research domain. A notable exception is Manathunga’s (2009) study which explored interdisciplinary scholars’ experiences of ‘working
across and between disciplinary boundaries' (p. 143) using a post-colonial theoretical lens. Manathunga (2009) utilised metaphors of identity such as ‘butterfly, mongrel, and chameleon’ (p. 143) to describe her participants’ liminal, marginalised and transformative experiences of interdisciplinarity. However, this study was not located specifically within the health research domain, nor did it attempt to explore interdisciplinarity as a phenomenon or use theoretical framework related to identity.

Identity in the context of IDHR has predominantly been explored at the collaborative level with the interdisciplinary team constituting the primary unit of analysis. Lingard and colleagues (2007) illustrated that tensions in identity affiliations and allegiances across disciplines and various ideological and organisational forces and pressures influence the process of working together. The authors showed that complex negotiations are required among team members’ values, needs, and priorities. Cox Curry et al (2009) similarly illustrated that interdisciplinary collaboration was associated with threats to researchers’ personal and professional identity which impacted on the collaborative research process. Although, these studies have alluded to identity tensions being a key issue for interdisciplinary teams to deal with in order to ensure they work constructively and effectively, there has been little exploration of the complexities and concerns in relation to identity expressed by and implications for the individual researcher.

At a more personal level, Hagoel and Kalekin-Fishman (2002) noted that the experience of IDHR was associated with an epistemological reorganisation or ‘change in the mix of concepts, presuppositions, methods and reconstructions of reality’ (p. 302). The authors empirically illustrated how the juxtaposition and integration of multiple viewpoints and methods which occurred during the first authors’ education and training in a second discipline, impacted on her fundamental sense of self and identity. They describe the shifts in identity that were experienced using the term ‘transdisciplinary professional’ (Hagoel and Kalekin-Fishman, 2002,
p. 302). Although this study provided a useful glimpse into how IDHR participation or engagement impacted on individuals’ self understandings, it was not clear whether these changes in identity could occur as a result of less formal IDHR training and education.

In summary, there is a lack of a systematic body of empirical and theoretical literature on the links between interdisciplinarity or IDHR and identity. A key objective of this thesis is to address this gap in the literature by providing empirical and theoretical insight into the links between the personal and lived experience of IDHR in the higher education sector, and identity.

2.9 Factors impacting interdisciplinarity and IDHR

In this section of the chapter, I have applied a macro-, meso-, and micro-level analysis to identify the factors impacting on how interdisciplinarity is positioned and perceived including within the health research setting. This analytical framework has been applied in multiple contexts, including in the context of IDHR (Canadian Academy of Health Sciences (CAHS), 2005) and in the health professional practice setting (D'Amour & Oandasan, 2005; San Martín-Rodríguez, Beaulieu, D'Amour, & Ferrada-Videla, 2005).

2.9.1 Macro-level factors

Macro-level factors refer to political, economic, and socio-cultural elements (Canadian Academy of Health Sciences (CAHS), 2005) or the conditions outside the organisation (San Martín-Rodríguez et al., 2005).

2.9.1.1 The normative power of the discipline

Over 30 years ago, Birnbaum (1981) observed that the discipline constituted the dominant organising structure for knowledge production in that universities focussed ‘on individual scholars, [and] on problems defined by their discipline’ (p. 1279). Despite the intervening years,
the conceptual, cultural, philosophical and physical organisation of the contemporary higher education institution is still based on the discipline (Hall et al., 2006). The discipline provides the normative framework for much of the academic and social activity that happens within the higher education setting (Henkel, 2005, 2009; Henkel & Vabo, 2006; Mourad, 1997; Weingart, 2010). The focus on the discipline and its role in the legitimation of knowledge is reinforced by a faculty merit system where reward and recognition is based on contribution to a discipline and individual research accomplishments are more highly valued than collaborative accomplishments (Amey & Brown, 2004). Within this model ‘a faculty member who published outside his discipline’s traditional journals, for example, might find his scholarship questioned at promotion time simply because his senior colleagues continued to use traditional, discipline-based performance criteria’ (Norman, Ambrose, & Huston, 2006, p. 355). Henkel (2005) has noted that the ‘demonstration of track record in a field becomes even more salient’ (p 167) in a higher education research characterised by growing competition for funding and resources.

This disciplinary orientation is also evident in the evaluation frameworks for determining research excellence and quality. Research evaluation is defined as ‘the systematic determination of the merit, worth, and significance of a research activity’ (Huutoniemi, 2010, p. 310). It is regarded as a means of ‘legitimising research and its results across both the academy and society’ (Huutoniemi, 2010, p. 310). Legitimacy refers to socially and culturally constructed and authorised notions of acceptance and approval. It is a problematic concept in the context of interdisciplinarity because of the difficulties in deciding on the appropriate standard against which interdisciplinary forms of knowledge and practices should be judged as being relevant, appropriate and useful.

At the level of national research quality assessment, frameworks such as the Excellence in Research for Australia (ERA) (Australian Research Council, 2011) utilise discipline-based criteria.
The framework is organised according to eight discipline clusters as listed below in Table 5. Each cluster contains a set of research disciplines defined according to Fields of Research (FoR) codes as articulated with the Australia and New Zealand Standard Research Classification (ANZSCR). This FoR framework contains 22 two-digit codes denoting broad disciplinary fields which are subcategorised into 157 four-digit codes denoting specific sub-fields. The ERA 2010 Evaluation Guidelines (Australian Research Council, 2010) specifies that the primary unit of analysis is the ‘research discipline for each institution by cluster (p. 17). The Guidelines (Australian Research Council, 2010) also specify that multidisciplinary or interdisciplinary research will be ‘disaggregated based on discipline components’ (p. 17) thus illustrating the lack of emphasis placed on profiling the extent of interdisciplinary research activity within and across institutions at a national scale.

Table 5: Discipline clusters
(from the Excellence in Research Australia 2010 national report [ARC, 2011])

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<th>Discipline clusters</th>
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<tbody>
<tr>
<td>1. Physical, Chemical and Earth Sciences (PCE)</td>
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<tr>
<td>2. Humanities and Creative Arts (HCA)</td>
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<tr>
<td>3. Engineering and Environmental Sciences (EE)</td>
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<tr>
<td>4. Social, Behavioural and Economic Sciences (SBE)</td>
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<tr>
<td>5. Mathematics, Information and Communication Sciences (MIC)</td>
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<td>6. Biological Sciences and Biotechnology (BSB)</td>
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<tr>
<td>7. Biomedical and Clinical Health Sciences (BCH)</td>
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<td>8. Public and Allied Health Sciences (PAH)</td>
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</table>
This disciplinary orientation also extends to research evaluation in the context of national funding schemes. For example, the recent Australian Research Council (ARC) report (Australian Research Council, website last updated November 2011) about the evaluation process for Discovery Projects which commenced in 2012, contained detailed information about the assessment of proposals by specialised readers/assessors within five discipline panels. These discipline panels were revised from those reported in Table 5 and included: Biological Sciences and Biotechnology (BSB); Engineering, Mathematics and Informatics (EMI); Humanities and Creative Arts (HCA); Physics, Chemistry and Earth Sciences (PCE); and Social, Behavioural and Economic Sciences (SBE). This report did not, however, specify how interdisciplinary research proposals (i.e. proposals that may straddle multiple Field of Research codes) were reviewed and what internal or external expertise was available to assist discipline panels in assessing interdisciplinary work. More alarmingly, little detail was provided about the how the results of multiple discipline-based reviews were integrated. This clearly illustrated the added level of scrutiny that interdisciplinary research is subject to in the research evaluation/assessment process, the lack of clarity about the process even though interdisciplinary projects are philosophically and conceptually different to discipline-based proposals, and the lack of parity in the methods used to evaluate discipline-specific vs. interdisciplinary research.

This echoes the general ambiguity in the literature related to the evaluation of interdisciplinary research projects. Brew (2008) has also articulated that typically ‘organizations which examine or provide funding and other support for research and for teaching do not tend to take account of the relationships between disciplinary areas; nor do they treat interdisciplinary ideas and projects in the same way as work within a single disciplinary area’ (p. 435). This can be understood as having implications for the types of research and approaches to knowledge production that are funded and subsequently carried out in the higher education sector.
Academic peer review is perhaps the most widely used method of research evaluation in the higher education sector, including in the research funding and publication arenas. It is used to determine the quality and credibility of research, as well as to improve performance through the provision of feedback. Peers are typically regarded as experts and other qualified personnel in a given field or discipline. In the context of interdisciplinarity, a key challenge is deciding in who may constitute an appropriate peer. The incommensurability between traditional discipline-based peer review processes and criteria and interdisciplinary research have been widely documented in the literature.

Langfeldt (2007) has discussed that traditional peer review systems are conservative in nature and oriented towards minimising risk, thus disadvantaging non-conventional research including interdisciplinary work. Her empirical study of several European review processes confirmed that interdisciplinary research proposals were less successful than discipline-based research in many settings. Based on this finding, Langfeldt (2007) asserted that ‘discipline-based review [panels] may serve as gatekeepers, effectively preventing resources going to interdisciplinary research’ (p. 38). Others have similarly noted that peer review scan serve ‘a gate keeping function both within and outside the academe’ (Holbrook, 2010, p. 321).

The incommensurability between traditional discipline-based evaluation frameworks and process and interdisciplinary research (Boix Mansilla, Feller, & Gardner, 2006; Boix Mansilla & Gardner, 2005; Huutoniemi, 2010; Sargent & Waters, 2004), has been widely documented. As such there is a call for an overhaul of research evaluation systems and frameworks that have been identified as being necessary to capture the ‘many important, but quite often elusive, aspects of interdisciplinarity’ (Aagaard-Hansen & Ouma, 2002, p. 207). Boix Mansilla & Gardner (2005) have summarised that interdisciplinary evaluation frameworks need to attend to aspects such as the alignment between antecedent disciplinary knowledge and epistemic values,
methods, research process, and insights; extent to which the research is a generative and coherent whole; and the degree to which the research advances understanding.

Others have suggested that interdisciplinary research evaluation should consider the novelty and extent of integration displayed in the work (Huuutoniemi, 2010), personal and professional outcomes associated with the collaborative experience such as satisfaction, and changes in self efficacy and self confidence, and extent of learning from the collaborative experience (Sargent & Waters, 2004). In the health research setting, documentable and observable examples of health-improving interventions have been suggested as possible indicators of research quality (Aagaard-Hansen & Ouma, 2002). Similarly, the use of new peer review strategies such using different types of peer reviewers for different purposes and aligning the selectivity and sensitivity of the review process to its objectives, have been suggested as ways of minimising the misalignment between discipline-based evaluation criteria and interdisciplinary research (Langfeldt, 2007).

The challenges posed to interdisciplinarity by the disciplinary orientation and organisation of the higher education institution (Boden et al., 2011; Clark et al., 2011) have been widely documented. Discipline-based merit systems have been identified as deterring scholars from pursuing interdisciplinary work (Cashman, Reidy, Cody, & Lemay, 2004; Kandiko & Blackmore, 2008) because of their focus on narrow individual achievements which is at odds with the notion of interdisciplinary scholarship and accomplishment.

Specifically within the health research context, reservations have been expressed at the growing support of IDHR. Laberge and colleagues (2009) showed that Canadian bio-medical scientists have cited various concerns regarding IDHR for a number of process-centred and outcome-centred reasons. Process-centred arguments included that the support of interdisciplinarity
would contribute to the creation of artificial teams, lead to the imposition of top-down interdisciplinary structures and contribute to poor research quality. Outcome-centred reasons included that a focus on interdisciplinarity would occur at the detriment of disciplinary research traditions and research excellence and scholarship. These concerns about interdisciplinarity potentially resulting in the dilution of disciplinary expertise and scholarship have also been noted by the Canadian Academy of Health Sciences (CAHS) (2005). These observations illustrate the prevalent tacit views and assumptions that interdisciplinarity may occur at the expense of and detract from disciplinary traditions and frameworks for knowledge production in the higher education sector.

The discipline-based model not only impacts how research excellence is determined and how merit and reward are allocated, but also notions of identity and processes of identification in the higher education institution and the sector generally. The discipline continues to provide an important source of meaning and self esteem for individuals within the higher education setting (Henkel, 2005, 2009; Henkel & Vabo, 2006; Mourad, 1997; Weingart, 2010). The anthropological framework of identity (Becher, 1994a; Becher & Trowler, 2001) portrays a view of academic identity being constructed within tribes or clans, characterised by specific epistemological or knowledge qualities and social and cultural attributes. How this normative discipline-based framework impacts on identity formation in the higher education setting will be elaborated on in Chapter 5.

In summary, it has been overwhelmingly recognised that the ‘culture of disciplinarity’ that dominates most higher education institutions...stands as a barrier to coexistence of a fully legitimate culture of interdisciplinarity’ (Boden et al., 2011, p. 2, online article, authors’ italics). Within this disciplinary culture and framework, interdisciplinarity is regarded ‘in some sense [as] conceptually deviant’ (Brew, 2008, p. 434) and as a threat to traditional modes of knowledge
production and disciplinary and professional boundaries. Writers have cautioned that ‘without a process or community for achieving recognition for creativity, the interdisciplinary scholar is faced with significant hurdles in promotion and tenure’ (Pfirman & Martin, 2010, p. 396). The magnitude of the challenges posed by the normative disciplinary framework in the higher education setting are such that Clark and colleagues (2011) have contended that within this context ‘interdisciplinarians must fight for identity, recognition, roles, legitimacy, and standing’ (p. 99).

2.9.1.2 Changing discourses regarding knowledge production

There are some shifts occurring in the higher education setting that are beginning to challenge established disciplinary frameworks and culture. In particular, it has been noted that there is a shift from Mode 1 or traditional forms of knowledge production to Mode 2 knowledge production (Gibbons et al., 1994). The former is discipline-based and theoretical, governed by autonomous and traditional academic-disciplinary communities, and largely motivated by academic curiosity (Gibbons et al., 1994). In contrast, Mode 2 knowledge production is transdisciplinary with more permeability between disciplines and institutions, application or translation oriented, heterogeneous, and more socially accountable and reflexive (Enders, 2005; Välimaa & Hoffman, 2008).

The shift from Mode 1 to Mode 2 is reflected in how academic institutions are trying to bridge traditional discipline-based structures, ways of thinking, and practices. Although most interdisciplinary initiatives within the Australian higher education sector have tended to focus on the restructuring of curriculum and teaching (Davies & Devlin, 2007), there is evidence of increasing discussion and debate about interdisciplinarity in the research context. I have utilised examples from my own university to illustrate these changing discourses in relation to higher education research. The University of Sydney identified in its Green Paper (2010), that ‘current
academic and administrative organisational arrangements create[d] complexity and duplication [which] both fragment disciplinary communities and hinder cross-disciplinary research’ (p. 36).

A strategic priority for the university was developing ‘cross-disciplinary fields of research, scholarship and teaching’ (p. 95, Green Paper, 2010). It has invested heavily in this strategic aim by advancing the establishment of several interdisciplinary research centres spanning multiple disciplines and bringing together researchers and educators from different areas of the university.

Notable examples in the health research domain include the Charles Perkins Centre which brings together researchers from the basic, clinical and population sciences as well as design, policy and social sciences to address issues of obesity, cardiovascular disease, and diabetes. Another example is the Brain and Mind Institute where researchers and scientists in neurosciences and brain research, collaborate with clinicians and other stakeholders such as patients, carers, and support groups. Interdisciplinary research centres outside of health, include the China Study Centre, the United States Studies Centre, the Institute for Sustainable Solutions, and the Centre for International Security Studies. This shift in discourse in relation to interdisciplinarity is by no means limited to the University of Sydney. A scan of university websites has indicated that many higher education institutions nationally have established similar centres in and beyond health, to foster collaborative and interdisciplinary research capable of generating holistic solutions to research issues and outcomes that have social and practical relevance and are amenable to translation into practice.

Enders (2005) has noted that these shifts in ‘discourses regarding Mode 2 knowledge production have fostered new questioning about the specific conditions under which knowledge is generated in the academe’ (p. 121). In particular, the changing perceptions about how knowledge is produced between and across discipline boundaries, has been identified as having
important ‘implications for formation of identities, particularly the extent to which individual academics experience the dominant organisational discourse(s) as consonant or in conflict with their self-identity’ (Blenkinsopp & Stalker, 2004, p. 421).

It is important to note that this shift towards Mode 2 knowledge production has not yet been substantiated by theoretical or empirical evidence (Weingart, 2010). In fact, some authors have noted that although these changing discourses have somewhat challenged established disciplinary cultures and frameworks in the higher education setting, the reality is that the disciplines continue to flourish and that most academics continue to work as they have always done (Calvert, 2000). This resonates with Mourad’s (1997) observation that ‘knowledge of reality is, in practice, a reality that is composed of disciplines’ (no page number, online article).

2.9.1.3 Political and economic climate

The intellectual and social activities occurring in the higher education sector have also been in part informed by the shift in the political and economic climate in the latter part of the twentieth century, which is characterised by increasing entrepreneurial and economic discourses and notions of control and accountability (Enders, 1999; Hakala, 2009; Henkel, 2005; Neumann & Guthrie, 2002; Ylijoki, 2005). During this time, public sector institutions including universities, and their academic communities became subject to increasing scrutiny by the state, were pressured to adopt managerial structures, values, and methods to formally demonstrate efficiency and productivity (Henkel, 2005).

Ylijoki (2005) has noted that the growing enthusiasm for academic capitalism has promoted a market-orientation and an entrepreneurial culture in the higher education sector. Academic capitalism is viewed to be characterised by ‘competition for external research funding, increased emphasis on efficiency and contributions to economic and social development, as well as
attempts to commercialise research results’ (Hakala, 2009, p. 174). In this environment, research activities have become subjugated to ‘an increasingly economic and managerial vocabulary’ (Neumann & Guthrie, 2002, p. 722). In addition, the overt focus on research performance is perceived to reinforce selectivity in terms of the types of research and approaches to inquiry which are pursued in the higher education sector (Neumann & Guthrie, 2002).

The Australian higher education sector has not been immune to the influence of changing political and economic climate. Neumann and Guthrie (2002) have identified that the corporatisation of the Australian higher education sector including in relation to its research activities, has resulted in the ‘construction of performance information systems, the goal of which is to render a variety of activities, including research (e.g. research output, quality, training, and the ability to attract external research inputs) and teaching (e.g. graduate outcomes, graduate employability, student satisfaction with teaching and quality), measurable and commodifiable’ (p. 722). The impact of the changing economic discourses has also impacted how funding, institutional and administrative structures are organised in the Australian higher education sector (Neumann & Guthrie, 2002). The establishment of national research assessment frameworks such as the Excellence for Research Australia (ERA) can be regarded as reflecting the emphasis within the higher education sector on research performance and productivity.

2.9.1.4 Tensions between disciplinary paradigms

A specific macro-level influence shaping how IDHR is perceived and positioned in the higher education institution and sector, is the positivist epistemological and ontological orientation to research privileged in the health research field. In the positivist research paradigm, notions of experimentation, objectivity, generalisability, reproducibility and causality occupy a hegemonic position (Albert et al, 2008; 2009). In this context, social sciences research and in particular
Qualitative research is regarded as a lesser science and perceived as inferior (Albert et al., 2008; Coast et al., 2004). Albert and colleagues (2008) empirically illustrated that differences in epistemic cultures, as well as the criteria by which knowledge production and research practices are judged to be valuable and legitimate, contribute to conflicts between the quantitative and qualitative research paradigms. The authors showed that negative perceptions of social science and qualitative research functioned as a cultural boundary to their inclusion and acceptance in the biomedical field (Albert et al., 2009). These issues can be understood as being particularly pertinent to the IDHR context in which there is contact between different disciplinary philosophies and research paradigms.

2.9.2 Meso-level factors

Meso-level factors refer to the institutional structures and context (Canadian Academy of Health Sciences (CAHS), 2005; San Martín-Rodríguez et al., 2005). In the higher education setting, the focus on the discipline and its role in the legitimisation of knowledge is reinforced by higher education organisational structures. Henkel (2005) has identified that the disciplines are ‘given tangible form and defined boundaries in the basic units or departments of the universities’ (p. 158). The manner in which the contemporary university is based on discipline-based faculties, departments and schools, and administrative, financial and resource structures, has been identified as a key obstacle to implementing interdisciplinarity in practice including within the health research domain (Amey & Brown, 2004; Hall, Stevens, & Torralba, 2002; Kandiko & Blackmore, 2008).

The literature has consistently documented that having sufficient institutional support, commitment and resourcing, and a climate conducive to interdisciplinarity is essential (Aboelela et al., 2007; Amabile et al., 2001; Sargent & Waters, 2004). Institutional support is regarded as manifesting in the form of administrative, technical, and financial resourcing, as well as collegial
support (Frost, Jean, Teodorescu, & Brown, 2004; Sargent & Waters, 2004). Institutional climate refers to national and institutional messages about interdisciplinarity, as well as local and national strategies for facilitating research across disciplines (Sargent & Waters, 2004). Frost et al (2004) have identified that an ‘outward-looking and problem-based’ (p. 140) institutional research culture and ethos can help to cultivate and sustain interdisciplinary collaboration. Kezar (2005) similarly identified the importance of developing a set of institutional values related to collaborative work which ‘created a new norm or operating philosophy for individuals’ (p. 846), and functioned to legitimate and support interdisciplinarity within the institution. Other key structural enablers for interdisciplinarity include the availability of protected time for and a physical environment conducive to interdisciplinary collaboration (Bronstein, 2003), as well opportunities to partake in shared professional development opportunities (McCallin, 2005).

2.9.3 Micro-level factors

Micro-level factors refer to individual and team elements (Canadian Academy of Health Sciences (CAHS), 2005) or interactional determinants which are the ‘components of the interpersonal relationships among team members’ (San Martín-Rodríguez et al., 2005, p. 141). Personal attributes documented as being associated with effective interdisciplinary collaboration include a personal commitment to the team, maturity and flexibility, critical thinking and reflection, and individual readiness for open mindedness and collaboration (Aboelela et al., 2007; Choi & Pak, 2007; McCallin, 2006; Vincenti, 2005). Sargent and Waters (2004) have identified that individuals with intrinsic motivations compared to instrumental motivations such as maximising complementary skills, knowledge or CV development are more likely to be more meaningful engaged with interdisciplinarity.

The literature has also noted the key personal characteristics of institutional and workplace leaders who facilitate interdisciplinarity. Frost and colleagues (2004) have noted that personal
traits of leaders such as ‘dedication, patience, consistency, imagination, tact and organisation’ (p. 466) as well as the extent of their own interdisciplinary relationships, are important in influencing the instigation and sustainability of interdisciplinary initiatives. Other writers have identified that these leaders tended to nurture linkages across discipline boundaries (Rosenfield & Kessel, 2008) and demonstrate a philosophical commitment to interdisciplinarity (Kezar, 2005). In particular, the use of cultural leadership approaches aimed at facilitating the development and use of strategies to create shared language and practices, and ritualise activity so that members feel a greater connection to the interdisciplinary team, have been identified as important (Amey & Brown, 2005). This highlights the important role of the institution and institutional leaders in role-modeling and advancing the interdisciplinary research agenda. Conversely, it can be understood that the loss of these champions can negatively impact institutional or workplace commitment.

In addition to these individual characteristics, a number of collective or team-level characteristics have been linked with successful interdisciplinary collaboration. These include having clear articulation of membership, physical proximity among team members, incentives for working together, a balance of power in the collaborative setting, shared goals and vision among team members, opportunities to provide regular constructive feedback, and explicit agreements about authorship and scholarly output (Aboelela et al., 2007; Barry et al., 1999; Choi & Pak, 2007; Hall et al., 2005). Furthermore, the capacity of a team to commit towards sharing knowledge and expertise within the team (Priest et al., 2006), develop a shared language and vocabulary to express ideas and transcend disciplinary boundaries (Austin et al., 2008; Jeffrey, 2003), and develop their collective emotional intelligence (Goleman, Boyatzis, & McKee, 2002; McCallin & Bamford, 2007) has also been linked to positive interdisciplinary collaboration outcomes and experiences.
Critically, the capacity of an interdisciplinary team to be collectively reflexive about the way it functions and its collaborative processes and practices (Barry et al., 1999; Lingard et al., 2007; McCallin, 2005; Savin-Baden, 2004) has been identified as important. Barry and colleagues (1999) illustrated that the use of individual and group reflexive techniques to make interdisciplinary team members’ presuppositions and preferences explicit could facilitate enhanced conceptual thinking, learning about other disciplines’ perspectives, ways of practice, values, and beliefs, as well as research quality and rigour. In this context, having trust relationships (Tierney, 2008) is also considered important, with shared professional development opportunities a practical means of facilitating shared experiences and frameworks.

In summary, the analysis of the literature has illustrated a number of factors at the macro-, meso-, and micro-level which impact on how interdisciplinarity and IDHR is positioned, perceived, and experienced within the higher education sector. A degree of alignment and synergy between these multiple levels has been deemed necessary in order to facilitate and sustain interdisciplinarity (Cashman et al., 2004; Porter et al., 2006).

2.10 Summary of chapter

In this chapter, I illustrated the origins of the academic disciplines, how they are perceived from an anthropological and sociological perspective, and the drivers of integration across disciplines. I reviewed the contemporary and historical literature on interdisciplinarity which indicated that its emergence and growing popularity are underpinned by the need to counteract disciplinary specialisation and fragmentation and associated problems, and the increasing uneasiness with applying disciplinary lenses and frameworks to complex real world problems. Furthermore, the social and applied potential of interdisciplinarity (Kandiko & Blackmore, 2008; Pfirman & Martin, 2010) was also identified as contributing to its popularity in applied fields such as health (Couturier et al, 2008). I discussed where interdisciplinarity is positioned along the continuum of
integration across disciplines, and interdisciplinary health research (IDHR) as the specific context for this study. I argued that given the rise in the popularity of IDHR as an approach to research inquiry particularly within the health domain, and ongoing national debates including in Australia (Brooks, 2009; Daly et al., 2011; Fisk et al., 2011; Morgan & Greeley, 2011), it is clear that it is an important and contemporary research agenda that requires careful consideration and examination. I also outlined the various dimensions of interdisciplinarity and IDHR and the macro-, meso-, and micro-level factors impacting how interdisciplinarity and IDHR is perceived and positioned in the higher education setting.

In situating interdisciplinarity and IDHR within the theoretical and empirical literature on the topic, a number of observations were made. First, a key insight garnered from the analysis of the literature was that the dominant anthropological and sociological perspectives have reinforced a view of the academic disciplines being separate, bounded and discrete, and engendered a focus on exploring the processes and practices of intellectual and cultural exchange between disciplines and their members. This preoccupation with the collaborative dimension of interdisciplinarity (Pfirman & Martin, 2010) is reflected in the contemporary empirical and theoretical literature. For example, many empirical studies in the context of interdisciplinarity in general and IDHR in particular, have focused on the team as the unit of analysis and on explicating the complex social processes and practices such as communication, interpersonal interaction, relationship building, and team work among members of different disciplines in the interdisciplinary collaborative setting. Similarly, many of the future research agendas and implications for practice that have been suggested in the literature are also linked to interdisciplinary collaboration (Jacobs & Frickel, 2009). The analysis of the contemporary literature has revealed that there have been limited accounts of interdisciplinarity or IDHR aimed at exploring how it is experienced by the individual in the higher education sector.
Although it has been severally acknowledged that scholars working in interdisciplinary contexts may experience ‘particular stresses, pressures, and obligations that are notably different from those scholars that operate within single conventional disciplines’ (Spanner, 2001, p. 356), there is a marked lack of insight into the nature of these challenges and difficulties and how they are negotiated and managed by the individual engaged in interdisciplinary research. As such, there have been increasing calls to utilise sophisticated methodologies and theory in order to advance insight into interdisciplinarity (Belanger & Rodriguez, 2008). I thus argue that there is a need for newer and more meaningful descriptions and interpretations of interdisciplinarity, in particular, those that provide insight into it as an essentially human phenomenon. In the next chapter I discuss the research approach taken in this study to facilitate insight into the lived experience of interdisciplinarity in the health research domain.
3.1 Introduction

In this chapter, I describe and provide a rationale for the approach to inquiry used in this study, as well as my connections to and interests in this research topic. This chapter addresses the research objective of using appropriate methodology to describe and interpret the lived experience of health researchers engaged in interdisciplinarity, including how they enact interdisciplinarity and manage their lived experience. It also addresses the research objective of adopting a consciously reflexive stance in articulating and exploring my interpretive influences and positioning in this study.

In this chapter, I first describe the ontological and epistemological commitments of this study. I then re-state the study research objectives and questions for this study to remind the reader of the purpose and nature of this work. Next I discuss the key features of the broad methodological framework for this study, and the specific methodology used in this study. I then discuss the complexities of being positioned as an insider to this research study and setting. I briefly describe the ethical considerations of this study, before outlining how participants were sampled and recruited for this study. Following this, I describe and justify the methods used to gather data for this study, as well as the approach taken to interpreting data. Finally, I discuss the methods utilised for ensuring quality in this research study.

It is worth noting that the term ‘narrative’ is used intermittently in this chapter and throughout this thesis in its most generic sense to reflect individuals’ accounts or stories, rather than to indicate the use of a particular methodology.
3.2 Philosophical orientations to research

A research paradigm constitutes one’s basic philosophical orientation and values (Guba & Lincoln, 1994) in relation research. A research paradigm is defined as ‘the basic belief system or worldview that guides the investigator, not only in choices of method but in ontologically and epistemologically fundamental ways’ (Guba & Lincoln, 1994, p. 105). Our ontological and epistemological assumptions reflect our underpinning values and beliefs and understandings about what human knowledge and reality is, and how it is constructed, conveyed and maintained. Ontology is defined as ‘a certain way of understanding what is’ (Crotty, 1998, p. 10). It is primarily concerned with questions regarding the form and nature of reality (or of a phenomenon) and what can be known about it (Cohen et al., 2011; Lincoln & Guba, 1985).

These ontological views then shape our epistemology or ‘way of understanding what it means to know’ (Crotty, 1998, p. 10). Our epistemological beliefs are concerned with how one can ‘come to know these realities’ (Cohen et al., 2011, p. 33) and the relationship between the knower and what can be known (Lincoln & Guba, 1985). These in turn inform our methodological approach and how ‘we view our world(s), what we take understanding to be and what we see as the purposes of understanding; and what is deemed valuable’ (Cohen et al., 2011, p. 3). The internal consistency between the ontology, epistemology, methodology and method of a research study has been identified as being a hallmark of research quality (Carter & Little, 2007).

A number of labels are interchangeably used in the literature to refer to the different research paradigms i.e. philosophical, ontological and epistemological orientations, views and values. Writers have differentiated between the objectivist and subjectivist paradigms (Cohen et al., 2011), objectivism and constructionism (Crotty, 1998), and positivist and interpretivist approaches. (Higgs, 1997). These can be understood as representing divergent positions on a continuum of philosophical values, theoretical orientation, methodology, and methods of data
collection and interpretation. The objectivist paradigm is also commonly referred to as the empirico-analytical or quantitative research paradigm, while the interpretivist and subjective paradigms are broadly grouped under the umbrella of qualitative research.

In the objectivist or positivist research paradigm, reality is regarded as being static and existing externally to the individual, and as something that can be observed (Guba & Lincoln, 1994). The ontological concern of the objectivist paradigm is with realism which assumes that meanings exist independently of any individual consciousness. The objectivist epistemology holds that meaning, and therefore meaningful reality, exists as such apart from the operation of any consciousness (Crotty, 1998, p. 8). Knowledge is seen as objective, hard and tangible. In this paradigm, the researcher is regarded as a ‘disinterested scientist’ (Denzin & Lincoln, 2000) who aims to scientifically investigate phenomena using experimental methods common in the natural sciences (Cohen et al., 2011). In this role of objective observer, it is critically important for the researcher to eliminate their personal values and other interpretive influences, commonly termed as biases, in order to safeguard the reliability, validity and generalisability of the research.

In contrast, the subjectivist or interpretivist paradigm is underpinned by an ontological perspective that there are multiple human realities, and not just one. There is an explicit recognition that knowledge is socially constructed (Guba & Lincoln, 1994), is ‘a product of individual consciousness’ (Cohen et al., 2011, p. 6), and is being continually interpreted and reinterpreted in different ways and in different historical, social, political and cultural contexts (Crotty, 1998). From this perspective, knowledge is understood as being time- and context-dependent, rather than universal and objective and generalisable, and human beings are perceived to construct meanings as they engage with the world in different ways and contexts (Crotty, 1998). The epistemology commitment of the interpretive paradigm is to anti-positivism
which assumes that ‘truth or meaning comes into existence in and out of our engagement with
the realities in our world’ (Crotty, 1998, p. 8). Berger and Luckmann (1966) have proposed that
all human experience and reality is:

- mediated by individual consciousness (i.e. subjective)
- differentiated between different modes (i.e. multiplicity)
- constructed in communication and interaction with others (relational); shared with
  others (i.e. intersubjective)
- specific to any one social community or setting being studied (i.e. contextual)

The subjectivist or interpretive view of knowledge and reality in the human world is commonly
labelled as qualitative research. Qualitative research encompasses a range of interpretive
approaches such as ethnography, phenomenology, critical inquiry, and post modernist
approaches which can be differentiated in terms of their underpinning theoretical aims and
methods associated with data gathering and interpretation. Despite these nuances, there is
general agreement about the key characteristics of qualitative research. These are that:

- there are multiple constructed realities; different people have different perceptions of
  reality through their attribution of meaning to events, and this meaning is intrinsic to
  the event and not external to it
- the researcher and participants are interdependent and are changed by the process of
  inquiry; the researcher’s presence, position, and role will have influence themselves, the
  research process and participants
- knowledge is dependent on both context and time
- description, understanding and interpretation of events are more useful than controlling
  them in order to establish cause and effect
- inquiry is value bound; the values, beliefs and assumptions of the researcher and the participants will shape what questions are asked and how, and how the findings are interpreted (Higgs, 1997, p. 9)

In the qualitative research paradigm, the researcher is seen as needing to get inside participants’ worlds in order to understand their social experiences. In contrast to the unbiased or neutral role occupied by the researcher in the quantitative paradigm, the qualitative researcher is seen as a passionate participant who is engaged in co-creating and making meaning in the research process (Denzin & Lincoln, 2000). The intersubjectivity of the research process in terms of the relationship between the knower and known and the reciprocity of interaction and meaning making between the two, is regarded as informing and shaping the research process and outcomes. It also becomes critically important for the qualitative researcher to be reflexive (Finlay, 2002b, Kuper, Lingard, et al., 2008; Kuper, Reeves, et al., 2008) in terms of identifying and articulating their personal lens as shaped by their background, circumstances and experiences which uniquely mediates their interpretation of reality. From this perspective, it is acknowledged that no two understandings of reality can be the same. The notion of reflexivity is discussed in more detail later in this chapter.

3.2.1 My philosophical orientation to this thesis

My main concern in this thesis is to understand and interpret the experience of a phenomenon as embedded and constructed within the social world. My specific aim is to explore IDHR as an essentially human experience and present a rich and evocative illustration of participants’ lived experience and the meanings they attribute to this experience. In order to address this aim and key concerns, this study is therefore situated in the interpretivist or qualitative research paradigm.
Consistent with the interpretive philosophical orientation, I recognise that I occupy a value-laden and subjective orientation to the phenomenon being researched, as well as a central position in the research process. I am also aware that my historical, social and cultural circumstances, experiences and background, have shaped the personal lens that I bring to the research, which in turn has influenced my research focus, approach and interpretations. Furthermore, I recognise that the connections shared between the study participants and myself as the researcher, may also exert an influence on the research process.

3.3 Research questions and objectives

The research questions for this study are informed by my interpretive philosophical orientation, and in particular my interest in exploring the lived human experience. The primary research question for this study is:

1) What is the lived experience of interdisciplinary health research (IDHR) from the perspective of health researchers in the higher education sector?

This study also has three secondary research questions. These are:

a) How do health researchers enact IDHR?

b) How can health researchers’ lived experience of IDHR be interpreted from the theoretical perspective of identity?

c) How do health researchers construct and manage their identity in the context of IDHR?

These research questions inform a set of specific research objectives for this thesis which include:
1) situating the study within the existing empirical and theoretical literature on interdisciplinarity in the higher education sector, with a specific focus on IDHR

2) using appropriate methodology to capture the lived experience of IDHR from the perspective of health researchers engaged in it

3) providing a phenomenological account of how IDHR is enacted, experienced and lived by health researchers in the higher education health research setting

4) making visible the links between the lived experience of IDHR and identity, and situating this study with the relevant empirical and theoretical literature on identity

5) interpreting health researchers’ lived experience from the theoretical perspective of identity, in particular illustrating how they manage their identity in the context of IDHR

6) analysing the scholarly significance of the study in advancing contemporary understandings of IDHR, and the practical implications of findings for individuals, teams, workplaces, higher education institutions, as well as the sector more broadly

7) adopting a reflexive stance in articulating and exploring my interpretive influences and position in this study

Each chapter of this thesis addresses a different research objective or multiple objectives. I have clearly articulated in each chapter what its specific objective is.

3.4 Phenomenology as a human science research methodology

The term human science research reflects a focus on study of the person and of their experiences. Despite some differences in the aims and methods across the spectrum of ‘human science research’ there are a number of common characteristics which include:

- recognising the value of qualitative designs and methodologies, studies of human experiences that are not approachable through quantitative approaches
- focusing on the wholeness of experience rather than solely on its objects or parts
- searching for meanings and essences of experience rather than measurements and explanations
- obtaining descriptions of experience through first-person accounts in informal and formal conversations and interviews
- regarding the data of experience as imperative in understanding human behaviour and as evidence for scientific investigations
- formulating questions and problems that reflect the interest, involvement, and personal commitment if the researcher
- viewing experience and behaviour as an integrated and inseparable relationship of subject and object and of parts and whole (Moustakas, 1994, p. 21)

Phenomenological research is an example of a human science research methodology as it is concerned with researching the human experience as it is lived. The origins of phenomenology can be traced back to Kant and Hegel, but it is the German philosopher Edmund Husserl (1859-1938) who is credited for providing much of its foundations (Sokolowski, 2000). Husserl developed phenomenology in order to address the perceived limitations of positivism with its reductionist orientation to human inquiry and focus on categorisation and ordering of facts. More specifically, Husserl’s concern with the notion of ‘getting back to things themselves’ (Crotty, 1998), points to the notion of phenomenology being a method suited for investigating how reality is available and presented to the human consciousness. The classic form of phenomenology (or transcendental phenomenology) as originally conceived by Husserl later expanded into several branches including: existential phenomenology (Maurice Merleau-Ponty 1908-1961; Jean-Paul Sartre 1905-1980; Paul Ricoeur 1913-2005); hermeneutic phenomenology (Hans-George Gadamer 1900-2002; Martin Heidegger 1889-1976; Alfred Schutz 1899-1956; Max van Manen 1942-); and experiential phenomenology or phenomenology of practice (Max van Manen 1942-).
3.4.1 Key characteristics of phenomenology

Phenomenology as originally conceived by Husserl is characterised by four key features as presented in Table 6. These features are: lifeworld; essence; intentionality; and bracketing (Grace & Ajjawi, 2010).

3.4.1.1 Lifeworld

Lifeworld refers to the lived experience or ‘the world as we immediately experience it prereflectively, rather than as we conceptualize, categorize, or reflect on it’ (van Manen, 1997, p. 9). Since phenomenology is aimed at gaining a deeper understanding of the nature and meaning of the human lifeworld, its challenge is to help participants express their world as directly as possible and explicate these dimensions such that their lifeworld is revealed.

3.4.1.2 Essence

The essence of a phenomenon is viewed as what makes something what it is and without which it would cease to be the same phenomenon (van Manen, 1997). Essence is seen as being encapsulated within ‘the particulars or instances [of the phenomenon] as they are encountered in the lived experience’ (van Manen, 1997, p. 10). Phenomenology requires gaining access to the phenomena and obtaining a thorough and full understanding of the meaning or essence of phenomenon.

3.4.1.3 Intentionality

Fundamental to Husserlian phenomenology inquiry is intentionality which refers to the notion of turning inward or focusing attention on what is available to our consciousness. Consciousness is seen as the only way in which one can access the world. Intentionality is the essential relation between conscious subjects and objects (Crotty, 1998), and refers to acts of consciousness which transcend the acts themselves and which are communicated via description. Husserl
viewed that both essence and intentionality were critical for achieving phenomenological understanding.

3.4.1.4 Bracketing

Bracketing as originally conceived by Husserl was a way of separating the subjective from the objective in order to grasp the essence of a phenomenon. It emphasised the need for the researcher to lay aside their own preconceptions and presuppositions including assumptions, biases and values so that the phenomenon could be interpreted in its own right. Some have proposed that bracketing can also be extended to the participants themselves in that they also need to bracket their assumptions to illustrate how they ‘think and feel in the most direct ways’ (Bentz & Shapiro, 1998, p. 96). Views about bracketing differ between phenomenological traditions.

Table 6: Key elements of phenomenological research

(from Grace and Ajjawi, 2010, p. 201)

<table>
<thead>
<tr>
<th>Lifeworld</th>
<th>the everyday world as it is immediately experienced, that is, before it is transmitted by abstract thought processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intentionality</td>
<td>this refers to directedness or relatedness. This means that all thinking (imagining, perceiving, remembering etc) is always thinking about something</td>
</tr>
<tr>
<td>Essence</td>
<td>the core meanings or fundamental elements that uniquely determine the nature of a phenomenon</td>
</tr>
<tr>
<td>Bracketing</td>
<td>the act of suspending our beliefs, preconceptions and prejudices in order to be open to the essential nature of lived experiences</td>
</tr>
</tbody>
</table>
3.4.2 Hermeneutic phenomenology

Hermeneutic phenomenology is the specific methodology for this study. It is informed by the early work of Heidegger and Gadamer, and more recently, van Manen (1997). Hermeneutic phenomenology is informed by both hermeneutics and phenomenology. Its phenomenological underpinnings are evident in its attempt to explore the core of a lived experience in its own terms, while its hermeneutic influences are reflected in the interpretive approach it takes. Van Manen (1997) has argued that hermeneutic phenomenology is different from all other forms of human science research because ‘it attempts to gain insightful descriptions of the way in which we experience the world pre-reflectively, without taxonomizing, classifying, or abstracting it’ (p. 9). Hermeneutic phenomenology differs in significant ways from Husserl’s transcendental phenomenology as illustrated in Table 7.
Table 7: Comparison of phenomenological traditions

(from Laverty, 2003, p. 32)

<table>
<thead>
<tr>
<th>Husserlian phenomenology</th>
<th>Heideggerian phenomenology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transcendental phenomenology</td>
<td>Philosophical phenomenology</td>
</tr>
<tr>
<td></td>
<td>Hermeneutic phenomenology</td>
</tr>
<tr>
<td>Epistemological</td>
<td>Existential-ontological</td>
</tr>
<tr>
<td>Epistemological questions of knowing</td>
<td>Questions of experiencing and understanding</td>
</tr>
<tr>
<td>How do we know what we know?</td>
<td>What does it mean to be a person?</td>
</tr>
<tr>
<td>Cartesian duality: mind body split</td>
<td>Dasein</td>
</tr>
<tr>
<td>A mechanistic view of the person</td>
<td>Person as self-interpreted being</td>
</tr>
<tr>
<td>Mind-body person lives in the world of objects</td>
<td>Person exists as a ‘being’ in and out of the world</td>
</tr>
<tr>
<td>Ahistorical</td>
<td>Historicality</td>
</tr>
<tr>
<td>Unit of analysis is meaning giving subject</td>
<td>Unit of analysis is transaction between the situation and the person</td>
</tr>
<tr>
<td>What is shared is the essence of the conscious mind</td>
<td>What is shared is culture, history, practice, language</td>
</tr>
<tr>
<td>Starts with reflection of mental states</td>
<td>We are already in the world in our pre-reflective states</td>
</tr>
<tr>
<td>Meaning is unsullied by the interpreter’s own normative goals and world view</td>
<td>Interpreters participate in making data</td>
</tr>
<tr>
<td>Participants’ meanings can be reconstituted in interpretive work by insisting data speak for themselves</td>
<td>Within the fore-structures of understanding interpretation can only make explicit what is already understood</td>
</tr>
<tr>
<td>Claim that adequate techniques and procedures guarantee the validity of interpretation</td>
<td>Establish own criteria for trustworthiness of research</td>
</tr>
<tr>
<td>Bracketing defends against the validity or objectivity of the interpretation against self interests</td>
<td>The hermeneutic circle (background, co-constitution, pre-understanding)</td>
</tr>
</tbody>
</table>
Of Greek origin, the word hermeneutic refers to interpretation, explanation or translation (Crotty, 1998). The earliest recorded hermeneutic tradition can be traced to the interpretation of biblical texts dating back to the seventeenth century. Philosophers such as Schleiermacher (1768-1834) and Dilthey (1833-1911) embraced the hermeneutic tradition as a means of interpreting human understanding. Van Manen (1997) has described hermeneutics as ‘the theory and practice of interpretation’ (p. 179), where interpretation involves moving beyond mere description to constructing a new or renewed and plausible meaning in relation to a phenomenon. Heidegger and then Gadamer, further extended the notion of hermeneutic understanding from the acquisition of knowledge and information, to understanding as a mode of being which is located within a particular horizon or viewpoint. Their primary intentions were to reveal conditions that facilitated understanding as ‘being-in-the-world’ (Dasein). These authors viewed that understanding was situated and generated within an interpretive and reciprocal dialogue, and mediated by prejudice (i.e. pre-understanding and the specific cultural and historical position) of the would-be interpreter. Gadamer also identified the temporality as a characteristic of people’s experience of the world.

For Gadamer (1900-2001) the specific focus was on language as the medium of hermeneutic expression. As such, a key element of hermeneutical inquiry is the interpretation of meaning acquired through text in order ‘to understand the meaning of the text on its own terms’ (Debesay, Nåden, & Slettebø, 2008, p. 59). The philosopher Paul Ricoeur (1913-2005) expanded ‘the notion of textuality to any human action or situation’ (van Manen, 1997, p. 180). As such, text is broadly conceived of as ‘any discourse (conversation or speech) transcribed into written word’ which forms the object of interpretation (Allen & Jensen, 1990, p. 242). This is the definition of text adopted in this thesis.
Phenomenology seeks to understand and explicate a human experience (or phenomenon) as it is encountered and enacted, and to provide insight into meaning as embedded within these lived experiences. The focus of phenomenological inquiry is always the human lifeworld. A key underlying premise of phenomenological research is that experiences and their significance to individuals are valid sources of knowledge (Grace & Ajjawi, 2010). As with other interpretive methodologies, the aim of phenomenological studies is to provide rich and evocative insight into the subjective lived experience of individuals in a specific setting rather than to generate wider explanations (Reeves, Albert, Kuper, & Hodges, 2008). The focus in phenomenology is on describing and interpreting how a phenomenon is experienced pre-reflectively rather than abstractly or theoretically, and exploring the subjective meanings associated with the experience. As such, there is no particular recourse to theoretical analysis of a phenomenon or to the development of theory.

The circular and iterative nature of understanding and interpretation and the dynamic movement between the individual parts (data) to the whole (of the phenomenon) which inform and giving meaning to each other, is represented by the hermeneutic circle. Gadamer (1975) conceptualised the hermeneutic circle as representing the cycle of exposure to information (texts), interpretation, then re-exposure to texts that is involved in the understanding of knowledge. From this perspective, understanding of the meaning and importance of individual parts of the data is dependent on the understanding of the whole body of data, which in turn is built up through the understanding of individual elements. The image of the hermeneutic circle presented by Kezar (2000) in Figure 2 below is informed by Heidegger’s (1962) original framework. In unpacking the hermeneutic circle, Heidegger (1962) conceptualised that there were three modes of engagement including contemplation or present at hand, circumspection or unready to hand, and participation or ready at hand.
In the first stage of the hermeneutic cycle, Kezar (2000) suggested that an individual began the research process at the present-at-hand stage with ‘detached theoretical understanding’ (p. 387) and then moved to the unready-to-hand stage where they experience a degree of dissonance regarding the phenomenon or topic under inquiry and begin to contemplate and reflect on the gaps between theory and practice. In the subsequent ready-to-hand stage, the individual is absorbed in practical activity. This phase of engagement can also be interrupted by breakdown and fragmentation (Kezar, 2000). Although, Kezar’s (2000) observations were based within the context of an empirical study exploring the potential of pilot studies to facilitate insight into various conceptual and methodological issues associated with a research topic or problem, these findings can be usefully applied to the broader process of research.
Rather than being an endless repetitive loop, the hermeneutic circle is seen to represent a positive opportunity for gaining new knowledge, in that each time the individual goes around the hermeneutic circle they acquire new knowledge and understanding (van Manen, 1997). Understanding is achieved when individual parts of the data are brought together into a whole, with the whole being defined as ‘that which is perceived to be an adequate framework within which one interprets’ (Debesay et al., 2008, p. 59). Kezar (2000) has described the circularity of understanding as one within which

‘...we understand in terms of what we already know. The more we engage the topic in reflection and practice, the deeper we come to know. Understanding develops as we become more engaged and concerned, through repeated experience, interaction with the issue in the real world, and reflection’ (p. 387)

Hermeneutic phenomenology views that there is no such thing as an un-interpreted phenomenon. Rather, it recognises that as the experience is lived, the individual has already interpreted meaning of this experience. It recognises that access to experience is always dependent on what the person who has lived the experience tells us about it. Van Manen (1997) noted that ‘recollections of experiences, reflections on experiences, descriptions of experiences, taped interviews about experiences, or transcribed conversations about experiences are already transformation of those experiences’ (p. 54). Furthermore, the reciprocity of perspectives shared by the researcher and participants is also valued as a central aspect of the interpretations that are made in the research. However, despite this shared affinity and empathy between researcher and participant, it is acknowledged that no one person can fully grasp the mind of another (Gadamer, 1975).
Hermeneutic phenomenology also recognises that humans always meet and interact with the world with preconceived expectations and pre-understandings of it based on prior experience, and that these are necessary conditions for our understanding of the present (van Manen, 1997). Van Manen (1997) has cautioned that

‘...the problem with phenomenological inquiry is not always that we know too little about the phenomenon we wish to investigate, but that we know too much. Or, more accurately, the problem is that our common sense pre-understandings, our suppositions, assumptions and existing bodies of scientific knowledge, pre-dispose us to interpret the phenomenon before we have even come to grips with the significance of the phenomenological question’ (p. 47).

Within the hermeneutic phenomenological framework, there is a rejection of the notion of bracketing which was originally advocated by Husserl which focused on the elimination of a researcher’s biases and assumptions in order to engage with the essence of the phenomenon being investigated. In contrast, the would-be-interpreter’s preconceptions, understandings, history (or prejudices as termed by Gadamer) are seen as an intrinsic and embedded part of how a phenomenon is interpreted and narrated (van Manen, 1997). The researcher is regarded as an active participant in the meaning making process, and the primary analytical lens through which participants’ experiences and the meanings they attribute to phenomena are interpreted. The interpretations and narratives that researchers present regarding study participants’ accounts and stories can be thought of as ‘...products of our interpretations and influenced by our theoretical interests – which makes them as much our narrative .... as those of our participants’ (Garcia & Hardy, 2007, pp. 370, author italics).
Therefore, the emphasis within the hermeneutic tradition is on the researcher actively engaging with the various interpretive influences that may have impacted the research process and the insights that have been generated, and making transparent how these relate to and impact on the issues being explored. Termed reflexivity, this involves the researcher demonstrating a more ‘immediate, continuing, dynamic, and subjective self-awareness’ (Finlay, 2002b, p. 533). It involves the person or persons doing the research making transparent the particular personal ‘lens’ through which a phenomenon has been interpreted (Kuper, Lingard, & Levinson, 2008; Kuper, Reeves, & Levinson, 2008). A researcher’s personal lens can include relevant aspects of self including historical background, personal knowledge and understandings, lived experiences, frames of reference, biases and assumptions, theoretical and philosophical orientation, and membership status in relation to the research setting or participants. These elements can be understood to inherently shape the meanings which are constructed about a phenomenon within a particular context, such that this may be interpreted differently by different researchers with no two interpretations being the same.

Reflexivity has been identified as a valuable means of:

- Examining the impact of the position, perspective, and presence of the researcher
- Promoting rich insight through examining personal responses and interpersonal dynamics
- Opening up unconscious motivations and implicit biases in the researcher’s approach
- Empowering others by opening a more radical consciousness
- Evaluating the research process, method and outcome
- Enabling public scrutiny of the integrity of the research through offering a methodological log of research decisions (Finlay, 2002a, p. 225)
The literature has suggested that the researcher’s own experiences and self-knowledge and their ‘thinking, intuitions, reflecting and judging are regarded as primary evidence’ (Moustakas, 1994, p. 59) or as a useful ‘resource and source for exploring the ideas of others’ (Holloway & Biley, 2011, p. 972). As such, the literature has recommended that the phenomenological-oriented researcher should begin the research process by exploring his or her personal experiences and understandings (Moustakas, 1994) in relation to the phenomenon being explored. Brew (2006) has similarly articulated that within the framework of research as a journey, one can consider that ‘in the centre of a researcher’s awareness are the personal issues and dilemmas that perplex them’ (p. 20).

I would argue that researchers have an inherent moral obligation and responsibility to articulate, examine and discuss relevant aspects of self which may have influenced the process of meaning making and interpretation. Indeed, articulating the particularities of the context within which the study and the phenomenon under exploration is located, has been identified as adding to the quality of the research (Lincoln & Guba, 1985). However, because of the difficulties associated with revealing one’s presuppositions, assumptions, and influences which are often subconscious and implicit, it can be difficult for researchers to demonstrate reflexivity. Finlay (2002b) has warned that reflexivity has the potential to become self-indulgent if it is done in a way where the ‘researcher’s voice can become unduly privileged thus blocking out the participant’s voice’ (p. 541). This has implications for how a researcher constructs an insightful and balanced narrative about the experience of a phenomenon. Finlay (2002b) has also cautioned researchers against using excessive reflexivity as a way of demonstrating and claiming enhanced research rigour.

Van Manen (1997) identified a number of actions that can be utilised in phenomenological research. These include:
- turning to a phenomenon which seriously interests us and commits us to the world
- investigating experience as we live it rather than as we conceptualise it
- reflecting on the essential themes which characterise the phenomenon
- describing the art of the phenomenon through the art of writing and rewriting
- maintaining a strong and oriented pedagogical relation to the phenomenon
- balancing the research context by considering the parts and the whole

(van Manen, 1997, pp. 30-31)

In turning to a phenomenon of interest, the researcher needs to aim to sensitively explore and make sense of some aspect of a specific human experience. In doing so, the researcher needs to situate themselves as the primary analytical tool or the instrument of research. In exploring the experience as it is lived, the phenomenological researcher is charged with using appropriate methods to enter into participants’ lifeworld and access their original experience. As the researcher engages in reflecting on the essential characterising themes of a phenomenon, they need to identify thematic aspects and structures related to a phenomenon and relate these to participants’ perspectives about what makes the experience significant for them. In describing the phenomena, the researcher needs to skillfully use interpretive and communicative techniques designed to convey a rich and evocative picture of the phenomenon under exploration. Van Manen (1997) also articulated the importance of the researcher maintaining a clear and strong orientation to the phenomenon under investigation and carefully considering their own pre-understandings, assumptions and subjectivities that may influence these interpretations. He viewed that personal reflections on experience provide the foundation for any interpretive activity (van Manen, 1997). Finally, the researcher needs to attend to identifying the practical implications of insights and meanings that are derived from any particular exploration.
3.4.3  **Rationale for using hermeneutic phenomenology**

My desire to meaningfully explore and interpret IDHR as an essentially human experience, rather than simply describe it, resulted in hermeneutic phenomenology being selected as the specific research approach for this study. I viewed that the interpretive nature of this research approach would enable me to delve into health researchers’ lived experience of IDHR and associated meanings as embedded within their everyday world and research practices. I chose this framework as it provided a means of collecting and interpreting richer and thicker data about IDHR as a human experience.

Within the context of this thesis, phenomenology enabled me to direct attention the human lifeworld and to questions such as ‘what is the lived experience of IDHR, what does it mean, and how does it feel like to have this experience? The phenomenological approach provided a framework for going directly to the source of the experience, i.e. the health researcher engaged in IDHR. It also drew attention to the need to explore the richness of the experience, and portray these insights in a unique and insightful manner. The hermeneutic underpinnings of this methodology alerted me to the need to articulate my pre-understandings, pre-conceptions and prejudices, as a way of foregrounding my interpretations of IDHR. The notion of bracketing articulated within the hermeneutic phenomenology tradition resonated strongly with my own views about the importance of considering and expressing my personal lens, position in this study and in relation to the phenomenon being explored, and interpretive influences. In the next section of this chapter, I extend the discussion about my position within and in relation to this research study.

3.5   **Reflexivity: the complexities of being positioned as an ‘insider’**

In the prologue to this thesis, I discussed that as a university academic and researcher, I have a personal interest in and connection to the phenomenon of interdisciplinarity in the higher
education sector and specifically within the health research domain. I began this research process with an interest in exploring IDHR in the context of collaborative team-based work between multiple academic or professional disciplines. However, as I began to reflect on my own experiences of research, sense of self as a researcher, the nature of my work, and the contexts in which I worked, my initial understandings and about IDHR were contested and challenged. McManus Holroyd (2007) has suggested that such fragmentation and breakdown often provides the initial prompt to question one’s own understandings assumptions

‘...it is often during our own disappointing experiences that we find ourselves in a world that no longer fits the customary order of things. This experience moves each of us to discover quite by accident that our beliefs about the phenomenon of concern were, at best, questionable. This becomes a trigger of sorts that motivates the individual to start to question his or her predominantly one-sided and highly subjective understanding of the phenomenon in question. During this questioning, it is not unusual for the individual to notice how inadequate his or her previous understandings were’ (p. 9 of 12, online article)

Writers have observed that breakdown in our beliefs and understandings are associated with feelings of ‘dissonance’ (Kezar, 2000, p. 388). Dissonance is regarded as prompting individuals to engage in deliberative reflection, revision of understandings of everyday activity and self-experience, and even fundamental interpretations of self (Kezar, 2000; McManus Holroyd, 2007). As I engaged in questioning my understandings of IDHR and examining the existing academic literature, it became increasingly evident that the complexity of the lived experience of interdisciplinarity and IDHR as an essentially human experience had not been adequately captured or illustrated. In particular, it was clear that the individual researcher’s voices about their personal, subjective and lived experience of IDHR was absent from the literature. This
reinforced my interest in probing into and portraying researchers’ lived experience and personal journeys in relation to IDHR in higher education setting. From early on in this research process, I was cognisant that my personal lens (i.e. background, prior experiences, pre-understanding) was uniquely informing how this research study was progressing and evolving. I was also aware that the quality of my research would be critically dependent on my capacity to identify and articulate my interests, connections and position in relation to the phenomenon being explored and this research study. It was thus evident that I needed to adopt a consciously reflexive stance in conducting this research and in writing this thesis.

The terms of emic (insider) and etic (outsider) (Corbin Dwyer & Buckle, 2009) have been used in the literature to denote researchers’ position and connection relative to the context for their study as well as study participants. Although initially developed for use in field-based research, these terms are applicable to research conducted in any naturalistic setting. As a university academic working in the Australian higher education sector and specifically in the health professions education field, I frequently engage in research activities with colleagues from disciplines within or outside of health, in the context of informal and formal teams. Thus I am generally familiar with the broader higher education setting in which this study was located, and intimately acquainted with the notion of IDHR which is the focus of this study. Additionally, as a result of my membership of multiple communities including the health research network which was the main source of recruitment into this study, I was familiar with a minority of study participants. Consequently, I consider myself as occupying an emic or insider position in this study.

The insider position is regarded as being associated with a number of advantages as well as drawbacks. For example, an insider researcher is thought to engender a climate of legitimacy due to perceptions of shared background and experiences with participants, resulting in a
situation where participants are more likely to engage with them at a deeper level and share more information (Corbin Dwyer & Buckle, 2009). Holloway and Biley (2011) have similarly noted that ‘being a cultural member permits access to the meanings of others’ (p 972) in a way that an outsider may not be able to access or understand. They have also conversely cautioned that researchers in an emic position might encounter problems in maintaining a degree of impartiality regarding of the issues being explored (Holloway & Biley, 2011). It is thought that participants may fail to give thorough explanations or descriptions of their experience because they assume a shared understanding with an insider researcher, or say things that they expect the insider researcher to sympathise with. As such insider researchers are warned to take due care in interpreting information provided by participants, to avoid emphasising only the understandings and experiences that are held in common between themselves and the participants at the expense of those that are not shared (Corbin Dwyer & Buckle, 2009).

Finally, Costley and Gibbs (2006) have identified that practitioner researchers i.e. those researchers who are insiders or who have insider knowledge ‘not only of the systems but also of the individuals they designate, for the purpose of the research, as subjects’ (p. 89), need to carefully consider their position within and their relationships with others within this community. As some of the data collected for this study was provided by individuals (some of whom I was familiar with) within my own organisation and a network that I was a member of, I needed to be careful to minimise ‘any conflict between personal position and the ideological structures’ (Costley & Gibbs, 2006, p. 92). Later in this chapter I discuss the specific considerations that I made in relation to my insider position in the data collection and analysis processes.
3.6 Ethical considerations for this study

The conduct of this research study was guided by ethical principles articulated by my institution’s Human Research Ethics Committee which are based on the National Statement on Ethical Conduct in Human Research (National Health and Medical Research Council, Australian Research Council, & Australian Vice Chancellors' Committee, 2007) which is a national ethical framework for research involving human participants. This study was submitted to and approved by the University of Sydney Human Research Ethics Committee (Reference number: 08-2008/11017).

Stuart (1998) has identified that ‘codes of ethical conduct for research involving humans determine what is the right way to conduct research without bringing harm to those that help us in the research adventure (p. 299). These ethical guidelines are broadly informed by the medico-ethical principles of autonomy, non-maleficence, beneficence, and justice (Beauchamp & Childress, 2001). In the context of research involving human participants, these medico-ethical principles can be translated broadly into the need to: i) respect participants’ privacy, ii) maintain participants’ confidentiality and anonymity, and iii) refrain from deceit when giving information and interacting with research participants.

Ethics guidelines for human research also state that utmost care should be taken to ensure that participants are not identifiable by the information they provide (National Health and Medical Research Council et al., 2007). In order to maintain the confidentiality of participants in this study, I ensured that all material associated with the study including research data were stored securely. Hardcopy research material was securely stored in locked filing cabinets of my personal office, while electronic data were stored on my personal database on the university servers with authentication needed for access. Also to minimise the potential for identification, participant consent forms were stored separately to all other material.
I also de-identified all transcripts prior to analysis and reporting. I did this by allocating each participant with a pseudonym. These pseudonyms took the form of common Australian Anglo-Celtic names so as not to compromise participant privacy and confidentiality. Second, I de-identified transcripts by removing other identifying information such as the names of people, places, institutions, organisations or workplaces and replacing these with codes. This list of pseudonyms and codes was only accessible by me and was securely stored separately from the data. Costley and Gibbs (2006) have suggested that practitioner researchers conducting research within their own organisation and networks, need to demonstrate an added duty of care ‘to safeguard these personal and moral relations to others’ (p. 89). I maintained this ethics of care by taking measures to ensure that all data was sufficiently de-identified before analysis and reporting so that no participants was at risk of being identified within a relatively small health research network and research community.

The National Statement on Ethical Conduct in Human Research (2007) states that participants of a research study must be in a position to provide informed consent based on sufficient information and adequate understanding of the requirements of the proposed research study and the implications of taking part in it. In observing this ethical principle, I communicated with participants at different times during the recruitment process and presented them with a range of materials about the study. For example, information about the study was communicated to participants via an initial invitation email, follow-up email or phone call, and participant information sheet.

A commonly cited issue in the process of recruitment and data gathering is the power and status imbalance that can exist between the researcher who typically occupies a privileged and more powerful position, and the participants. This can result in perceived coercion to participate and can also comprise the nature and quality of the data that is collected. However, due to my junior...
researcher position relative to the participants of this study who were typically senior and established researchers, hierarchies of power were not anticipated to be an issue in the recruitment and data collection process.

3.7 Participants

3.7.1 Sampling

Phenomenological research aims to provide in-depth insight into the lived experience of a phenomenon or event, and associated interpretations of a particular group of participants within a specific context (van Manen, 1997). In order to locate a group of participants who could provide insight into the phenomenon of IDHR in the higher education health research context, I used a purposive sampling strategy. Purposive sampling is a type of non-probability sampling which is aimed at identifying knowledgeable participants who can provide detailed information about the phenomenon under exploration (Cohen et al., 2011). It can be contrasted with probability (or random) sampling used in quantitative research which has the aim of generalising findings beyond the population being studied.

In this study, participants were selected based on their experience with IDHR, willingness to discuss their experiences, and potential to meaningfully contribute to the topic being explored. In recruiting participants, I was interested in gaining access to individuals who:

- self-identified as having current or past experiences of IDHR, and

IDHR was defined for participants in the Participant Information Sheet (Appendix 2) as involving the integration of perspectives from multiple academic or professional disciplines allied to or within health, most commonly in the context of a research team.
Health research was broadly classified as research occurring in or involving the fields
Public Health, all areas of Allied Health, Health Sciences, Health Services, Nursing,
Dentistry, Pharmacy or Medical/Health Education)
- consented to participate in the study

3.7.2 Recruitment

3.7.2.1 Sources of recruitment
Participants for this study were sampled from two sources. The main source of recruitment for
this study was a health research network to which I subscribed. Members of this health research
network spanned multiple health and affiliated disciplines, and organisations including higher
education institutions, government and non-government organisations, hospitals, and area
health services. Members included academics, educators, healthcare professionals, professional
staff involved in research, research administrators and higher degree students engaged in
research. This research network had a specific focus on qualitative health research, and as such,
members were either actively engaged in or interested in qualitative research. However, based
on my personal knowledge of and interactions with the network, members’ experience and
expertise in qualitative research varies considerably.

A secondary source of recruitment into the study was health research teams at the University of
Sydney. These were identified via the Australian Research Council (ARC) grant funding lists for
2009. I focused on ARC Discovery and Linkage projects as these typically tend to involve
collaboration across multiple disciplines, professions or organisations. I also focused on projects
located within the Social, Behavioural and Economic Sciences (SBE) and Public and Allied Health
and Health Services (PAHHS) clusters as identified in Excellence in Research for Australia (2008)
consultation paper, as they most closely aligned with my focus on health research. It is
important to note that these clusters were renamed for the 2010 and 2012 ERA process (Australian Research Council, 2010, 2011) as articulated on page 56 of this thesis. The chief investigators named on 13 ARC Discovery and Linkage projects within the SBE and PAHHS clusters were invited to the study.

3.7.2.2 Methods of recruitment

Recruitment was initiated via an invitation email (Appendix 1) sent to the aforementioned health research network, and chief investigators on nominated ARC Discovery and Linkage project teams at the University of Sydney. This invitation email was circulated to the health research network by the network administrator. I directly emailed chief investigators of the health research teams inviting their participation. It was assumed that as these chief investigators were established senior researchers leading nationally funded projects, perceived or actual coercion to participate would not be an issue.

The initial invitation email briefly outlined the aims of the study, criteria for participation, and what participation would involve. It invited interested parties to contact me for further detailed information. Once individuals had expressed interest in participating, I followed-up with a phone call and/or email to introduce myself and the study in more detail, and to answer any questions. As a second tier orientation to the study, I emailed these potential participants the participant information sheet (Appendix 2) and consent form (Appendix 3) for the study.

The participation information statement and consent form documents had been developed to the stringent standards required by my institution’s Human Research Ethics Committee. They were based on a template endorsed by this committee. The participation information sheet briefly outlined the study, its aims, what it involved, and information about the ethical considerations of the study including the voluntary nature of participation, the possibility of
withdrawal from the study without penalty, and methods to protect participant confidentiality. The consent form outlined the conditions that participants were required to agree to if they participated in the study. Potential participants were requested to read the participant information sheet and consent form, and to contact me with questions about the study or to confirm their intention to participate. Once each person had confirmed their intention to take part in the study, I liaised with them to arrange a suitable date and time for their interview. The decision about the date, time and venue for the interview was left to participants to decide in order to maximise convenience for them. I also asked participants to return the signed consent form via email or post prior to their interview.

The sample size for this interpretive study was not pre-determined or in other words, set \textit{a priori}. Based on my readings of the qualitative research literature, and in particular the phenomenological literature, I determined that up to 20 participants would provide more than sufficient material to achieve the purposes of the study, as well as a manageable amount of data to analyse using phenomenological techniques.

\section*{3.7.3 Introducing the participants}

Participants in this study were twenty-one health researchers engaged in IDHR in the higher education context. These participants are Susan, Sarah, Rachel, Kelly, Fiona, Ralph, Colin, Gloria, Amy, Helen, Patrick, Dan, Deborah, Andrew, Lisa, Julie, Shannon, Penny, Angela, Sandra, and Rita. I will first present a summary of participant demographic data, and then a short personal narrative for each participant.

\subsection*{3.7.3.1 Participants demographic data}

All participants in this study had previous exposure to and experiences of interdisciplinarity and IDHR collaboration in the context of their research careers. Although, some were engaged in
collaborative work in the health education and health professional practice context, these experiences were not explored as they did not align with the focus of this study. At the time of the study, 18 participants were involved in IDHR research teams and projects that spanned diverse topic areas, settings including academic and clinical, and methodologies. These teams and projects also involved members from different academic disciplines and professions, as well as stakeholders from other organisations.

At the time of the study, 16 participants were employed within a higher education institutional setting, two in a non-government organisation, while three were engaged in clinical practice but with concurrent university academic appointments. Participants were employed in a range of research roles. The majority of participants were employed as academic staff and most commonly as research associates or research fellows. The majority of participants also had a doctoral qualification, while 5 were currently engaged in doctoral studies. These roles are outlined in Table 8 below.

Table 8: Participants’ research roles

<table>
<thead>
<tr>
<th>Role</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project coordinator/ project manager</td>
<td>2</td>
</tr>
<tr>
<td>Evaluation Officer</td>
<td>1</td>
</tr>
<tr>
<td>Research officer/Senior research officer</td>
<td>2</td>
</tr>
<tr>
<td>Research associate/ Research fellow/ Senior research fellow/ Post doctoral fellow</td>
<td>6</td>
</tr>
<tr>
<td>Associate lecturer</td>
<td>1</td>
</tr>
<tr>
<td>Lecturer</td>
<td>2</td>
</tr>
<tr>
<td>Senior lecturer</td>
<td>3</td>
</tr>
<tr>
<td>Professor</td>
<td>1</td>
</tr>
<tr>
<td>Clinician (with conjoint academic appointments)</td>
<td>3</td>
</tr>
</tbody>
</table>
Most participants self-nominated as being affiliated to a single academic discipline. Examples of disciplines reported by participants included health science/professions education; health services research; indigenous health; medicine; nursing; paediatrics and child health; pharmacy; public health as well as psychology and social policy. A complete list of academic disciplines reported by participants is presented in Table 9 below. A small number of participants did not actively identify with a single discipline.

Table 9: Participants’ disciplinary affiliations

<table>
<thead>
<tr>
<th>Primary research discipline/field of research</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health professions education</td>
<td>2</td>
</tr>
<tr>
<td>Health science education</td>
<td>1</td>
</tr>
<tr>
<td>Health services research</td>
<td>4</td>
</tr>
<tr>
<td>Indigenous Health</td>
<td>1</td>
</tr>
<tr>
<td>Medicine</td>
<td>1</td>
</tr>
<tr>
<td>Nursing</td>
<td>1</td>
</tr>
<tr>
<td>Paediatrics and Child Health</td>
<td>1</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>1</td>
</tr>
<tr>
<td>Psychology</td>
<td>2</td>
</tr>
<tr>
<td>Public Health</td>
<td>3</td>
</tr>
<tr>
<td>Social policy</td>
<td>1</td>
</tr>
<tr>
<td>Not specified</td>
<td>3</td>
</tr>
</tbody>
</table>

There were five male and 16 female participants in the study. While this appears to present a skewed picture in terms of gender representation, it echoes the existing literature which shows that women are typically underrepresented in academia, but overrepresented in the interdisciplinary research field (Rhoten & Pfirman, 2007a, 2007b). Finally, there was a relatively even spread of participants across most age categories, except for 31-35 years, as presented in Table 10 below.
Table 10: Participants’ age range

<table>
<thead>
<tr>
<th>Age range</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>26-30</td>
<td>5</td>
</tr>
<tr>
<td>31-35</td>
<td>2</td>
</tr>
<tr>
<td>36-40</td>
<td>4</td>
</tr>
<tr>
<td>41-45</td>
<td>2</td>
</tr>
<tr>
<td>46-50</td>
<td>4</td>
</tr>
<tr>
<td>51-55</td>
<td>4</td>
</tr>
</tbody>
</table>

3.7.3.2 Participant narratives

In this section of the chapter, I present a short narrative about each participant in this study. The aim is to illustrate for the reader the richness of these researchers’ personal journeys, socialisation experiences, and career pathways and trajectories in the higher education sector, and specifically in the health research domain. In each narrative, I provide information about each participant’s employment role, background training and specialisation, whether they were involved in IDHR at the time of the study and if so, the nature of that work, as well as the key issues identified in their interview. In the interest of protecting the confidentiality of participants drawn from a relatively small and intimate research community, I will not presenting some demographic data e.g. place of work, in these narratives.

Susan

Susan was employed in the role of senior lecturer in the discipline of Pharmacy. Prior to her role in the university, Susan had worked within the pharmaceutical industry. At the time of data collection, she was the chief investigator on an ARC Linkage project involved a team of researchers from multiple academic and professional disciplines and organisations. Susan commented on the unique requirements of IDHR in the academic setting, in particular, the roles and responsibilities of IDHR team leaders.
Sarah

Sarah was an associate lecturer in the area of health professions education. Sarah identified that she had always worked in collaborative and interdisciplinary team contexts, although the nature of integration among disciplines had varied across projects and research teams. At the time of data collection, Sarah was managing an international multi-organisational project involving researchers from multiple academic and clinical disciplines. Sarah mainly discussed issues and challenges related to managing projects and research teams spanning multiple disciplines and organisational settings as informed by her experiences of managing such a project. She also identified how team members could extend their skills and broaden their involvement within the IDHR collaborative setting.

Rachel

Rachel was employed as an evaluation officer in a non-government organisation. She had initially worked in clinical practice, and later in the context of health education. Rachel had also worked in different research environments including the university, hospital, and non-government organisations. At the time of data collection, she was involved in a research team with members from two health disciplines. Rachel predominantly discussed the individual and team competencies needed for IDHR collaboration.

Kelly

Kelly had just commenced working as a postdoctoral fellow in the university setting. She was also at the final stage of finishing her PhD. Kelly was a qualified physiotherapist and had worked in clinical practice for some years, before returning to the university to complete her PhD. At the time of data collection she was involved in two different research teams: one transdisciplinary team with members from at least 7 different clinical fields and academic disciplines, and one uni-disciplinary team consisting of members from one discipline. Kelly identified that she did not
actively affiliate with a single academic or professional discipline. She mainly discussed the challenges associated with the position and place of IDHR in the traditional academic model, and compared and contrasted interdisciplinary research with uni-disciplinary research.

**Fiona**

Fiona was a senior lecturer in the area of health professions education. She was also completing her PhD at the time of the study. She was a qualified medical practitioner and had practice clinical for a number of years, before moving to the health professions education field. At the time of data collection she was not involved in an IDHR team or project. However, she did have previous experience of IDHR in the higher education setting as well as in the clinical setting. Fiona noted the challenges posed to the collaborative process by the different expectations, priorities, values, and needs of various disciplines and professions, and she particularly commented on the role of leadership in facilitating IDHR collaboration.

**Ralph**

Ralph was a senior lecturer in the health sciences field. His early education training was in psychology, but he had begun working in health sciences relatively early on in his career. He also had extensive experience of working within collaborative settings. At the time of data collection, he was involved in a research team with members from two other health sciences disciplines. Ralph did not identify with a single academic discipline. He mainly discussed pressures for researchers within the university setting, the position of interdisciplinarity in the traditional academic model, and the organisational changes that could facilitate IDHR.

**Colin**

Colin was employed as a research officer at a non-governmental organisation. At the time of the study he was in the final stages of completing his PhD. At the time of data collection he was
working on a health research project involving members from two disciplines. Colin particularly noted the epistemological and cultural conflicts between disciplines that could occur in the IDHR team setting, and the various tensions this could engender.

_Gloria_

Gloria worked as a research fellow in a university research centre. Her initial background was in pharmacy, but she had moved to the health services research context early in her career. Her methodological expertise was in qualitative health research. Gloria did not identify strongly with any one academic or professional discipline. At the time of data collection, she was working in a research team involving members from at least one other health related disciplines. Gloria mainly talked issues relating to identity in the context of IDHR, the perceived credibility and legitimacy of qualitative research paradigm within the health research field, and the factors associated with interdisciplinary collaboration.

_Amy_

Amy was a post doctoral researcher in a university academic centre. Her early training was in medicine, but she had left this field early on and had started working within health research projects spanning a number of disciplines. Her methodological expertise was in qualitative research. Amy did not identify with any particular academic discipline. At the time of data collection, she was working on a number of health research projects and teams involving members from up to 5 academic disciplines. Her main comments related to issues of identity in the IDHR setting, challenges associated with positioning IDHR in the higher education setting, and the challenges of doing qualitative research in the health field.
Helen

Helen was employed as a research associate in the university. She had a background in epidemiology. She was also completing her PhD. Most of her research experiences were in the clinical research context, and within IDHR collaborations. At the time of data collection she was involved in a research team consisting of members from 5 different disciplines, both academic and clinical. Helen mainly talked about the epistemological and cultural clashes between disciplines in interdisciplinary research.

Patrick

Patrick was employed primarily as a hospital clinician, but he also had a conjoint academic research appointment at a university. His background was in medicine. At the time of data collection, he was taking part in a research study that involved at least one other clinical discipline and one academic discipline. Patrick identified the added value of IDHR collaboration, but also how the nature and extent of integration across disciplines varied across teams and projects.

Dan

Dan worked as a clinician, but also had a conjoint academic appointment at a tertiary education provider in the field of health professions education. He was also doing his PhD. He identified his primary discipline as health sciences education. At the time of data collection he was not involved in an interdisciplinary research project, but had previous experiences of IDHR in the higher education research and education contexts, and also within the clinical setting. Dan mainly discussed what he perceived to be were individual and team capabilities for IDHR.
Deborah

Deborah was employed as a professor in the university setting. Her early training and background was in psychology but she had worked in health research since early in her career. Deborah had extensive experience of leading large nationally funded research projects. At the time of data collection, she had completed a national research project involving members from multiple academic disciplines and organisations on which she was the chief investigator. Deborah expressed emotions such as disillusionment, frustration and anger due to experiences associated with her most recent IDHR collaborative project.

Andrew

Andrew was employed as a lecturer in the area the health sciences. His background was in education. At the time of data collection, he was involved in a state-funded research project involving 4 different academic disciplines and multiple organisations. Andrew noted the different motivations for participating in IDHR and how institutional expectations shaped research motivations and forms of participation.

Lisa

Lisa was employed as a senior research fellow in a university research centre. Her educational background was diverse but her work most closely aligned with the area of social policy. She had extensive experience of leading large nationally funded research projects. At the time of data collection, she was managing a research study involving members from at least 3 academic disciplines and different organisations. Lisa identified that she did not actively affiliate with any one academic discipline. She mainly discussed the challenges associated with having an interdisciplinary identity in the higher education setting. She also commented on the specific roles and responsibilities of research leaders in facilitating an interdisciplinary research culture.
Julie was employed as a project manager in the university setting. She was working in the discipline of public health. Her early background was in psychology. Although she was not involved in an IDHR project at the time of data collection, she indicated that she had a range of past experiences in IDHR. Julie discussed the research outcomes that are important in health research, and the skills involved in managing IDHR collaboration. She also discussed the changes required at the university level to facilitate interdisciplinarity and IDHR.

Shannon was employed as a senior research officer in a research centre attached to a university and a hospital. Her educational background was in public health. She identified that she had an intrinsically interdisciplinary outlook and approach to research. At the time of data collection, she was involved in various research projects involving multiple academic and clinical disciplines. Shannon commented on the added value and challenges associated with integrating disciplinary perspectives and values in interdisciplinary research. She also discussed the varying nature of integration of disciplinary perspectives across teams and projects.

Penny was a hospital clinician with a conjoint academic appointment in the university. Her background was in medicine. At the time of data collection she was the chief investigator on a clinical research project involving members from multiple clinical and academic disciplines. Penny discussed role of leadership in fostering a research culture and research capacity building in relation to interdisciplinarity.
Angela

Angela was employed as a project manager in the university setting. Her background was in nursing, but she had been working in health research for a number of years. At the time of data collection she was managing a national multi-site health research project that involved members from multiple academic and clinical disciplines and organisations. Angela commented on the challenges of managing a project team involving multiple academic and professional disciplines that are geographically dispersed and the challenges of managing a project from a rural based setting. She also identified the notion of professional development as a key opportunity for team members in extending their skills and capacity within a project.

Sandra

Sandra was employed as a senior lecturer in a university-based academic unit. Although her initial training was in public health, Sandra had further education, training, and work experiences spanning multiple academic disciplines. She did not affiliate with one primary academic discipline. She also identified as a qualitative health researcher. At the time of data collection Sandra was working in a research team involving members from at least two other academic disciplines. She mainly discussed the challenges associated with conducting qualitative research in the health domain, the various levels at which interdisciplinarity could be enacted, the challenges associated in positioning interdisciplinarity within the traditional academic model, and issues to do with identity and identification in relation to interdisciplinarity.

Rita

Rita was working as a research associate in a university-based academic centre. Her initial education and training was in sociology, but she had been working in the health research setting since early in her career. At the time of data collection she was working in a health services research team with members from at least three other academic disciplines. Rita primarily
discussed the epistemological and cultural conflicts between academic or professional disciplines encountered in the interdisciplinary research process.

3.8 Gathering data

Phenomenological inquiry makes use of methods of data collection (and interpretation) that are aimed at elucidating the lived meaning of an aspect of the human lived experience, and presenting this in such a manner that resonates with the experiences and perspectives of others (van Manen, 1997). In exploring the experience as it is lived, the phenomenological researcher is charged with using appropriate methods to enter into participants’ lifeworld and access their original experience. As such, methods typically involve questioning, reflecting, focusing and intuiting phenomenological descriptions. Although the process of data gathering is typically discussed separately to data interpretation to facilitate logical presentation of the research process, in reality these two stages of inquiry are iterative and inseparably intertwined (van Manen, 1997).

3.8.1 The interview as a source of data

Van Manen (1997) has asserted that ‘the “data” of human science research are human experiences’ (p. 63). This conveys a notion that the basis of phenomenological inquiry are peoples’ experiential accounts or descriptions of the lived experience captured in speech or via text. Interviews are a commonly used method of data gathering, as they provide an in depth means of exploring participants’ experiences, beliefs, and perceptions related to a particular phenomenon (van Manen, 1997). Within the hermeneutic phenomenological framework, the aim of the interview (or any other interactional form of data collection for that matter) is to facilitate ‘a conversational relation with a partner (interviewee) about the meaning of an experience’ (van Manen, 1997, p. 66). The phenomenological researcher, thus, needs to be
adept at creating an interview climate where the participant is comfortable in articulating their personal narrative, and feels engaged, respected and valued.

I used an in-depth semi-structured interview format to delve into participants’ lived experiences of IDHR in the higher education setting. A semi-structured interview format was chosen since it could provide a degree of consistency across key interview questions, while remaining sensitive to the issues identified by participants as being relevant and important to their experience of IDHR. I developed an interview schedule (Appendix 4) which contained a number of questions that I aimed to cover in each interview. The interview schedule was designed to be used flexibly as an aide mémoire rather than as a fixed list of questions that had to be asked sequentially. I developed a set of open questions that would enable me to elicit and explore participants’ own experiences, the meanings that they attributed to these experiences, and the personal and professional significance of these experiences.

I used the first two interviews as an opportunity to pilot the interview questions, check the wording of questions, consider how participants responded to the way questions were phrased, identify issues with question clarity, and to generally familiarise myself with the interview questions and process. The pilot interviews provided valuable insights regarding: revising the wording of interview questions to further enhance the clarity of meaning; revising prompt questions to facilitate elaboration of responses; and emergent themes. I revised the interview schedule based on these initial insights. This part of the process was valuable in highlighting alignment and contradiction between my pre-understandings of IDHR and participants’ experiences, which informed how questions were phrased and asked.

I interviewed each participant once. Seventeen interviews were conducted face to face in a location convenient to participants. This was typically their place of work or study. Four
interviews were conducted over the phone due to unanticipated difficulties in arranging a face to face meeting. The interviews were clustered and staggered over a period of months reflecting the reality and pragmatics of data collection. The staggered aspect of the data collection process although unintended, was useful in that it provided me with time to immerse myself in the data as it was being collected. Interviews were audio taped with participants’ consent using an Olympus DS4000 digital recorder. Interviews ranged from 35 to 101 minutes.

Prior to each interview, I provided each participant with a verbal summary of my study, its main ethical considerations, and the opportunity to ask any questions. I began the interview by asking participants to describe their experiences of interdisciplinary research generally and then specifically in the health research setting. I then explored specific aspects of participants’ IDHR experiences, as broadly guided by the questions listed in the interview schedule (Appendix 4) and issues raised by the participants themselves. Thus the interview was simultaneously structured yet free-flowing. Congruent with the purpose of this study, participants were directed as much as possible in the data collection process to focus specifically on their experiences which were characterised by integration and synergy between multiple disciplines, and occurred within the research setting rather than in other contexts.

As an insider to the phenomenon of interdisciplinarity and IDHR, I had to be careful not to make assumptions during data gathering process, that participants and I shared similar experiences, perceptions, and interpretations. Rather, I had to consciously remain open to and explore what participants were reporting about their lived experience. It was also evident early on in my interviews and interactions with participants, that my position as an insider to the higher education health research field influenced how participants interacted and communicated with me. I noted a definite dynamic affinity between my participants and myself, resonating with what Corbin Dwyer & Buckle (2009) experienced in their study.
This perceived affinity was reflected in participants’ use of the collective pronouns such as ‘we’ and ‘us’ in their interviews, positive body language, and warm emotional tones in their talk. At times I also felt that participants failed to adequately describe their feelings, particular events or experiences because they assumed that I would understand or know because I was an insider. Therefore, I was required in some instances, to use open-ended and probing questions such as ‘what was that like for you?’, ‘what did that mean for you?’, or ‘give me an example of that’ in order to draw out participants’ own experiences, perspectives, feelings and interpretations. The use of extended and clarificative questioning during the interviews provided a means of prompting participants to elaborate on their experiences and the meanings that they attributed to these experiences. Questions such as ‘can you give me an example of that?’ specifically helped in directing participants’ talk back to their own lived experience and away from generalised discussions about interdisciplinarity.

I also found that my position as an emerging researcher in relation to the participants, who were typically senior researchers or peers, meant that power and status issues were not an issue in the data gathering process. Rather, the balance of power actually appeared to be skewed in the participants’ favour since most were senior and established researchers. I also felt that since participants had either completed their doctoral studies or were in the process of doing so, they were generous with their time and willingness to help a fellow researcher and share their experiences with me. However, on occasion, this also contributed towards a minority of participants being somewhat domineering or paternalistic in their interactions with me.

During the data gathering process, I became increasingly aware that participants were expressing various contradictions and ambiguities in relation their IDHR experience. At times, these conflicts, tensions and feelings of torn-in-between were explicitly identified and discussed by participants. Some issues were narrated more regularly across the group, while others were
more idiosyncratic and were expressed only by a few participants. Additionally, some accounts were discrete, while other accounts comprised of multiple sub-accounts by the same participant over the course of their interview. I did not exclusively focus on getting participants to articulate these narratives or accounts of conflict and ambiguity at the expense of other issues. Rather my aim was to encourage participants to narrate their experiences and express their view regarding any issues that they deemed were important. In the data analysis section of this chapter, however, I will describe how these instances of conflict came to the fore during the theoretical analysis phase of the data interpretation.

I supplemented the material obtained from my interviews with field notes, which were recorded during and immediately after each interview. These field notes were a free flowing account of my impressions and initial thoughts about each interview. These notes contained my observations about aspects that would not be captured in the audio recording. I made notes about the physical setting and climate of the interview including the nature of actions and interactions, the participant’s body language, emotional state and tone of voice, and any environmental elements that may have had a bearing on the interview. These notes constituted an important part of the descriptive and analytical material for this study.

I also supplemented interview material and field notes with demographic data collected using a short survey (Appendix 5). This was given to participants to complete at the conclusion of the interview, or in the case of interviews conducted over the phone, it was emailed. The demographic survey contained questions relating to whether participants were currently working on an IDHR team, and if so the details of that team, team members, and their role within it; participants’ current employment role; their educational qualifications; their primary academic discipline; gender; and age range. Participants’ ethnic background was not formally
surveyed as exploration of cultural differences associated with IDHR was not a focus of this study.

3.9 Interpreting data

The aim of phenomenological interpretation ‘is to transform the lived experience into a textual expression of its essence-in such a way that the effect of the text is at once a reflexive re-living and a reflective appropriation of something meaningful: a notion by which the reader is powerfully animated in his or her own lived experience (van Manen, 1997, p 36). Thus, the emphasis in data interpretation (as in data gathering) is on elucidating, exploring, and understanding participants’ experiences and viewpoints. A thick description of any phenomenon can be obtained by identifying phenomenological themes in the data. Phenomenological themes can ‘be understood as structures of experience’ (van Manen, 1997, p. 79, author’s italics). The process of arriving at this thematic understanding and insights is not ‘a rule-bound process but a free act of “seeing” meaning’ (van Manen, 1997, p. 79).

Data interpretation was also informed by my own personal experience of interdisciplinarity and IDHR, and my position within and connections to this study, which I have elaborated on earlier. In exploring and interpreting the data, I took care to represent participants’ original and authentic experiences of IDHR and associated meanings, as opposed to my pre-understandings and assumptions about the phenomenon. Critical reflexive analysis and deliberation on my pre-understandings and my own subjectivities in relation to interdisciplinarity and IDHR in particular, helped me to be open to new emerging themes and ideas that were outside my own personal and framework of understandings.

Reflecting the hermeneutic and phenomenological orientation of this research study, the process of data interpretation was inductive in that it was grounded in participants’ accounts of
their experiences and the meanings they attributed to these experiences. Additionally, the analytical process although depicted as linear and sequential, was in reality, iterative (circular) as depicted by the hermeneutic circle discussed earlier. Data interpretation involved constant movement between the individual parts (of the data) and the whole (of the phenomenon) each informing and giving meaning to the other, and contributing to a more advanced understanding of the data. Figure 3 illustrates the data interpretation process and stages for this study.

The data interpretation process and methods used in this thesis are based primarily on the work of van Manen (1997), but also on some of the techniques proposed by Smith, Flowers and Larkin (2008). I have clearly identified where these adaptations have been made in interpretive process. In the section below I describe the stages of data interpretation and what was involved at each stage.

### 3.9.1 Stage 1 – Preparing for analysis

An aspect of preparing for data analysis involved listening to the audio recording of each interview and making notes regarding my initial impressions of the interview, main points expressed by the participant, and emerging issues of interest. I also reviewed the associated field notes and demographic survey data for each interview. After this initial review of each audio file, I transcribed each interview verbatim. Next, I created a copy of the original transcript for the purposes of analysis, where all identifying information including participants’ names and other identifiers were removed and replaced by pseudonyms and codes. During this time, I recorded my reflections about the data and interesting and insightful points from each interview in an analytical journal. I continued to add to this journal throughout the interpretative process.

This initial foray into the data helped me to become more familiar with each participant’s voice, their personal story, and their lived experience of IDHR. This phase of the analysis resonated
with the wholistic approach to analysis which is focused on capturing ‘the fundamental meaning or main significance of a text as a whole’ (van Manen, 1997, p. 93). As mentioned earlier, data collection for this study was staggered across a number of months. As such, this preliminary phase of analysis occurred in tandem with the data collection, and although unanticipated was helpful in determining theoretical saturation where new information ceases to emerge from the data.

3.9.2 Stage 2 - Immersion in the data

The aim of immersing myself in the data was to familiarise myself thoroughly with the research material that had been gathered. During this stage of the analysis, I spent countless hours reading and re-reading each de-identified transcript, associated field notes, and linked demographic data, so that I could actively engage with each participant’s lived experience and their personal experience and journey in the higher education health research setting. As I read and re-read each transcript, I highlighted words and phrases within each transcript that were, for example, insightful, interesting, emotive, metaphorical, confronting, unexpected, and appeared to be of significance to the lived experience of the participant. I also made notes of key issues and insights that reoccurred within each interview, as well across interviews. Another key activity conducted in this phase of the analysis was to note elements and aspects of the data that appeared to contradict each other within and across transcripts. During this time, I also added to the notes I had made earlier regarding my overall impressions of each interview and the main points or issues identified by participants in relation to their experiences.

This stage of the analysis enabled me to build a detailed picture of each interview as well as to identify the nuances within it. I used both the wholistic approach (van Manen, 1997) defined earlier, as well as a selective approach to analysis, where the aim is to interpret what portions of the text may reveal about the essence or nature of a phenomenon in question (van Manen,
During this time, I worked exclusively on an electronic Microsoft Word copy (rather than hardcopy) of each de-identified transcript as it facilitated the recording of extensive notes and comments.

### 3.9.3 Stage 3 - Making exploratory notes

In making explanatory notes for each transcript, I aimed to produce a comprehensive and detailed set of notes that facilitated an in-depth picture of each participant’s accounts of their lived experience. This stage of analysis resonated most closely with the selective approach to analysis, as well as the detailed or line-by-line approach which broadly focus on interpreting how parts of the text reveal regarding elements essential to the phenomenon or experience under study (van Manen, 1997). In this phase of the analysis, I focused on identifying words, statements and phrases within each transcript that appeared especially revealing and insightful. These exploratory notes were inductively derived in that they were grounded within and informed by participants’ experiences and interpretations of their experiences. The understandings from one transcript informed how the next transcript was analysed and interpreted, such that the complexity of understandings and interpretations increased as I progressed through the dataset. This reflects the circular and iterative nature of interpretation and the cumulative increase in understanding articulated within the hermeneutic circle.

In this phase of the analysis, I drew on Smith and colleague’s (2008) suggestion of identifying descriptive, linguistic, and conceptual level codes for the data. Descriptive level coding was focused on the content of what the participant said, the subject of the talk, and in essence surface level descriptive elements. Linguistic level coding focused on participants’ use of language including metaphorical expressions and emotive language. Metaphors are embodied representations in that “people's intuitive, felt and phenomenological experiences of their own bodies shape large portions of metaphoric thought and language” (Gibbs, 2006, p. 436).
Metaphors are regarded as being central to the way we think and act, and as illustrated by Rees et al (2007) can give insight into the oppositional qualities of experiences, relationships and interactions. This linguistic analysis was a particularly powerful and informative part of the data interpretation process as it illustrated the links between participants’ language and their lived experience of IDHR.

Finally, conceptual level coding focused on exploring the deeper meanings of experiences for participants or any underlying issues of significance. Conceptual coding involved questioning and interrogating the data beyond what the participants had said. In developing conceptual codes, I questioned and examined participants’ descriptions and interpretations to get to the essence of their lived experience. I referred to the coding framework proposed by Strauss (1987, cited in Bazeley, 2009) which highlights a number of critical questions that can be asked in order to facilitate the interrogation of data. These questions include ‘under what conditions does this category or theme arise? what actions/interactions/strategies are involved? what are the consequences and do these vary depending on the particular circumstances or the form in which it is expressed?’ (Bazeley, 2009, p. 10).

In this phase of the analysis, the coding of transcripts was based on the format suggested by Smith et al (2008) illustrated in Table 11 below. Each transcript was organised into three columns: the first column on the left contained the de-identified original transcript; the middle column contained my detailed exploratory notes including descriptive, linguistic and conceptual codes; and the column on the right provided a space to record emergent themes as described in the next phase of the analysis. Preceding each table, were my notes about my overall impressions of each interview. This coding format ensured proximity between the de-identified original transcript and my exploratory notes thus facilitating cross checking of my interpretations.
against the original transcript in order to ensure that themes were representative of the authentic lived experience of each participant.

Table 11: Coding format used in this study
(from Smith et al, 2008)

<table>
<thead>
<tr>
<th>Original transcript</th>
<th>Exploratory notes</th>
<th>Emergent themes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.9.4 **Stage 4 - Developing emergent themes**

In developing emergent phenomenological themes for each transcript informed, I worked exclusively with the detailed exploratory notes produced in the phase above. The development of emergent themes is a technique suggested by Smith and colleagues (2008). I developed a set of linked emergent themes for each transcript that reflected each participant’s experiences, meanings, feelings and reflections about IDHR. This involved a synergistic and iterative process of description and interpretation and interrogation of the original transcript and exploratory notes. This stage of analysis also involved reflecting on my own pre-understandings and personal experiences of IDHR in order to broaden, but not to dominate, my interpretations of the meaning of particular situations and experiences for participants. During this stage I continually revisited the raw data to compare and contrast emergent themes with what participants had actually expressed. I also recorded my personal reflections about the analytical process, methodological decisions, and emerging insights in my analytical journal.

I sequentially analysed emergent themes across transcripts. As I progressed with identifying and documenting emergent themes across all the interviews, it became increasingly clear where there were similarities and differences among emergent themes across the dataset. At this time
I started to further refine and revise my initial ideas and interpretations about key themes in the data and possible relationships and contradictions between emergent themes. I documented these observations in my analytical journal.

Once emergent themes for the entire dataset had been identified, I used NVivo version 8 and later 9 (QSR International, Doncaster, VIC, Australia) in the coding and analysis process. I chose to use NVivo since my prior research experiences had demonstrated that it facilitated the process of coding, searching across codes, and mapping relationships between themes and attributes of each transcript. It also facilitated the creation of a range of analytical memos, which could be linked to the data. The first step in using NVivo involved importing all electronic de-identified transcripts that had already been coded in as described in the earlier stages of the analysis. Then, using my already identified themes as guide, I mapped all emergent themes onto free nodes containing excerpts of raw data. Each free node was given a label and described briefly. Once all emergent themes for the entire dataset had been entered, labeled, and defined in NVivo, I could proceed to the next stage of exploring the patterns and connections among these emergent themes.

3.9.5 Stage 5 - Making connections across emergent themes

In this phase of the analysis, I started to identify relationships and connections between the emergent phenomenological themes within individual transcripts and across the entire dataset. The aim here was to identify main themes in the data, how these subsumed or were associated with other themes and how they could be grouped. This part of the analysis involved thinking about how emergent themes identified in stage above were essential or incidental to the phenomenon being explored (van Manen, 1997), how essential themes linked to each other, and the manner in which they could be grouped or clustered together in a coherent manner. A key aim was also to identify themes that were contradictory or challenged my understandings and
interpretations of IDHR. These ‘divergent views, negative cases or outliers.....provide a rich source for further analytic thinking’ (Bazeley, 2009, p. 11). My own understandings of IDHR as documented in my analytical journal also provided useful insights regarding some of the emerging relationships and connections between themes.

During this stage of the data interpretation process I worked exclusively in NVivo. In the free node view in NVivo I organised and grouped the data in different and progressively more complex ways in order to provide a logical interpretation of the data and to incorporate new and emerging understandings about and link within the data. This process of redefinition, relabeling and re-organisation enabled me to ‘visualise and theorise the links’ (Bazeley, 2009, p. 14) between the themes, which facilitated the construction of a thematic framework for the entire dataset that represented the key issues and themes in the data. Once I had identified my core and sub-themes I moved these into tree nodes in NVivo, where main themes were represented as parent nodes while sub-themes were represented as child nodes. The tree node view in NVivo depicted a linear relationship between themes in the data, but did not illustrate the complex interrelationships and linkages between themes. Therefore, I used the modeling function in NVivo to assist in visually representing the links and connections between themes.

3.9.6 Stage 6 - Theoretical interpretation of data

Bazeley (2009) has articulated that making links with the theoretical and methodological literature is a critical aspect of the qualitative analysis process, and can facilitate the cohesive and purposive nature of the analysis. In the previous chapter, I identified that theoretical interpretation of interdisciplinarity and IDHR was largely lacking in the literature. Therefore the theoretical interpretation of the lived experience of IDHR was identified as being one of the important contributions that could be made by this study. This phase of analysis involved following up on concepts emerging from the first-order analysis, and comparing and contrasting
these findings with the existing literature. In particular, the identity was used a broad interpretive framework to facilitate further elaboration and explication of the various conflicts, tensions and feelings of torn-in-between that participants has expressed in relation their IDHR experience.

The analytical stages 1 to 5 constituted the inductive first-order analysis component of this study which was grounded within and informed by the data. This enabled me to interpret the complexity and multiplicity of the lived experience of IDHR and uncover participants’ deep meanings and understandings in relation to the phenomenon. The findings emanating from this part of the analysis are presented in Chapter 4 of this thesis. Analytical stage 6 constituted the
second-order analysis of the data. This theoretical analysis facilitated an additional layer of interpretation regarding the lived experience of IDHR. The findings emanating from the second-order analysis are reported in Chapter 6.

3.9.7 Writing as interpretation

Writing is widely acknowledged as a key aspect of the phenomenological interpretation process. In phenomenological inquiry, the text is not only the data but also the product of the research. It is through writing that the essence of a phenomenon is revealed (van Manen, 1997). The powerful and inseparable connection between phenomenological inquiry and writing has been described as follows:

‘..it is in the act of reading and writing that insights emerge. The writing of work involves textual material that possesses hermeneutic and interpretive significance. It is in the process of writing that research data are further interpreted. In a phenomenological sense, the research produces knowledge in the form of texts that not only describe and analyze phenomena of the lifeworld but also evoke understandings that otherwise lie beyond their reach’ (van Manen, 1997, p. 715).

Phenomenological writing is aimed at engaging the reader by conveying and communicating the lived experience at a level of shared humanity (MacCleave, 2006; Smith et al., 2008). It attempts not only to connect readers to a human phenomenon as experienced by others, but also to invoke a phenomenological nod in terms of how closely the portrayed experience resonates with the lived reality of the reader. Aspects of a phenomenological text that facilitate a connection to the lived world and lend to its credibility, include its pedagogic orientation to the world, interpretative power and descriptive quality (van Manen, 1997). Specific features of the language used in phenomenological writing include concreteness or avoidance of abstract
language; evocativeness or vivid language; intensification or layering of meaning using language; tone or descriptive language; and epiphany or transformation (van Manen, 1997). The process of writing is also seen as being characterised by a number of contradictions that the phenomenological researcher needs to skillfully negotiate. These contradictions include separation vs. connection to the lifeworld, decontextualising vs. return of thoughts to praxis, abstraction vs. concretising, and objectifying vs. subjectifying (van Manen, 1997).

The process of writing and re-writing started early in this thesis, first in the form of brief notes and jottings, and then more formal pieces of writing regarding my understandings of IDHR and how these were evolving, what has written in the literature, the process by which data was gathered and interpreted, and emergent findings. The process of writing facilitated further questioning and exploration of the data, the interrelationships between themes, and consequently the development of a rich and detailed picture of participants’ lifeworld. It was by writing that I was able to arrive at a deep and insightful understanding of IDHR, and communicate this in a manner that was faithful to participants’ voices and their personal realities and interpretations of the phenomenon, yet at the same time, evocative and descriptive. The next section of this chapter, I present the quality criteria for research that is situated within the interpretive or qualitative paradigm, including phenomenological research.

### 3.10 Ensuring quality in phenomenological inquiry

As discussed earlier in this chapter, this thesis is underpinned by an interpretive ontological and epistemological orientation to knowledge production and inquiry. This study is not concerned with establishing the ‘truth’ or the reliability, validity or generalisability of the research. Rather, it is aimed at elucidating a reality of the human world as situated within specific context and point in time and informed by a particular personal lens and interpretive framework. The overall
quality of this research study has been evaluated against the criteria of ‘credibility, transferability, dependability and confirmability’ (p. 300) proposed by Lincoln and Guba (1985).

### 3.10.1 Credibility or trustworthiness of the research

Credibility refers to the extent to which the reader feels confident about the trustworthiness of the research process and findings that are reported (Lincoln & Guba, 1985). Credibility is demonstrated if a researcher has illuminated a range of different realities in a fair and balanced manner, without privileging some voices, including their own, over others.

In this study, I continually compared participants’ accounts and the raw data against my themes and sub-themes to ensure the idiographic integrity of participant accounts and consistency between my interpretations and participants’ narratives. Periodic critical self-reflection as well as the shifting alignment between participants’ accounts and my own understandings (Corbin Dwyer & Buckle, 2009) served as a useful reminder that we were a heterogeneous population of researchers with different experiences as shaped by historical, social and individual contexts. In illustrating the themes and subthemes in the data, I attempted to illustrate the breadth and diversity of and connections between respondents’ views and experiences, as well as alternative or contrasting accounts so as to convey the range of realities captured in this study.

The credibility of the analytical process and outcomes can also be established by corroborating findings with study participants and others including supervisors and peers. Respondent validation or member checking (Mays & Pope, 2000) refers to the process of checking the accuracy of transcripts or initial interpretations of data with participants. None of the participants in this study asked to review their interview transcripts for accuracy, despite being presented with the option. The main way in which I checked for resonance between my interpretations of IDHR and the reality of participants’ and other researchers’ lived experience,
was via the presentation of my work in public fora. Early in this study, I presented my initial analysis at a meeting of the health research network that was the primary source of recruitment to this study. My main aim was to gauge the extent to which the initial analysis resonated with the health research audience’s views and experiences of IDHR. The degree of receptiveness to the findings I presented, confirmed the authenticity of the initial analysis. In addition, through this activity I was able to clarify unresolved issues, generate additional questiona, and gather additional insights in relation to my themes and sub themes.

I was also presented my work at national conferences in July 2010 and September 2011, and Faculty research seminars in September 2010 and October 2011. These provided a way of checking how study findings resonated with the views and experiences of a broader group of researchers outside the health research network and in disciplines both in and allied to health. The audience feedback was overwhelmingly positive, and indicated that there was a strong degree of resonance between my findings and other researchers’ experiences of IDHR as an essentially human experience. The presentation of my work at conferences and other scholarly meetings also provided an opportunity to engage in intellectual discussions with researchers external to my collegial and supervisory relationship. Finally, discussion of my work with my supervisors, academic colleagues and other PhD students provided formative opportunities to explore my understandings in more depth, consider alternative interpretations, and add to the complexity and sophistication of my interpretations.

Ultimately, data analysis involves an act of interpreting meaning; a process that is influenced by the personal lens of the researcher including their historical, social, and cultural background, and their position in relation to the research phenomenon being investigated and wider social setting in which the study is being conducted. My understanding and interpretations of the lived experience of IDHR in the higher education health research setting can be understood as being
shaped by my personal lens, position within the research and connections to the topic being explored, and thus potentially differing from the insights and interpretations of another researcher. I have documented the various interpretive influences and how these may have mediated what I could see, know, feel, understand and communicate, throughout this thesis.

3.10.2 Dependability and confirmability

The notions of dependability and confirmability refer to the researcher making clear the particularities of the context within which the study and the phenomenon under exploration is located, what changes may have occurred, and how these may have shaped the ‘product’ and ‘process’ of inquiry (Lincoln & Guba, 1985, p. 318). The confirmability and dependability of the inquiry process can be maintained by keeping an audit trail or written record of the methodological and analytical decisions made in the study and significant turning points in the research. This can enhance the transparency of the analytical process, provide a methodological check of the decisions made in the research process, facilitate checking and rechecking of the discrepancies or issues, and more importantly, prompt self-reflection and critique of the approach to and outcomes of the research. The analytical and reflective journal I maintained throughout this study provided a useful source of reflective, descriptive and interpretive material.

3.10.3 Transferability

Transferability is determined by the extent to which the research findings resonate with the reader. The researcher is charged with being a skilled narrator in terms of presenting a narrative that speaks to the reader, invokes a phenomenological nod (van Manen, 1997), is evocative, and makes connections with the published literature (Kuper, Lingard, et al., 2008). Additionally, has identified that the quality of phenomenological inquiry can be gauged by the extent to which the research taps into feeling as well as thought, encompasses a more holistic understanding of the
phenomenon, and also probes beyond the surface appearances to grasp deeper levels of meaning (MacCleave, 2006).

In this study, I have used rich thick descriptions of participants’ narratives as well as a discursive account of my own understandings in order to provide a rich and evocative interpretation of the lived experience of IDHR. As discussed earlier, writing was an integral part of the meaning-making process, and involved a ‘complex process of rewriting (re-thinking, re-reflecting, re-cognizing)’ (van Manen, 1997, p. 131), in order to do justice to the complexity and multiplicity of participants’ lived experience of the life world. Transferability can be gauged in terms of the extent to which the insights derived from a particular study can inform the thinking, understandings and practices of others. The practical implications of this research for researchers and research teams engaged in IDHR, workplaces, higher education organisations and the sector as a whole have been articulated in Chapter 7.

3.10.4 Overall rigour

The overall rigour of a research study is critically dependent on the alignment or consistency between the research purpose, underpinning philosophical assumptions and epistemological values, methodological approach including the methods used to gather and interpret data (Crotty, 1998). Carter (2010) has argued that internal coherence between various elements of a research study including epistemology, methodology, and method (Carter & Little, 2007) is a hallmark of quality. I have demonstrated alignment between my underpinning interpretive philosophical framework; my research questions related to understanding a specific human phenomenon; the research approach of hermeneutic phenomenology which focuses on elucidating and illustrating participants’ lived experiences and the meanings they attribute to this phenomenon; interview as the method for gathering in-depth personal narratives and
accounts of lived reality; and the phenomenological techniques used in interpreting participants’ experiences and communicating these to the reader.

In addition, to provide meaningful insight into a phenomenon, a study needs to do more than describe the phenomenon, it also needs to make theoretical connections with existing understandings and knowledge (Kuper, Lingard, et al., 2008). My analysis of the literature indicated that theoretically informed interpretations of IDHR were largely absent. The second-order theoretical analysis of the data gathered in this study facilitated a deeper interpretation of participants’ experience of IDHR and added to the overall rigour of this thesis.

3.10.5 Reflexivity

To these criteria of research quality described above, I have also added reflexivity. In their seminal work on the meaning and nature of academic scholarship and the standards by which academic work is assessed, Glassick, Huber, and Maeroff (1997) have proposed it is important for scholars to engage in reflective critique in terms of evaluating their own work and reflect on the implications for future practice and quality improvement. In the research context, reflexivity can be understood as encompassing a researcher’s self-awareness of the particular lens through which they view and interpret a phenomenon and capacity to clearly articulate this (Kuper, Lingard, et al., 2008; Kuper, Reeves, et al., 2008). Reflexivity is suggested as something that needs to begin at the very early stages of the research, and continue throughout the process (Finlay, 2002b), including in data gathering and interpretation and writing. Reflexivity is seen to fundamentally underpin the quality of interpretive research (Kuper, Lingard, et al., 2008; Lincoln & Guba, 1985; Mays & Pope, 2000).

In carrying out this study, I took an actively reflective stance as suggested by Lincoln and Guba (1985) by examining and documenting my interests and connections to the research, as well as
my pre-understandings about the phenomenon being studied, as well as observations regarding the research process and outcomes. I maintained a reflective journal or analytical log throughout this study to keep track of my reflections, observations, thoughts and feelings during the study and this research journey. I made copious notes about my understandings and thoughts about this study including the research purpose, questions, methods, process and outcomes. This helped to illustrate the congruence between various parts of my study, and any misalignment. It also assisted in clarifying what my personal and theoretical views and values were in relation to the phenomenon being explored in this study.

During the data collection and analysis stages my journal functioned primarily as a ‘methodological log’ (Lincoln & Guba, 1985, p. 327). It was a place where I recorded my analytical methods and decisions, the manner in which I was defining, naming and organising themes, thoughts about any issues encountered in the analytical process, and thoughts regarding relevant conceptual and theoretical frameworks. I also used this log as a way of recording new and emergent understandings about the findings generated in this study. As identified earlier, this reflective journal was an important source of descriptive, reflective and analytical material for this study and critically informed the writing process.

3.11 Summary of chapter

In this chapter I outlined my interpretive philosophical orientation to this research study and its research aims and questions. I described the approach taken to the design of this study, sampling and recruitment of participants, data collection and analysis. Use of hermeneutic phenomenology as informed by the work of van Manen (1997) facilitated the collection of rich idiographic data from twenty-one health researchers about their lived experiences of IDHR. This data was interpreted via an analysis process involving five analytical phases. In this chapter I also discussed the complexities of being positioned as an insider to the research and elaborated on
my personal connections to and interests in this research. I also provided a rationale for how this study has met the quality criteria for qualitative research.

In the next chapter, I will present the findings of the first-order phenomenological analysis related to how health researchers enact, experience and live IDHR in the higher education context.
Chapter 4 – Health researchers’ lived experience of IDHR

4.1 Introduction to the chapter

This chapter provides a phenomenological interpretation of health researchers’ lived experience of IDHR in the higher education setting. It answers the primary research question for this study which is ‘what is the lived experience of interdisciplinary health research (IDHR) from the perspective of health researchers in the higher education sector’ and the secondary research question of ‘how do health researchers enact IDHR?’ This chapter addresses the research objective of providing a phenomenological account of how IDHR is lived and experienced as an essentially human phenomenon.

The process of phenomenological analysis used to generate the findings presented in this chapter has been detailed in the previous chapter. The data interpretation process used in generating these phenomenological findings was inductive in that it involved immersion in and was grounded in participants’ accounts of their experiences. The interpretation of data was also iterative and involved movement between parts and the whole of the dataset, and between different analytical stages. In illustrating the various themes and sub-themes presented in this chapter, I have selected and presented a range of quotes that richly illustrate participants’ lived experiences. Participant quotes are italicised to differentiate them from my own interpretations as well those expressed in the literature.

4.2 The conflicted experience of IDHR

The key finding of this study was that health researchers’ lived experience of IDHR in the higher education sector was simultaneously enabling as well as disabling, and thus fundamentally underpinned by conflict. Participants in this study expressed a number of contrasting accounts regarding their experience of IDHR in the higher education setting. These are described below.
4.2.1 **IDHR as enabling**

Participants’ lived experience of IDHR can be described as enabling based on three primary reasons: value; opportunity for learning; and transformation.

4.2.1.1 **IDHR as valuable**

Participants in this study expressed how IDHR was a valuable approach to knowledge production and research inquiry. A key aspect of value identified by participants was the capacity or potential for IDHR to provide new insights and understandings that could not be derived from the perspective of a single discipline. Disciplinary expertise and skills were seen as being complementary and synergistic, rather fragmented and separate, thus providing a holistic view of a particular research issue and potential solutions.

“... so what I would miss as behavioural scientist, an oncologist or medical doctor would pick up, you know in their appraisal, and their knowledge and understanding of the literature is also different so you get that very broad, the breadth of reading as well as the depth in a particular area” [Helen]

Participants also identified that the integration of multiple disciplinary perspectives into a common research framework which occurred in the context of IDHR, could valuably add to the rigour and quality of the research. Lisa reported how the contributions of and insights from multiple disciplines in a recent project she had managed, had facilitated the development of a theoretical and methodological framework that could address the key research goals of the project in a way that was sensitive to the lived experience of participants in the study. This supports the notion that an IDHR approach can enhance theoretical and methodological rigour of research. It was also evident that the interdisciplinary membership of Lisa’s research team had assisted with managing diverse relationships with stakeholders situated within different
disciplines with diverse disciplinary expectations and demands. This indicates that strategic factors such as relationship management can also drive the adoption of IDHR. I shall discuss these strategic drivers in more detail later in this chapter.

“...we were able to design very strong methodology of asking people about their quality of life and why using [x] care service was very important to them, so why it was improving their life and improving their ability to stay at home.... So the range of disciplines in that project was important both for managing the research relationship and also designing an alternative that was realistic and was true to the lived experiences of those people in that project” [Lisa]

Participants stressed that the capacity of IDHR to generate findings that could be easily implemented into practice was another important aspect of its value. Julie discussed that in her research area of drugs and alcohol, an IDHR approach could facilitate the development of health interventions that were more likely to be taken up and used by patients or clients. From this perspective, IDHR can be understood as a bridge between the theoretical or scientific research-world and the out-there every-day world.

“I used to work in drug and alcohol so you know you can have every intervention out there that it’s a bit like you can lead a horse to water but you can’t make it drink. And quite often you can have these wonderful interventions, wonderful pharmaceuticals, wonderful health systems, and yet something’s gone wrong and the end user, the person that’s meant to benefit, for some reason doesn’t use it” [Julie]
Lisa also discussed that IDHR as an approach to knowledge production and research inquiry, was particularly favoured in the applied research context, as it was seen to have the capacity to generate outcomes that were relevant and useful to stakeholders, including healthcare consumers. From this perspective, the capacity of research to generate findings or outcomes that are relevant, applicable and amenable to uptake (Lavis et al., 2005) can be considered another hallmark of quality.

“I think particularly in applied research that [the interdisciplinary approach] is very important because it means that it is much more likely to have relevance to the users of the research, so there is some point in doing the research” [Lisa]

A key goal of health research is to ‘improve human health by translating knowledge into practical applications’ (Nicogossian et al., 2010, p. 2). As such, Mode 2 or interdisciplinary forms of knowledge production which are more ‘socially accountable and reflexive’ (Gibbons et al., 1994, p. 3) and have a greater translational or applied potential (Kandiko & Blackmore, 2008; Pfirman & Martin, 2010) than traditional discipline-based approaches, have been particularly privileged in applied disciplines such as medicine and nursing (Couturier et al, 2008).

Participants also noted that since IDHR embraced complexity and change, it had the capacity to be more responsive to the unpredictability characterising the process of knowledge production and research inquiry, than discipline-based research approaches. Kelly described how a narrow discipline-focused approach to research was comparable to ‘putting all your eggs in one basket’, whereas she described IDHR as ‘resilient’ because it was characterised by flexibility and adaptability.
“I mean in this rapidly changing complex multifaceted world if you close down, if you put all your eggs into one basket of sociology or statistics or whatever, then I think you’re stuffed. You’re not resilient because you’re not able to change and be inside that difference” [Kelly]

The final dimension of IDHR value described by participants was more personally oriented. Participants reported experiencing IDHR as enjoyable, fun and exciting, in contrast to the monotonous routine of working within a specific disciplinary framework and boundaries. The metaphor of ‘going on holiday’ expressed by Sandra aptly illustrates how the IDHR experience offered a welcome disruption to conventional approaches to knowledge production and research inquiry.

“...it’s fun to be in an environment where you can be exposed to things that have nothing to do with what you are doing....so it can just take you out of yourself for a little while, take you to a different place, it’s kind of like going on holiday (laughs)” [Sandra]

Overall, the findings presented in this part of the chapter have clearly illustrated that health researchers experienced the value of IDHR along a number of dimensions, including in terms of its capacity to: generate new insights; enhance research quality and rigour; increase the translational potential of findings; be more flexible and adaptable; and be personally enjoyable, fun and enriching.

4.2.1.2 IDHR as facilitating learning

Participants experienced IDHR as facilitating learning in a number of different ways. First, they viewed that IDHR prompted learning through the exposure to and engagement with the
knowledge and practices of other disciplines. Rachel discussed that she had learnt about alternative interpretations of particular research problems and their solutions. From this perspective, learning in the context of IDHR was stimulated by and occurred in relation to the knowledge and practices of other disciplines.

“...it shows you different ways of examining things, different perspectives, they have different interpretations of the same issue” [Rachel]

Participants also described how the exposure to and contact with other disciplines in the context of IDHR, had prompted them to look inwards and critically reflect on at their own worldviews and approaches to research. Colin noted that the engagement with different disciplinary views and perspectives had prompted him to question and consider his own knowledge and practices, and explore how these could be altered. In this case, learning in the context of IDHR occurred through reflection on the knowledge and practices of participants’ own discipline.

‘...it makes you think more closely of your acceptance or otherwise of different approaches, and two it makes you investigate more closely your own approach to see whether it can be modified or moderated in some way to have more successful or more comprehensive outcomes’ [Colin]

Participants also described learning in the IDHR context as sometimes focussing on acquisition of theoretical knowledge via independent and self-directed activity. Gloria indicated that this type of theoretical learning within the IDHR collaborative setting, was largely motivated by a desire to familiarise herself with the knowledge and skill base of her colleagues from other disciplines. The need to seek out new theoretical, methodological and other types of understanding appeared to exert an implicit pressure on participants to continuously learn and update their
own knowledge. From this perspective, learning can be conceptualised as a predominantly cognitive activity occurring at the level of the individual researcher.

“I have to do a lot of individual learning so that when they are presenting all these results I am able to understand what they are trying to tell me. So it is that sort of understanding, and learning, constant learning, you have to teach yourself you have to go out there and find exactly what it is that they mean” [Gloria]

However, it was also evident that at other times, learning in the IDHR context was focused on the acquisition of more implicit cultural knowledge related to the practice or conduct of research. Andrew described that he learned about ‘how they do things’ in and through interactions with and observations of peers or senior researchers in the IDHR collaborative setting. In this case, learning was related to gaining knowledge about the informal and hidden curriculum (Hafferty, 1998) which is not explicitly articulated, via informal and less structured methods. From this perspective, learning can be conceptualised as a relational and socially constructed activity occurring within the context of a team or collective.

“….certainly when you’re sitting there listening to people that have expertise in some areas that you don’t, that’s an opportunity to learn through a more skilled researcher, you can see how they do things” [Andrew]

In discussing the opportunities they did have to learn in the IDHR context, participants noted that it was important to have sufficient flexibility in relation to their research roles and within their research teams, to take on new activities and learning. The notion of being able to ‘branch out’ was identified by Sarah as motivating professional development and growth, and facilitating
a learning culture in the IDHR setting. This indicates that research teams and workplaces have an important role in exploring, encouraging and supporting the educational and professional development aspirations of individuals. The professional growth and notion of transformation experienced in the IDHR context is discussed in more detail in the next part of this chapter.

“...I think there needs to be some flexibility in the role for people to be able to demonstrate their talent and skills in certain respects.... So you got to have a starting point, but I think people need the opportunity to grow and develop in the role and possibly branch out into a few other areas” [Sarah]

Participants also emphasised the formative and important role of research leaders including supervisors and mentors in supporting learning in the IDHR context. Kelly described how her own supervisor had guided and supported her in accessing concepts and theories, methods across multiple disciplines. These individuals can be understood to have the capacity to facilitate interdisciplinary scholarship and a research culture commensurate with working across disciplines. The frustrating lack of approval that can also be provided for IDHR by institutions, workplaces and their leaders is discussed in later in this chapter.

“having this amazing mentor, someone saying to me, yes you can look at feminism, ethnography, complexity theory, video reflexivity, statistics, qualitative interviews, intensive care, health services research, go for it, have a look at it all, I trust you’re going to come back with something.....to have that support, rather than someone saying you’re only allowed to look at this in this box, I mean that’s criminal. That’s chopping off someone’s intellect” [Kelly]
Academic leaders including supervisors can be understood to have an important propagatory role in terms of providing advice, mentoring, supervising, and developing research capacity (Priest et al., 2006). However, the discipline-based framework and culture of the higher education sector which limits the opportunity for meaningful interaction between disciplines, can contribute to the difficulty in finding appropriate role models and mentors who can appropriately support researchers’ interdisciplinary aspirations. A further complicating factor is the lack of role models for particular groups in the academe. Although women and minorities are overrepresented in the interdisciplinary research environment, they are generally underrepresented in academia (Rhoten & Pfirman, 2007a, 2007b).

Based on the findings presented in this part of the chapter, the IDHR setting can be conceptualised as a key site in which learning occurs. This resonates with the literature in the healthcare professional practice setting where the interdisciplinary team has been suggested as a learning community in which researchers collectively acquire, develop, and share expertise (McCallin, 2006). However, it is important to note that the interdisciplinary collaborative setting may also be characterised by conflicts in learning cultures (Solomon, Boud, Leontios, & Staron, 2001) and disciplinary expectations about what is worth learning, who should learn, and how.

4.2.1.3 IDHR as transformative

Participants expressed that they had experienced a distinct sense of professional and personal growth and change within the IDHR context. For some participants, this professional growth manifested in the form of developing increased confidence and self-efficacy beliefs and leadership capacity to communicate, interact, collaborate with colleagues from other disciplines. Angela described that within the context of her IDHR collaborative experiences she had developed a degree of self-confidence and self-efficacy in relation to her interpersonal interactions and leadership skills to drive and manage the research process. Resonating with the
experiences of other participants in this study, Angela’s comments also pointed to the vital role of supervisors and senior colleagues in supporting and guiding researchers, particularly those early in their career, to achieve feelings of self-efficaciousness.

“I’m getting much more confident interacting with the rest of the team who are from all sorts of places, which is probably the biggest change. So I’m sort certainly much more confident, in that I can find my way, because I have had some good support to do that. So that’s certainly professionally changed I suppose the just the process and the project and how I perceive myself in that and actually feel like you know I can drive part of the process now from a practical point of view” [Angela]

It was also clear that as participants engaged with and participated in interdisciplinary knowledge production and research inquiry, they were experiencing a change in relation to how they approached the process of knowledge production and research inquiry. It was evident that some participants were moving away from ‘bounded’ [Sandra] notions of thinking, and were beginning to challenge conventional parameters for research and question the value and worth of narrow discipline-based frameworks and approaches.

“I mean the boundaries kind of become less interesting and policing those boundaries stops being a worthwhile and useful thing to do so you stop thinking about things as bounded. You just start thinking about there being a world of ideas out there that you can draw on and if it comes from a particular discipline so be it” [Sandra]
Kinzeloe (2001) has noted that as researchers begin to consider the linkages and relationships between disciplines, they begin to form new and complex understandings of what constitutes research quality and rigour. The capacity for an individual to venture beyond their discipline and integrate multiple disciplinary perspectives into their research can be potentially considered as an additional dimension of researcher professionalism.

As participants in this study were considering the synergies and contributions of multiple disciplines in the context of IDHR, they were not only developing new understandings about research quality, but also about the theoretical and practical impact and contributions of their research. These insights lend weight to the argument that Evans’s (2010) model of researcher professionality can be further extended to accommodate an individual’s capacity to consider the theoretical and practical implications of their research findings for a range of contexts.

“Some people manage it very well, so they manage both the applied context which is outside their particular discipline and use that as a basis for strengthening their theoretical expertise as well” [Lisa]

It was also clear that some participants were beginning to think differently about their fundamental sense and understandings of self as a researcher and the work that they did. Ralph’s use of the term ‘de-professionalised’ conveys an impression of shifting away from a narrow and bounded notion of disciplinary identity and professional skill set, in this case as a psychologist, to a broader understanding of self and knowledge and skill base. This movement from narrow to broad conceptions of researcher identity can be understood as representing a movement from the restricted to extended end of the researcher professionality continuum (Evans, 2010).
“I have almost de-professionalised myself as a psychologist because I now spend so much time learning about other things” [Ralph]

The existing literature has provided some insight into the transformative nature of the IDHR experience. Couturier et al (2008) and Hall et al (2006) have theorised that interdisciplinarity is associated with a change in how researchers think about themselves. However, these observations have not been empirically substantiated. Others writers such as Manathunga (2009) and Hagoel & Kalekin-Fishman (2002) have empirically shown that researchers engaged in interdisciplinarity and IDHR in the higher education research setting do experience a change in how they conceptualise and define their identity. However, exploring these shifts in personal or professional identity was not the focus of these above two studies, nor individuals in the IDHR setting managed and negotiated their changing identities.

In contrast to the notion of transformation at the individual level discussed above, participants also noted that transformation could occur at a system or institutional level. The dissolution of discipline-based faculty structures and the formation of theme-based research groups as described by Ralph, illustrated how structural changes in the institution can foster interdisciplinary interaction and collaboration.

“…out of all the changes that’s been by far the best because it has caused people from different areas across the faculty to end up sitting in rooms with people who they otherwise would not have talked to, all talking about the same thing.

And that has produced a great deal of research collaboration” [Ralph]

Similarly, Kelly identified that having an interdisciplinary learning space in which scholars from multiple disciplines were co-located, had contributed to a richer student learning experience.
The notion of ‘richness which is facilitated by space’ expressed by Kelly illustrates how the configuration of physical space can contribute to philosophical exchange and synergistic working across and between disciplines.

“The room I’m in there has got people doing Doctor of Creative Arts, innovative design on computer instillation projects for public art, another person is doing something on Lebanon and the history of Lebanon, and us doing health services research, and we sit down and we have this richness which is facilitated by space. So we’re mixing, rubbing shoulders with people from all different disciplines” [Kelly]

In summary, the notion of transformation in the context of IDHR was discussed primarily at the level of the individual in terms of changes in researchers’: confidence and capacity; approach to knowledge production and research inquiry; and understandings of identity and sense of self. Despite the nature of the personal and professional transformation occurring in the context of the IDHR experience remaining relatively amorphous and ill defined at times, it was clear that it occurred gradually over the course of participants’ career. This indicates the temporal and cumulative nature of the change associated with the IDHR experience.

The notion of transformation was also discussed at the organisational level, in relation to various local or institutional changes which reflected a growing recognition of the value of interdisciplinarity, including in the health research domain. Holley (2009) has identified that organisational level transformation typically involves a shift in institutional culture, values and practices and ‘impacts how members of the organisation view themselves and the work in which they are engaged’ (p. 334). In this study, structural changes in the institution that were described by participants can be understood as being facilitative of IDHR, rather than occurring
as a result of it. Whether the structural changes were in fact underpinned by commensurate changes in institutional research culture, were not explored as a part of this thesis. As noted earlier, although there are changing discourses in the higher education sector about integration across disciplines and working in more synergistic ways, it is recognised that in reality, there has not been much change to how knowledge is produced and research inquiry is conducted within discipline-based frameworks (Calvert, 2000).

4.2.2 IDHR as disabling

In contrast to the largely affirmative narratives expressed above, participants in this study also expressed a number of negative accounts regarding their experience of IDHR. Participants’ lived experience of IDHR can be conceptualised as disabling for four primary reasons: lack of legitimacy and credibility; level of risk; vulnerability to tokenistic use; and susceptibility to entrepreneurial pressures.

4.2.2.1 IDHR as lacking legitimacy and credibility

Participants in this study overwhelmingly experienced IDHR as lacking a degree of legitimacy and credibility within the normative discipline-based framework in the higher education sector. The literature has documented that the discipline continues to constitute the dominant organising structure of the higher education (Birnbaum, 1981), is synonymous with the notion of academic scholarship and excellence (Amey & Brown, 2004; Neumann, 1993), underpins reward and recognition frameworks (Norman et al., 2006), shapes institutional culture (Boden et al., 2011; Clark et al., 2011), and informs notions of identity (Henkel, 2005, 2009; Henkel & Vabo, 2006). As discussed in Chapter 2, within this discipline-based model, research scholarship and excellence and merit and reward are gauged in terms of an individual’s contribution to a discipline and their personal research accomplishments (Amey & Brown, 2004) and using ‘traditional, discipline-based performance criteria’ (Norman, Ambrose, & Huston, 2006, p. 355). Scholarship describes
the manner of pursuing a serious and sustained line of enquiry as well as the research dissemination process (Neumann, 1993). In a higher education research context characterised by growing competition for limited funding and resources, the ‘demonstration of track record in a field becomes even more salient’ (Henkel, 2005, p. 167).

Kelly described how researchers engaged in IDHR struggled to demonstrate their legitimacy and credibility within the conventional discipline-based academic model, including when seeking entry into or progressing within the higher education sector. Her observations regarding the manner in which researchers’ academic profile and contributions are traditionally evaluated, illustrate the prevailing discipline-based orientation of the process. This posed challenges for researchers engaged in IDHR whose research activities and outputs often straddled multiple disciplines.

“…traditionally, say to get into this sort of university, you want to make sure as a sociologist you’ve got something in Sociology of Health and Illness [journal name], something in the Sociological Theory [journal name], Sociological Inquiry [journal name], very discipline specific. Whereas in this context your outputs are straddling” [Kelly]

In the context of research funding and evaluation, the narrow discipline-based criteria, categories, and key words mandated by some national health research funding bodies, were regarded as being problematic for IDHR proposals that spanned disciplines, methodologies and research fields. Amy expressed a frustration that this could result in IDHR proposals being reviewed by disciplinary panels with little appreciation and sympathy for the interdisciplinary research philosophy and approach.
“.…because we don’t fit into a single discipline, when we fill out an NHMRC [funding body] form or an ARC [funding body] form, we don’t really know what to put down as our key words or our domains of research, [and] so we know when it goes off that it could go to a panel that has absolutely no idea of what we’re talking about and may be very unsympathetic” [Amy]

The normative discipline-based framework also extended to and presented challenges in the context of research dissemination. Kelly reported she typically submitted her research findings informed by perspectives from sociology, linguistics and health, as well as by a range of research methodologies such as discourse analysis and ethnography, to a range of interdisciplinary journals. These included ‘Qualitative Health Research, Discourse and Communication, Health Sociology Review, and the International Journal of Multiple Research Approaches [IJMRA]. However, Kelly reported that such interdisciplinary journals were typically ill-perceived in the conventional discipline-based academic model.

“.…He said for instance ‘you’ve published in really weird journals’ [Kelly]

Journal prestige and reputation is usually evidenced by an impact factor (Thomson Reuters, originally published in 1994) which is calculated within a traditional metric system using discipline-based or field-dependent publication and citation practices (Leydesdorff, 2007). As a result, interdisciplinary journals tend to have a lower impact factor than discipline-based journals. For this reason they can be perceived as lacking in quality and are not highly accepted by all researchers. Wagner and colleagues (2011) have warned that reference to ‘assumptions that apply only to the physical and medical sciences (such as the significance of the order of authorship of journal articles which itself varies within the physical and medical sciences), [and]
the use of standardised databases such as the Journal Citation Reports © can limit development of highly valid measures of IDR (interdisciplinary scientific research)’ (p. 24).

Despite these challenges, there is evidence of the increasing rise of particular interdisciplinary journals as legitimate and rigorous sources for research dissemination (Pfirman & Martin, 2010). My simple analysis of the impact factor and ranking of Social Science & Medicine and Qualitative Health Research, which were two of the interdisciplinary journals identified by Kelly, indicated that these were ranked highly in some subject categories and has high impact factors. For example, an analysis of the impact factor and rating of Social Science & Medicine using the ISI Web of Knowledge Journal Citation Reports © and the 2010 JCR Social Science Edition database, indicated that it was ranked 5th out of 33 within the subject category of Social Science, Biomedical with an impact factor of 2.742. Likewise, an analysis of the impact factor and rating of Qualitative Health Research on the ISI Web of Knowledge Journal Citation Reports © and the 2010 JCR Social Science Edition database, indicated that within the subject category of Health Policy and Services, it was ranked 13th out of 56 with an impact factor of 2.264.

As a result of the challenges to the legitimacy and credibility of IDHR, participants commonly attributed their research success to luck or sympathy. In essence, they viewed that positive funding, evaluation or publication outcomes were attributable to factors external to their locus of control, rather than to the quality and rigour of their work.

“...it is always a question of who we think will be most sympathetic to our quirkiness rather than knowing exactly where it’ll be successful. Yeah, so it’s kind of difficult” [Shannon]
Participants in this study overwhelmingly noted that challenges to legitimacy and credibility were exacerbated for individuals or teams engaged in IDHR situated within the interpretive or qualitative paradigm. The existing empirical literature has shown that within the health sciences research context where notions of experimentation, objectivity, generalisability, reproducibility and causality dominate, qualitative research is perceived as inferior (Albert et al., 2008; Coast et al., 2004). Participants described their experience of qualitative research was perceived as a ‘soft science’ [Helen] in contrast to the hard empirical science of quantitative research IDHR collaborative settings. Helen’s comments allude to the clash in the ontological and epistemological orientations between discipline tribes (Becher, 1994a; Becher & Trowler, 2001) and the valuing of some forms of knowledge and ways of knowing over others.

“….the other issue is people being skeptical about other peoples’ areas, what the research is showing, and the quality of their research. Particularly with clinicians, medical doctors and the sort of biostatisticians and people like that, who sort of talk about soft science and questionnaires and those sorts of things as if they’ve got no meaning at all” [Helen].

Gloria described that she struggled with her qualitative research work not being widely accepted in her IDHR team as it was perceived to be lacking in rigour. Her use of the metaphorical expressions such as ‘hard battle’ and ‘struggle’ pointed to the hurdles that she was encountering in trying to establish her legitimacy and standing as a researcher, and also the tensions that existed between her world views and other team members. As illustrated by Rees et al (2007) metaphors can give insight into the oppositional qualities of relationships and interactions between different people or groups.
“I do have a soft spot for qualitative research, and...it is not accepted, it is not very widely accepted in the discipline that I’m now in. So it’s a constant struggle to be for example the only qualitative researcher in the team, because it’s like you know ‘we all do quantitative, it’s a very quantitative science, what you do is not really research’. So that’s the hard thing, that’s the hard battle you have to put up with most of the time” [Gloria]

Some participants described how these negative perceptions of qualitative research were sometimes perpetuated by health research funding bodies. Amy viewed that the small sample sizes used in her team’s qualitative research projects were often cynically regarded by funders and funding review panels.

“...we’re within a field that’s very quantitatively oriented so whenever we submit things to the NHMRC [funding body] it could go to a reviewer who’ll think that our small sample size is just ridiculous, and we get that all the time” [Amy]

The findings presented in this part of the chapter have illustrated that IDHR as an approach to knowledge production and research inquiry can be perceived as lacking legitimacy and credibility with the prevailing discipline-based academic model. This disciplinary framework presents challenges to getting IDHR funded, evaluated and disseminated, but also for researchers engaged in IDHR in getting recognised and rewarded within the higher education institution and sector. IDHR situated within the qualitative paradigm was shown to be particularly vulnerable to challenges to legitimacy and credibility due to the ongoing tensions between the ontological and epistemological beliefs and values of the objectivist (positivist) and subjectivist (interpretive) research paradigms.
4.2.2.2 IDHR as risky

Participants noted that because of its unpredictable and unknown quality, IDHR was often perceived as being risk-laden within a conservative academic framework which valued attributes such as ‘certainty and order and predictability’. Kelly discussed how the perception of IDHR as risk made it difficult for interdisciplinary scholars to position themselves and their work in the higher education sector.

“...sometimes that can be very difficult for academics to occupy that space because in applying for research funding and in establishing a reputation people often want certainty and order and predictability and know what you’re going to do” [Kelly]

In addition, although the diversity of interactions in the IDHR collaborative setting provided participants with the opportunity to expand their collegial relationships and professional networks, the difficulties faced in establishing and maintaining interactions and relationships across disciplines added to the perceived and actual level of risk of IDHR. Some described the experience as “worlds colliding”.

“...it is not easy, it’s a lot harder than just being your own boss and dealing with your own discipline, you all speak the same jargon and you all have the same ideas of how things tick” [Rita]

Participants also noted that since interdisciplinary colleagues did not have a shared framework of experiences and background, compared to colleagues from the same disciplines, they had to work harder to develop and negotiate a level of trust commensurate and conducive for collaboration. Tierney (2008) has suggested that trust is not only a shared experience based on
and developed through common interpretation and interests, but is also a conditional experience that is influenced by assumptions about social and moral obligations and the competence of the trusted. From this perspective, the development of interdisciplinary trust relationships can be understood as being difficult and time consuming and adding to the level of risk of IDHR. Lingard et al (2007) have identified that the process of developing trust relationships can be enhanced by interdisciplinary teams working to co-create collective understandings and histories.

“That person doesn’t have to do too much to win your trust because you share a common professional background and you’ve had common experiences. You share an understanding of what people are like. There is already a certain level of trust that is already established before you even work with that person because of their background” [Rachel]

The potential for conflict between the entrenched cultural values, and research priorities and expectations of different disciplines within the IDHR collaborative setting, was regarded as exacerbating its level of risk. The manuscript production process was identified as an example of a site characterised by tension between the needs and priorities of researchers from different disciplines. Researchers’ disciplinary affiliations shape what they perceive as valuable or legitimate, such that ‘what constitutes capital is defined differently for each member’ (Lingard et al., 2007, p. 512). It can thus be understood that more complex negotiations are required in the IDHR collaborative setting to expertly negotiate and resolve conflicts arising from the varying and sometimes competing professional needs and expectations, cultural values, socio-cultural practices, and ideals and norms of different disciplines.
“Health science follows the customs of medicine, and in medicine there’s a very different customs to arts about how you come to be an author. So the health sciences people think I’m a bit peculiar (laughs) because sometimes if I’ve just talked to them and given them advice I’ll say ‘no I won’t be an author you can put me in the foot note’” [Ralph]

The perception of IDHR as risk also extend beyond the higher education institution to some health research funding bodies who were reluctant to finance interdisciplinary projects due to the unknown and uncertain nature of the research process and outcomes.

“…they may not invest in projects that are innovative but a little bit higher risk as you don’t know what the output or outcome is going to be”[Susan]

The literature has noted that interdisciplinarity can be associated with greater transaction costs such as the increased energy and time required to cultivate and sustain relationships (Pfirman and Martin, 2010). Studies have shown that both established and emerging researchers regard interdisciplinary research as professionally risky due to factors such as the time needed to establish a career and lack of tenure (Rhoten & Parker, 2004). Pfirman and Martin (2010) similarly identified that career risks associated with interdisciplinarity could be categorised as those occurring in relation to intellectual or social-relational activities, as well as in relation to reward and recognition, and research logistics. I would argue that these risks may be particularly confronting for emerging or early career researchers who may not have access to adequate roles models or networks of support who help illustrate how these can be properly managed or mitigated.
Discipline-based socialisation practices in the higher education sector, which did not adequately prepare health researchers for working across disciplines and with interdisciplinary colleagues, was regarded as adding to the level of risk of IDHR collaboration. Gloria noted how “...even though we are all from a health background we are not even taught to work together” thus alluding to the failure of the higher education system in providing appropriate opportunities for interaction and exchange across disciplines and adequately preparing its graduates for working in an interdisciplinary manner. Due to their narrow discipline-based socialisation experiences, some participants articulated experiencing “a shock to the system” [Dan] when first working with colleagues from other disciplines in the IDHR collaborative setting. This shock can be compared with the culture shock and associated feelings of displacement experienced by migrants as they come into contact with a new culture.

The literature has documented the predominantly disciplinary emphasis of current socialisation processes in the higher education setting and the lack of preparation that students are provided to interact, communicate, or work across disciplines (Hall et al., 2005). Boden and colleagues (2011) have articulated that ‘students are being socialised to a culture of higher education as being organised by disciplines’ (p. 2, author italics). Although there is increasing recognition of the value of deliberative and structured activities in helping students and practitioners develop the knowledge and skills for collaborative working in the health professions education and practice contexts (Barr, Koppel, Reeves, Hammick, & Freeth, 2005; Hammick, Freeth, Koppel, Reeves, & Barr, 2007; Reeves et al., 2008), there is little systematic effort in the health research domain directed at crafting formal opportunities for researchers across disciplines to learn, interact and work together. In health research domain ‘narrowly defined and specialised discipline-based approach to the generation and dissemination of research, and current specialised preparation’ (Vincenti, 2005, p. 102) have been identified as hindering effective IDHR. A number of authors have articulated that unless individuals are formally helped to
understand the basic knowledge and values based perspectives of other disciplines, they will be unable to interpret the relevance and value of each other’s points of view and approaches to research and practice (Clark, 2006; McCallin, 2006; Petrie, 1976).

Participants viewed the level of risk associated with IDHR was also exacerbated by how the higher education institution was organised around discipline-based departments, schools, and units, and the lack of sharing and synergy between these parts. Henkel (2005) has identified that the disciplines are ‘given tangible form and defined boundaries in the basic units or departments of the universities’ (p. 158). In particular, due to the lack of physical or virtual sites for interdisciplinary colleagues to meet and exchange knowledge, participants observed that their own interdisciplinary interactions were often fortuitous and ad-hoc

“...the main difficulty is simply finding people across disciplines who are interested in similar things. But um, as far as I can work out it is largely done by word of mouth, accidental meetings at conferences” [Julie]

The allocation of individuals into discipline-based schools, departments or faculties for staffing, resourcing or administrative purposes, was also seen as stifling interdisciplinary researchers and their work. Deborah used the metaphor of ‘island’ to describe her feelings of displacement associated with being placed within a faculty and department whose research areas did not align her own. The siloed organisation of administrative, financial and resource structures in higher education institution based on discipline, has been identified as a key obstacle to implementing interdisciplinarity including within the health research domain (Amey & Brown, 2004; Hall et al., 2002; Kandiko & Blackmore, 2008).
“...you know I’m this sort of island (laughs) you know and so it has been really difficult for me because I don’t have any collaborators, natural collaborators within my own school or faculty” [Deborah]

The literature has documented that the normative disciplinary framework in the higher education sector continues to present challenges to the acceptance of interdisciplinarity including in the health research field (Boden et al., 2011; Brew, 2008; Clark et al., 2011). Despite the growing rhetoric about the value of IDHR (Frost & Jean, 2003; Frost et al., 2004; Kezar, 2005), it is evident that the expectations and demands of the traditional academic model continue to shape how researchers see and talk about themselves and their work. Cashman and colleagues (2004) have warned that a lack of explicit organisational support, reinforcement and authorisation for interdisciplinary scholarship can result in individuals gravitating towards traditional discipline-based and ethnocentric ways of thinking and working. These issues may be particularly confronting for emerging or early career researchers who may not have access to adequate roles models or networks of support to help illustrate how they can be properly managed or mitigated. The literature has documented that a progressive institutional research culture and ethos is necessary for supporting and legitimising interdisciplinarity as a valuable approach to research inquiry and knowledge production in the higher education setting (Frost & Jean, 2003; Frost et al., 2004; Kezar, 2005) and helping to advance the momentum of the interdisciplinary research agenda.

4.2.2.3 IDHR as vulnerable to tokenistic use

Participants experienced that IDHR could sometimes be used by individuals, team and organisations as a way of conveying an appearance of collaboration or cohesion across disciplines, rather than genuine integration. The fast-paced, complex, competitive and chaotic nature of the research environment was seen to exacerbate this issue.
“...it’s really easy for it [interdisciplinarity] to be a kind of an inclusiveness that’s more about the appearance of the inclusiveness rather than genuine engagement” [Sandra]

Andrew’s comments illustrated that in some instances, IDHR could be used as a means of highlighting a team’s diverse skills, expertise or capacity to meet various institutional or external demands. These can be understood as examples of strategic drivers for IDHR. I previously noted the need to manage stakeholder relationships as also providing the impetus for IDHR. Greckhamer and colleagues (2008) have warned that interdisciplinarity can be used as a ‘label’ (p. 315) or symbolic resource in order to meet cultural and societal expectations and the complex demands of administration bodies, funders, policy makers, and research participants and consumers.

“… we’ve got a diverse group so we meet all the criteria so ‘have you got someone who is skilled in statistics?’ and ‘have you got someone who’s skilled in report writing?’ ‘do you have an aboriginal person?’ ‘do you have someone who is accepted in the community?’ all that sort of thing. So in that group we’ve got all that and therefore ethics is approved.” [Andrew]

In particular, participants observed how the historically privileged position of some disciplines e.g. medicine, in the health field, could result in particular disciplinary perspectives and voices dominating the IDHR process. This issue can be exacerbated by the higher level of disciplinary tribalism and chauvinism in the health field (Bate, 2000; Weller, 2012).

“...because I think that’s something that often happens and often it’s the medics...
Participants in this study viewed that the potential for unequal representation of disciplines within the IDHR collaborative context could be resolved by establishing processes to ensure that each discipline’s voice was heard in developing the underpinning conceptual or theoretical framework of a research project, as well its empirical, analytical and dissemination components.

“...if you have a process in which people are included early, but also, and this is critical, are equally involved in the actual empirical work in the project, are equally engaged with the data that is being worked on or concepts that are being worked on then it can be brilliant” [Sandra]

The term tokenism has been used in the literature to refer to a situation where the input or the voice of a discipline is present but is not heard (Reich & Reich, 2006). Tokenism can be a particular challenge within the IDHR collaborative setting, since hierarchies in power and status between different disciplines involved in the process, can impact which discipline’s contributions and preferences is given credence and value over others. Albert and colleagues (2009; 2008) have identified that it is critical for interdisciplinary initiatives to address fundamental issues of legitimacy and power differentials between disciplines and bridging ontological and epistemological divides.

4.2.2.4 IDHR as subject to entrepreneurial pressures

Participants experienced that IDHR was vulnerable to the entrepreneurial ethos and expectations related to research productivity and performance in the higher education sector. They noted that some entrepreneurial messages in the higher education sector were explicitly expressed in the form of research performance criteria for academic staff. Ralph provided as
example of the research performance criteria used in his faculty. These criteria typically mirror the standards specified within national frameworks for research assessment like the ERA (Australian Research Council, 2010, 2011).

“...according to these criteria I’m supposed to publish 3 refereed papers every year and get a 50K grant every year, and graduate 1 postgraduate research student every year. Now they’ve relented a little bit and said ‘oh you can average it over 3 years, that means 9 papers over 3 years, 3 grants and 3 postgraduate students.’” [Ralph]

Ralph was of the view that these research performance criteria were rigid and inflexible, and did not take into account an individual’s unique needs or resources that they had access to within the research setting. It can also be understood that these performance-based research criteria have limited synergy with participants’ evolving understandings and notions of research professionality (Evans, 2010).

“I’ve got more data than I know what do with. So I don’t want to go and get more research grants to get more data. I just want to help deal with the stuff that’s already there. It seems incredibly wasteful to have people all the time collecting new data when you haven’t got all the things you can get out of the things that people have collected” [Ralph]

Participants described how messages about research performance and productivity were also implicitly perpetuated in the higher education sector. In particular, they noted that the notion of publish or perish served to exert an implicit pressure on researchers to continually produce and publish research outputs in order to progress and thrive in their academic careers. Andrew
noted that the entrepreneurial culture of the higher education sector engendered a focus on research quantity at the expense of research quality. This illustrated health researchers’ perceptions about the dichotomous relationship and the potentially irreconcilable divide between the notions of quality and quality.

“I’ve been told before that the saying publish or perish is never been truer than what it is today and I think common sense will tell you whether people admit it or not when quantity goes up, quality has got to suffer a little bit.” [Andrew]

Colin also viewed that institutional demands and expectations related to research performance and productivity, meant that most individuals or research teams were implicitly concerned about research outputs. His comments regarding publishing versus the ‘pursuit of true knowledge’ also alluded to participants’ perceptions about the conflicting relationship between research quality and quantity.

“...given the university is so research focused particularly this one, implicit in most people’s thinking, and when I say implicit they are not aware of it is that at the end of the day it’s about how can we get a publication out of this, rather than pursuit of true knowledge” [Colin]

Julie noted the pressure to publish could also result in researchers using various strategies to maximise the spread of their research data. The notion of ‘salami slicing’ can be understood as reflecting a restricted professionality viewpoint of research as being ‘independent and free-standing’ and ‘finite and complete’ (Evans, (2010, p. 670) rather than integrated and connected. Writers have warned that the expectations associated with publish or perish can lead researchers to use unprofessional dissemination practices such as ‘double publishing, self
plagiarism, and submitting the minimal publishable unit’ (Neill, 2008, no page number, online article). In a study examining the frequency of positive results reported in a large random sample of research papers in the United States, Fanelli (2010) showed that the majority of papers presented positive findings.

“...you know this idea of publish or perish, you know there is a lot of the salami approach to research...you know where you slice off a little piece of research and they are valid for a year or something” [Julie]

Participants noted that the institutional focus on research performance and productivity exerted a significant influence on the types and nature of research activities that were valued and pursued in the higher education sector. Andrew commented that in his research area of mental health, particular research topics and types of projects were implicitly regarded as being more amenable to funding and publication, and thus more attractive to pursue in relation to career progression and advancement.

“...I mean in mental health there are certain views of projects that are likely to get published and then are others which are not going to be considered by journals or committees out here. If you wish to progress in academia it’s easy to see which way to go” [Andrew]

In summary, the entrepreneurial ethos of the higher education sector has contributed towards a situation where conventional discipline-based forms of research are more socially valued, accepted and thus emphasised and pursued in the higher education health research context, at the expense of non-conventional forms of research such as IDHR. It can thus be argued that the entrepreneurial culture of the higher education sector has created an environment in which
interdisciplinary research including IDHR is at risk of being marginalised, and perhaps altogether abandoned.

4.3 The multiple levels at which IDHR is enacted

Participants in this study discussed two different ways in which they enacted IDHR: the social-relational or team level, and the personal-embodied or individual level.

4.3.1 IDHR as social-relational

At one level, IDHR was enacted as a collaborative activity involving researchers, health practitioners, consumers and other stakeholders from various disciplines, professions, and/or organisations and most commonly within informal or formal teams. IDHR teams tended to vary in size, mix of disciplines or professionals involved, as well as in terms of the extent of synergy among disciplinary perspectives and research approaches. The latter point resonates with the continuum of integration among disciplines reported in the literature and depicted by the terms multidisciplinary, interdisciplinary, and transdisciplinary (Aboelela et al., 2007; Choi & Pak, 2006, 2007; Klein, 2010; Lattuca, 2002; Rosenfield, 1992).

“We’ve got a core team that works really well and that’s 3 people, myself and 2 others. And then the other team members come in and out you know” [Angela]

Some health researchers indicated that their involvement in IDHR collaboration had ‘naturally occurred’ due to their involvement in projects which had required the input of multiple stakeholders such as academic researchers, health practitioners, consumers and organisational members. Based on findings presented earlier in this paper, it can be understood that if IDHR collaborations are not underpinned by appropriate philosophical frameworks and processes to facilitate the integration of disciplinary perspectives, they can be vulnerable to tokenism.
“...more recently I was involved in a project where we were implementing it with general practitioners, and you’d have a number of different organisations both government and non-government, and consumer representatives, so essentially that’s where you were using different organisations to feed in information, to comment, to evaluate, and also they had an interest in the outcome as well”

[Julie]

Health researchers enacting IDHR at the collaborative level tended to focus on the enablers, barriers, challenges and opportunities associated with working with colleagues from other disciplines. They emphasised interpersonal, interactional and relational aspects such as communication, leadership, and team member roles and responsibilities. In particular, these participants consistently identified the notion of IDHR collaborative leadership and the roles of leaders as advocates and role models for how to collaborate and communicate across disciplines. In particular, they noted the formative role of research leaders in demonstrating how to effectively integrate multiple disciplinary perspectives and collaborate across disciplines by “kind of always pushing the boundaries and challenging them to think about what they do and how they do it” [Penny].

“...if there is an explicit statement from the leadership and demonstrated in the way that they’re functioning as well then they’re setting up the expectation of how this is and that that cuts down on the, reduces the sort of factionalism that can emerge, particularly in large collaborations” [Helen]
Health researchers who enacted IDHR at the social-relational level placed a premium on discipline-based knowledge, skills and expertise, in that they considered an individual’s disciplinary knowledge and skills constituted their unique contribution to IDHR.

“...so the fact someone is a clinician or a psychologist is very important because they have expert knowledge that’s required to conduct the study” [Patrick]

Some participants implicitly assumed that an individual’s disciplinary knowledge, expertise and skills formed the primary basis of selection into an IDHR team. Although not explored in this study, this raises a question about how researchers are in fact selected for interdisciplinary collaboration, whether collaborative criteria are considered in the selection process, and the relative weighting of these collaborative competencies compared to discipline-based ones.

“...it is pretty well an unspoken or unstated assumption and its quite clear that we are all coming in with our different knowledge, and that we are required for that” [Susan]

A key competency for researchers engaged in IDHR was the capacity to articulate and communicate their discipline-specific knowledge perspectives and frameworks to their interdisciplinary colleagues. The term brokering has been used in the literature, including in the IDHR context, to describe team members’ role in ‘translating insights and experiences across professional and disciplinary boundaries’ (Lingard, Schryer, Spafford, & Campbell, 2007, p. 506).

“...I had to say well why was my expertise as a sociologist caring about power relations, about critical thinking and changing thing.....I had to voice the importance of that” [Angela]
A key observation about health researchers enacting IDHR at the social-relational level was that they described narrow socialisation education and training pathways in the higher education sector, particularly early in their career. Most had entered the health field through a specific vocational pathway which emphasised specialism and disciplinary progression. As a result, these participants tended to express a strong alliance and affiliation to a single health discipline and talk about their own sense of self in relation to that discipline. The disciplines mentioned by participants included health science/professions education; health services research; indigenous health; medicine; nursing; paediatrics and child health; pharmacy; public health as well as psychology and social policy. Sometimes, they used these disciplinary identity labels flexibly depending on context resonating with Brew’s (2008) nested conceptions of identity.

Although many of the participants enacting IDHR at the social-relational level had considerable exposure to and experience of collaborating across disciplines, this did not appear to formatively shape how they viewed and interpreted their sense of self. For example, although Fiona discussed that she had been “schooled in the fact that it [interdisciplinary collaboration] was good idea from the patient’s point of view”, she still identified strongly with the medical profession as articulated within her interview and in her responses to the demographic survey.

4.3.2 IDHR as personal-embodied

At another level, study findings showed that IDHR was enacted by the individual researcher in that they actively integrated concepts, methods, perspectives and theories from multiple disciplines in their research, both within and external to the collaborative setting. From this perspective, IDHR can be regarded as being embodied and enacted at the level of the individual, and within or external to the collaborative setting. Various personal and philosophical reasons were cited included advancing the theoretical, methodological, analytical or interpretative
power of their research, providing a holistic, balanced or novel view of a particular research issue, and trying to avoid the limitations of using narrow and discipline-based frameworks.

“So if I analyse some data and I find that I think that there’s a central concept that I can use to explain that data then I won’t think, because I don’t come from a particular discipline, I won’t think what has been done in my discipline about this, I’ll think what has been done about this so I’ll look to whatever discipline has something useful to say about it” [Sandra]

Thus the research practices of individuals enacting interdisciplinarity at a personal-embodied level can be understood as being characterised by a degree of ‘methodological eclecticism’ (Lincoln, 2001, p. 694) in that it involved the incorporation of methods spanning different disciplines and sometimes research paradigms, into a common research framework. I would also argue that the work of these individuals is characterised by theoretical eclecticism in that it involves the integration and interposition of theoretical frameworks from multiple disciplines.

“....it is looking at all of the factors that influence disease outcomes. So looking at psychological factors, environmental factors, um genetic factors and not only how all these things impact health but how they interact too” [Shannon]

The term bricolage has been used in the literature to refer the process of an individual drawing on and integrating knowledge and methodological frameworks and approaches across multiple disciplines. Kincheloe (2001) has described bricolage as a process in which researchers ‘compare not only the methods of diverse disciplines, but also differing epistemologies and social theoretical assumptions’ (p. 686). Although at first, the concepts of bricolage appears similar to the notion of brokering discussed earlier, the two concepts can be differentiated in terms the
level at which these processes are enacted by the individual. Bricolage is reflective of ‘cultivation of boundary work’ (Kincheloe, 2001, p. 690) by the individual scholar, while brokering is enacted within the collaborative setting.

Ralph described individuals enacting IDHR at the personal-embodied level as being open minded, creative and flexible, in contrast to those who may enact IDHR at the collaborative level, yet express narrow, fixed, and predictable discipline-based views.

“...I think some of my colleagues who I respect enormously are not especially multidisciplinary people necessarily. They have a fairly clear view of how things should be done and so although their participation is always very valuable it is also very predictable. You always know what the answer is going to be with them because that’s their answer pretty much that’s the way the world should be investigated or that’s the view of reality that you should bring to any query”

[Ralph]

Critically, health researchers enacting IDHR at the personal-embodied level described broad or diverse socialisation experiences and career pathways in and through the health and higher education sectors. Some had educational and working experiences in multiple disciplines, while others had been trained within interdisciplinary education programs. For example, Amy narrated that she had left medicine early on and had obtained further formal training in a different field and had worked across multiple disciplines including social sciences, philosophy, and sociology.

“...I studied medicine but then realised that I didn’t want to be a doctor, so ever since I finished my internship I’ve been in disciplines that are not essentially mine” [Amy]
Shannon indicated her undergraduate and postgraduate education and training were within an interdisciplinary education program in health which had the aim of facilitating insight into the social and economic determinants of human health and disease and how these are interlinked. The goals of interdisciplinary education programs include the cross-disciplinary study of a particular area, and the development of problem solving approaches and frameworks that span multiple disciplines (Klein, 1999).

“So I was always kind of taught that it wasn’t correct to look at a problem from a one angle but that we kind of needed these complex teams to approach health problems, and so I guess as students we were taught to think that way”

[Shannon]

Participants’ socialisation experiences were characterised by diversity in that they had been socialised into an interdisciplinary worldview, multiple disciplinary perspectives and approaches to knowledge production from their early days in the higher education sector. As a result of these experiences, these participants did not align themselves with any one academic or professional discipline, rather, tended to express interdisciplinary values, preferences and conceptions of self. For example, Amy identified that ‘so I guess my whole experience as an academic has been interdisciplinary’. Brew (2008) empirically illustrated in her study that researchers in the higher education sector were increasingly defining their identity in fluid, flexible and confluent ways in terms of ‘being between several different areas’ (p. 431) or as ‘free floating in no particular discipline but between various disciplines or sub disciplines’ (p. 431).

It was evident that Shannon’s interdisciplinary education and training experiences had a formative impact on her current personal preferences and affinity for IDHR, and her general
outlook regarding the nature of approaches to knowledge production and research inquiry that were most valuable.

“I would hope all researchers would approach things in this way. It’s hard because it is so much ingrained in me that I kind of expect people to want to use the interdisciplinary approach to all problems” [Shannon]

These health researchers generally viewed their interdisciplinary outlook as an asset because it meant they could better understand and integrate research perspectives, knowledge, and methods across disciplines, and be open to multiple analytical lenses rather than be constrained by having to use a single interpretive framework. For example, Kelly viewed that her interdisciplinary background and identity “sort of helps because I speak a few languages”. Sandra also described that her interdisciplinary identity meant that she could “…find things that are relevant to the work that I’m doing rather than allowing the work that I’m doing to be driven by some kind of political or professional or disciplinary agenda”.

However, others expressed epistemic anxieties about not being knowledgeable or skilled enough to a depth in any particular area compared to their colleagues who had progressed within one discipline. Lisa described feeling as though her knowledge and expertise were “spread thinly” and viewed this to be a drawback in the traditional academic model where notions of scholarship were associated with the consolidation of disciplinary knowledge and practices. Scholars enacting IDHR at the personal-embodied level also expressed feeling insecure because their eclectic education and training background did not align with traditional discipline-based socialisation norms and expectations. They discussed how individuals who were unable to lay claim to a disciplinary pathway of progression needed to work harder in establishing and demonstrating their credibility and competence, than those who had a more traditional
education and training pathway in one discipline. Sandra noted that she had felt insecure as an emerging academic because her background did not align with the traditional discipline-based expectations in health regarding socialisation pathways.

“…..there is a sense of needing to have been initiated [into a discipline] in the correct way, and if you haven’t been initiated in the correct way then sorry it’s too late, you didn’t do the PhD in the right department, or in anthropology it’s you didn’t do two years of fieldwork in a exotic location so therefore sorry you missed out. Yeah so I think I just didn’t have an answer and felt a bit insecure”

[Sandra]

Overall, the findings presented in this section of the chapter have illustrated the multiplicity of the levels at which IDHR can be enacted, specifically the social-relational or team and the personal-embodied or individual level. The findings have also shown that the level at which IDHR is enacted partly shapes the type of issues that are emphasised and the nature of concerns expressed by health researchers.

4.4 Summary of chapter

In chapter 2, I noted the current literature had privileged a focus on the collaborative dimension of interdisciplinarity including in the health research domain, thereby marginalising the voice and experience of researchers engaged in the actual work. I thus argued there was a need for newer and more meaningful interpretations of IDHR, which could advance insight into how it experienced as an essentially human phenomenon. By applying a phenomenological interpretive framework to the analysis of data, I have provided rich and in-depth insight into how IDHR is experienced, enacted and lived by health researchers in the higher education setting.
This chapter addressed the primary research question for this study which is ‘what is the lived experience of interdisciplinary health research (IDHR) in the higher education sector from the perspective of health researchers engaged it?’ The findings presented in this chapter illustrated that health researchers’ lived experience of IDHR was simultaneously enabling and disabling. On one hand, IDHR was enabling in that participants experienced it as: valuable; stimulating learning; and transformative. On the other hand, IDHR was disabling in that participants experienced it as: lacking legitimacy and credibility; risky; vulnerable to tokenistic use; and subject to the pressures engendered by the entrepreneurial ethos of the higher education sector. Based on these findings, I argue that the lived experience of IDHR is fundamentally underpinned by conflict.

As a result of their conflicted experience of IDHR, participants in this study expressed various anxieties and concerns reported throughout this chapter related to how they perceived the work that they do in the higher education setting and their fundamental sense of self as a researcher. The narratives expressed by participants in this study can be compared to those expressed by individuals who have crossed national and cultural borders such as the experience of ‘the underlying dilemma of being the other, of never really being really part of it, and of being in a state of limbo’ (Jaya, 2011, p. 745). Other writers have also identified conflictual demands and expectations encountered by interdisciplinary scholars and the liminal and marginalised experiences of interdisciplinary researchers in negotiating and positioning themselves in the higher education setting (Manathunga, 2009). This conflicted state and feelings of torn-in-between that have been observed in the literature resonate with the lived experience of health researcher participants in this study. Pfirman and Martin (2010) have observed that ‘continued self-examinations and appeals for acceptance can lead to a sense of personal vulnerability, tension, insecurity, and demoralisation’ (p. 390).
This chapter also addressed a secondary research question of this thesis which was ‘how do health researchers enact IDHR?’ The findings clearly illustrated that IDHR was enacted in two different ways, as a: team-based collaborative activity involving researchers from multiple disciplines; and a personal activity engaged in by the individual researcher including outside of the IDHR team setting. I have referred to the former as the social-relational level of IDHR as it is enacted at the level of the team, and have labelled the latter as the personal-embodied level of IDHR as it is internalised and enacted at the level of the individual. The findings presented in this chapter also illustrated the level at which IDHR was enacted shaped the nature of the concerns and challenges expressed and emphasised by participants, and the types of support and resources required by health researchers to constructively manage and negotiate their conflicted experience of IDHR. In addition, the multiple levels of IDHR can be understood as being synergistic and complementary in some situations. For example, a researcher enacting IDHR at a personal-embodied level may also enact it at the social-relational level. However, a researcher enacting IDHR as a tokenistic collaborative activity may not necessarily demonstrate appreciation for how it can occur at the personal and embodied level.

Finally, I argue that nature of health researchers’ early socialisation experiences within the higher education sector can powerfully mediate the level at which they enact IDHR, as well as their preferences for particular types of knowledge production activities and approaches to research inquiry, further along their professional career. In this case, early and sustained socialisation into a specific health vocational field with a strongly defined sense of professional identity, role and culture e.g. medicine, nursing, social work, can be understood as formatively influencing how individuals define themselves and the work that they do. It was, however, beyond the scope of this interpretively situated thesis to speculate on whether individuals’ socialisation experiences preceded their affinity (or not) for IDHR, or whether their inherently
interdisciplinary preferences had resulted in them seeking broad exposure to multiple disciplines.

In the next chapter I present the theoretical framework guiding the interpretation of the phenomenological findings discussed here.
Chapter 5 – Identity as a theoretical framework

5.1 Introduction to the chapter

As argued earlier in this thesis, there is an identified need for studies that venture beyond description to theoretical analysis and interpretation of the lived experience of IDHR (Belanger & Rodriguez, 2008). By using identity as the broad interpretive lens in this thesis, I address the fourth research objective of this thesis which is to make visible the links between the lived experience of IDHR and identity and situate this study with the relevant empirical and theoretical literature on identity.

This chapter begins with an explanation of why identity was chosen as the theoretical framework for this thesis and the specific view of identity taken in this thesis. I then discuss what the dimensions of identity that underpin ‘what it means to be recognised as a certain kind of person’ (Gee, 200, p. 100). Next I review how identity is formed within organisational settings and the strategies used by individuals in constructing and reconstructing their identity. Then, I specifically consider how identity is constructed in the higher education setting and the factors which impact on identity formation. I present a model of identity consonance and dissonance to illustrate the nature of tensions in identities and how these are typically resolved. Finally, I consider how the conceptual frameworks and models presented in this chapter can provide theoretical insight into health researchers’ conflicted experience of IDHR.

5.2 Rationale for the choice of identity as a theoretical lens

The choice of identity as the broad theoretical framework for this thesis was informed by two key factors. First, the phenomenological findings of this thesis which have been presented in the Chapter 4, illustrated that health researchers expressed a number of concerns and questions related to who they were (and were becoming) as researchers, and the work that they did, in the
context of their conflicted experience of IDHR. In addition, the multiplicity of the levels at which participants enacted IDHR also illustrated how participants’ conceptions and understandings of self shaped and informed their approach to knowledge production and research inquiry. Thus, the phenomenological findings of the research material alluded to identity as a potentially relevant theoretical construct and framework for interpreting health researchers’ lived experience of IDHR.

Second, the process of reflexivity helped me to critically consider my own taken-for-granted assumptions and views about IDHR and identify new frameworks for interpretation of the phenomenon. Kezar (2000) has observed that ‘during occasions of breakdown, people look around (circumspection), notice their project (reflection), consider alternatives to the course of action they are engaged in (deliberation), and start to repair based on this understanding or knowledge’ (p. 388). This breakdown or fragmentation in understandings of the self and self-experience are regarded as prompting researchers to focus and deliberate on their views in order to make meaningful alterations (Kezar, 2000; McManus Holroyd, 2007). As described in the Prologue to this thesis, although my initial interests were in the collaborative dimension of IDHR, I recognised early on in this thesis that health researchers’ lived experience of IDHR was not adequately explored, in particular how the experience was linked to and shaped by their personal and professional self-concept or understandings. Thus, the decision to use identity as the key theoretical lens for this study was informed by the phenomenological findings of this study as presented in Chapter 4 as well as my own reflections about the lived experience of IDHR.

5.3 The specific perspective of identity taken in this thesis

My intention in this section is to articulate the specific perspective of identity taken in this hermeneutic phenomenology study which aims to capture the lifeworld of individuals, in this
case health researchers engaged in IDHR in the Australian higher education setting. A key assumption of the phenomenological tradition is that reality is found in the relationships between social actors and phenomena, and that, it is to this lived experience that people ascribe meaning. Of particular interest to the phenomenological researcher, is how these meanings are expressed and how they create reality for those who expressed them. The goal of the research is to uncover the deeper meaning of human experience and reality as experienced, constructed, and understood by the participants of a study. As such, the focus in this thesis is on health researchers’ self-concept, self-understanding, and self-knowledge about how they are and what they do. In Chapter 2 of this thesis, I distinguished between an individual’s internal or personal/self-identity (Alvesson et al., 2008; Giddens, 1991) and their external or social identity (Jenkins, 1996; Monrouxe, 2010). In this study, I have interpreted identity as a person’s concept of self that is part of their conscious experience and results from their interpretation of the social world.

Studies of identity are differentiated in the literature in terms of the degree of individual agency that is privileged. Some studies ‘tend to give priority to meaning and intention, and view the individual as a meaning-maker’ (Alvesson, 2010, p. 197) while others ‘locate powers creating subjectivity primarily outside the individual, in structures, the situation, or the Discourse’ (Alvesson, 2010, p. 197). In this thesis, I have regarded the individual as being active and agentic in interpreting their social reality. As such, I have aligned with the view that individuals are relatively aware of their constructions of self and are agentic or active in authoring these constructions (Wieland, 2010). Although, I recognise that health researchers’ understandings and conceptions of self are also situated within a complex social and interactional context, this thesis does not aim to explore identity as a socially-constructed phenomenon. Next, I explore the dimensions of identity that can shape an individual’s self-identity.
5.3 Four dimensions of identity

Gee (2000) has proposed four dimensions of identity that refer to ‘what it means to be recognised as a certain kind of person’ (p. 100). These are presented in Table 12 below. In this framework, nature-identity refers to an individual’s biological characteristics such as gender and race. Institution-identity relates to identity that is institutionally legitimated and defined. In the case of health researchers within the higher education setting, identity can be defined in terms of the particular roles or positions and rights or responsibilities of an individual within a university. The term discourse-identity refers to how identity is discursively constructed and sustained within social interactions with rational others (i.e. those who are not compelled to recognise a particular identity label). Lastly, affinity-identity describes an individual’s active affiliation with a particular task or role which has recognised social meaning and which is developed and sustained by engaging in a set of shared and relevant practices of a particular community.

Table 12: Four dimensions of identity
(from, Gee, 2001)

<table>
<thead>
<tr>
<th>Process</th>
<th>Power</th>
<th>Source of power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature-identity:</td>
<td>(developed from) forces</td>
<td>in nature</td>
</tr>
<tr>
<td>a state</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institution-identity</td>
<td>(authorised by) authorities</td>
<td>within institutions</td>
</tr>
<tr>
<td>a position</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discourse identity</td>
<td>(recognised in) discourse/</td>
<td>of/with ‘rational’ others</td>
</tr>
<tr>
<td>an individual trait</td>
<td>dialogue</td>
<td></td>
</tr>
<tr>
<td>Affinity-identity:</td>
<td>(shared in) the practice</td>
<td>of ‘affinity groups’</td>
</tr>
<tr>
<td>experiences</td>
<td></td>
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Gee’s (2000) framework draws attention to the multilayered nature of identity and the micro- and macro-level historical, institutional, social and cultural forces and structures shaping identity construction across different contexts. He has suggested that these dimensions of identity are interrelated ‘in complex and important ways’ (Gee, 2000, p. 101) and may be accepted, contest or negotiated in term of which one dominates within a particular context for a particular person. From this perspective it becomes possible to conceptualise the different and sometimes competing ways in which individuals see themselves and/or are recognised by others. In the context of the current study, colleagues, workplace leaders, and others both within and outside of the discipline can be important sources of identity validation, while individuals or teams engaged in interdisciplinarity can be regarded as being formative influences in and sources of support for developing and sustaining IDHR practices.

5.5 Identity and identification in organisational settings

In this section of the chapter I discuss how identity is constructed and maintained within organisational settings, of which the higher education institution is a specific example. Organisations are defined as ‘socially constructed from networks of conversations or dialogues, the intertextuality, continuities and consistencies of which serve to maintain and objectify reality for participants’ (Humphreys & Brown, 2002, p. 422). Within the organisational setting, an individual’s identity is seen ‘as emerging from the central, distinctive, and more or less enduring aspects—in short, the essences—of the collectives and roles in which he or she is a member’ (Ashforth, Harrison, & Corley, 2008, p. 328). Individuals are regarded as having multiple identities within organisational settings due to their membership of differentiated networks and groups, with these identities either complementing or contradicting each other (Alvesson, 2010).

The process of identity formation and identification within organisational setting is regarded as being fundamentally underpinned by conflict, insecurity and ambiguity (Alvesson, 2010). The
literature has noted that a myriad of ‘contradictions and struggles, tensions, fragmentation and discord’ (Watson, 2008, p. 124) challenge individuals’ personal and subjective image and interpretations of self (Alvesson et al., 2008; Sveningsson & Alvesson, 2003). The ‘uncertainty produced by change and cultural contact’ (Jenkins, 1996, p. 9) prompt individuals to focus inwards on the self, and consider ‘questions of who they are and who they might become’ (Watson, 2008, p. 122). These tensions in identity encountered in organisational settings can be further exacerbated because of the multiplicity of identities and understandings and perceptions of self which can be complementary but also in conflict with each other (Collinson, 2003). Thus, work organisations are regarded as providing a fruitful setting within which to explore how ‘people deal with questions of who they are and who they might become’ (Watson, 2008, p. 122).

The literature has noted that as individuals grapple with multiple and conflicting identities, they can engage in ‘drawing on cultural resources as well memories and desires to reproduce or transform their sense of self’ (Alvesson et al., 2008, p. 15). Similarly, Rhodes and colleagues (2008) have identified organisations as ‘settings in which identities are (re)constructed’ (p. 229). The term identity work is used in the organisational literature to describe the ongoing mental activity engaged in by individuals to craft a more positively valued and coherent sense of self (Alvesson, 2010; Alvesson et al., 2008; Alvesson & Willmott, 2002; Sveningsson & Alvesson, 2003; Watson, 2008). Key triggers of identity work have been identified as conflicts, ambiguities, discord, and feelings of insecurity encountered within organisations, as well as ‘everyday forms of stress and strain’ (Alvesson et al., 2008, p. 15). Identity work is characterised by an emphasis on becoming rather than being (Alvesson et al., 2008; Sveningsson & Alvesson, 2003), and as such, is seen as a process that is ongoing or continuous.
Reflecting the earlier discussion regarding the extent of individual agency in relation to identity, the process of identity work can also be distinguished in terms of whether it is active and conscious and underpinned by specific events, encounters or experiences, or ‘comparatively unselfconscious’ (Alvesson & Willmott, 2002, p. 626). Writers have observed that identity work can emerge through both ‘self-aware reflections about whom one is and through every day practices of doing work and life’ (Wieland, 2010, p. 505). The degree of individual agency characterising the process of identity construction and the nature of the identities that are constructed in response to threats and struggles in identity (Alvesson, 2010) have been suggested as the two dimensions along which research on identity work differs.

The literature has noted that individuals employ a range of methods, whether consciously or not, to negotiate threats and struggles in relation to identity. Alvesson (2010) has suggested that individuals either choose to move away from or closer to specific identities via a process of differentiation, fragmentation or identification. Collinson (2003) has similarly observed that individuals can adopt a range of ‘survival practices’ (p. 536) within organisations. These include conformist practices where individuals align themselves with the organisation in order to attain ‘material or symbolic security’ (Collinson, 2003, p. 537); dramaturgical strategies where they become ‘increasingly skilled manipulators of self, reputation and image in the eyes of significant others’ (Collinson, 2003, p. 538) especially in highly visible and high-stakes situations; or resistant practices where individuals express their discontent about workplace processes. Other strategies used by individuals to respond to a tension in identities include choosing to conform to or reject the dominant identity validated by the social structure and interactions within a particular environment (Burke, 2003), or leaving a conflicted organisational environment altogether (Cast, 2003).
Despite the growing awareness of how uncertainties and tensions in organisational settings can impact identity, Collinson (2003) has articulated that the existing literature has not ‘fully appreciated the analytical importance of insecurity’ (p. 529) and its impact on the construction of self. Managing competing demands and expectations in relation to identity has been shown to lead to feelings of discomfort, stress, emotional exhaustion, and dissatisfaction. Colbeck (2008) has identified that it is critical for individuals to be able to find ‘synergistic connections’ (p. 14) between multiple identities in order to enhance their productivity, energy, and wellbeing. Burke (2003) has similarly suggested that individuals need to be helped to develop a sense of shared meanings and integration across different identities. These observations point to the importance of recognising the multiplicity of identities and potential for conflict between these, as well as role of workplaces, workplace leaders and collegial networks in providing support for individuals in integrating their identities. Next, I specifically explore identity formation in the higher education organisational setting.

5.6 Identity and identification in the higher education setting

The higher education institution is seen as a particular type of organisation that is founded on three pillars of teaching, research and service (Holley, 2009). Brew (2006) has articulated that the higher education institution and sector in general can be regarded as being a ‘world of acute ambivalence’ (p. 13) characterised by complexity, uncertainty and change, and multiple and conflicting demands. This resonates with Alvesson’s (2010) observation that conflict, insecurity and ambiguity are inherent and existential elements of the experience within organisations.

As discussed in Chapter 2, a key factor impacting on identity and identification in the higher education sector is the normative-discipline based framework. The discipline has been consistently regarded as underpinning notions of research scholarship and excellence, merit and recognition, and legitimacy and credibility in the higher education setting, but also as providing
an important source of meaning and self esteem for people in this sector (Henkel, 2005, 2009; Henkel & Vabo, 2006; Mourad, 1997; Weingart, 2010). The literature has noted that the dominant ‘disciplinary discourse produces the socially situated identities professionals take on and prescribes the kind of activities in which they will engage and, ultimately, the kind of knowledge they will recognise, value, and produce’ (Greckhamer and colleagues, 2008, p. 311). Although there is a shift in discourses in the higher education sector regarding what knowledge is valuable and who produces it (Gibbons et al., 1994) and how it is produced (Enders, 2005), this has yet to be empirically observed. In fact some writers have observed that although disciplinary cultures and frameworks for academic activity are being increasingly contested, the reality is that the disciplines continue to flourish in the higher education sector, institutions are organised conceptually and structurally based on the disciplines, and most academics continue to work as they have always done (Calvert, 2000).

Another key element linked to identity in the higher education sector is the increasing entrepreneurial orientation of academic institutions and their focus on productivity and performance. Specific implications for interdisciplinarity and IDHR are that the market-orientation and managerial culture (Ylijoki, 2005) of the higher education sector are distinctly at odds with the values of integration, synergy and cohesion characterising interdisciplinary work. The focus on productivity and performance has been identified as impacting on the core ‘assumptions about roles, relationships, and boundaries’ (Henkel, 2005, p. 159) of individuals and their scholarly communities, and how work practices and notions of identity are being defined (Henkel, 2005; Neumann & Guthrie, 2002). The entrepreneurial ethos is widely regarded as contributing to a confusion or crisis of identity in the higher education sector (Henkel, 2005; Pfadenhauer, 2006; Ylijoki, 2005).
From this perspective, it can be understood that individuals’ self-concept or self-identity about who one is and what one does in the higher education setting is shaped and legitimised in relation to the discipline and reinforced by disciplinary communities, as well as being influenced by the entrepreneurial culture of the sector. Furthermore, the contradictions and ambiguities experienced within higher education sector (Brew, 2006) can be understood as prompting individuals to look inward and closely examine who they are and what they do (Alvesson et al., 2008; Sveningsson & Alvesson, 2003). Much of the empirical literature on identity is situated within the institutional reform context, as it is one characterised by conflict and ambiguity. It has thus provided a fruitful context in which to explore how individuals construct and negotiate their identity and in particular the various strategies that are used.

For example, Barry and colleagues (2001) showed that participants in their study engaged in various acts of resistance to ‘resist the imposition of control in various ways’ (p. 98) including the development of informal employee networks. In a later study, these authors used identity work as a theoretical lens to illustrate how individuals constructed different identities as defensive or proactive responses to the pressures they encountered in the higher education reform setting (Barry, Berg, & Chandler, 2006). The identities constructed by participants included: stressed professor; managerial advocate; administrative patrician; accidental female; academic chameleon; and resolute researcher (Barry et al., 2006). Participants were shown to shift between these identities in response to specific situations and interactional relationships. The findings of this study also indicated that male participants found it considerably easier to assert and enact their preferred identities and resist complying with institutional norms and expectations, whereas female participants appeared to face greater difficulties in embracing their preferred identity. Although this finding was not explored in detail by the authors, it illustrated the added challenges faced by females in enacting their preferred identities within the higher education workplace, as well as the gendered nature of identity work.
In the Australian setting, Garcia & Hardy (2007) showed that temporal differentiation of past, present and future practices provided academics with a means of positioning themselves and their work more positively. This study also showed that individuals were active and agentic in consciously constructing and negotiating their identity narratives. Humphreys and Brown (2002) showed that tensions between individual and organisational narratives of identity impacted on how participants conceived of their relationship with the organisation. In their study, individual identity narratives referred to individuals’ self conceptions and understandings of their identity, while organisational narratives referred to the dominant and enduring characteristics and values of an organisation. Humphreys and Brown (2002) showed that identity formation in the higher education setting took the form of ongoing dialogue and negotiation between individual and organisational narratives of identity. The authors identified that within the institutional reform context, individuals could become ‘enmeshed in a complicated series of intersecting and sometimes competing dialogues in which they come to be subjugated to some views and resistant to others’ (Humphreys & Brown, 2002, p. 439).

In summary, the institutional reform context has been particularly popular for exploring how identity is constructed and negotiated in the higher education sector, as it is an environment characterised by high levels of conflict and ambiguity. This literature has usefully illustrated the identity negotiation and management strategies that can be used strategies to resolve conflicts in identities in the higher education setting. In the next section of the chapter, I outline the specific theoretical lens for analysing identity construction and negotiation in the higher education setting.

5.7 The concept of dissonance

The concept of dissonance was first articulated by Festinger (1962) to describe how possessing conflicting cognitions (i.e. values, attitudes, beliefs) can engender feelings of discomfort and
unease (i.e. dissonance) for individuals. The notion of dissonance has also been linked with emotions (Jansz & Timmers, 2002) and values (Bruhn, 2008). Jansz and Timmers (2002) used the term emotional dissonance to describe the feelings of unease that can occur when an emotional experience is perceived as threat to identity. Bruhn (2008) used the term value dissonance to describe ‘a distressing mental state in which people find themselves doing things that they do not highly value, or having opinions that do not fit institutional norms or fit with the opinions of those who monitor and enforce them’ (p. 21).

Four key features of dissonance can be observed in the literature. The first is that dissonance is more likely to occur when there is greater discrepancy in values and opinions related to a significant issue (Bruhn, 2008). Second, dissonance is more likely to occur when particular ‘norms were unclear, unspecified or inconsistently applied’ (Bruhn, 2008, p. 21). Third, dissonance is perceived to function as a motivational influence for individuals to reconcile conflicting cognitions, emotions, or values (Festinger, 1962). Fourth, individuals typically resolve or manage dissonance using a range of strategies. For example, Festinger (1962) showed that individuals tried to minimise their feelings of cognitive dissonance by attempting to: reduce the relative importance of a conflicting belief; acquire new beliefs to minimise feelings of dissonance; or entirely remove a conflicting belief that was the cause of the dissonance.

Others have shown that students in the medical education setting, attempted to resolve their cognitive and emotional dissonance by engaging in reconciliation or preservation tactics (Thompson, Teal, Rogers, Paterniti, & Haidet, 2010). Reconciliation involved students altering their internal ideals to align with external expectations and demands, while preservation involved dismissal of external values and ideals and maintenance of internal ideals, thereby minimising the potential for dissonance. Other studies have also shown that dissonance is
managed by regulation of original emotional responses (Jansz & Timmers, 2002), changing personal values and opinions, or by leaving an institution or workplace (Bruhn, 2008).

5.8 Identity dissonance and consonance

Although dissonance has mainly been linked to cognition and epistemologies in the existing literature as a result of Festinger’s (1962) seminal work, it is also a construct that is being increasingly linked to identity. Much of the substantive theorising regarding identity dissonance has been carried out by Costello (2005) in the context of an ethnographic study of students’ experiences in higher education. She explored the underperformance of students from non-privileged backgrounds i.e. based on race, ethnicity, socio-economic status, gender, religion, sexual orientation, and physical ability. She interviewed 72 students and observed more than 300 students in their first year in professional schools of law and social work at one university in the United States. Based on this extensive data, Costello (2005) noted that students showed varying alignment between their personal and subjective conceptions of self (self-identity), and the values and expectations of their emerging professional role (professional identity). Self-identity was defined with reference to Bourdieu’s sociological terminology as a set of largely embodied, internalised, or unconscious dispositions or habitus as representing an individual’s ‘assumptions and world views, taste, postures and gestures, and emotional orientations’ (Costello, 2005, p. 23). Professional identity was viewed as encompassing the values, beliefs, attitudes, world views, practices, expectations and demands of the emerging professional role, in this case as a social worker or lawyer.

Costello (2005) considered that identity dissonance was a largely non-conscious experience due to the implicit nature of self-identity and the ‘non-conscious nature of identity at the level of the habitus’ (Costello, 2005, p. 34). She regarded that participants in her study tended to be largely unaware that they were experiencing a conflict in identities. She also considered individuals to
have limited agency in constructing and managing their identity in terms of consciously devising strategies to cope with these tensions. Costello (2005) suggested that the process of acquiring a new identity would occur ‘smoothly when one’s personal identities are consonant with the new role, while the process is a traumatic one when one’s personal identities are dissonant with the role’ (p. 26). Next, I describe in more detail the experience of identity dissonance and consonance as illustrated in Costello’s (2005) study and the different strategies used (whether consciously or non-consciously) to resolve the conflict in identities.

### 5.8.1 Identity dissonance

For the students in Costello’s (2005) study who were identity-dissonant, the professional school was a site where their personal and preferred narratives of identity were contested by dominant and more socially valued professional role and values. Identity-dissonant students reported feelings of pressure to adopt a professional role they perceived as alien and threatening. Costello (2005) regarded identity dissonance as an unpleasant and traumatic experience, associated with poor academic and professional success and difficulties in coping with cognitive and workload demands of the professional school. She identified two different groups of identity-dissonant students based on the strategies they used to resolve their conflicted identities and feelings of dissonance.

#### 5.8.1.1 Positive identity dissonance

Some identity-dissonant students strived to minimise the conflict in identities by altering their personal identity so that it was no longer in conflict with their emerging professional identity. They did this by shedding their personal values and views, in lieu of socially dominant ones. This group was labelled as being positively identity-dissonant. Costello (2005) found that positive identity-dissonance could be a traumatic experience for students due the difficulties associated with the ‘process of self editing’ (p. 125) and the pressures associated with managing
dissonance, and could result in academic and professional underperformance. Critically, positively identity-dissonant students reported a sense of loss in authenticity associated with ‘having to release important self identities’ (Costello, 2005, p. 123) resulting in feelings of alienation and isolation from their communities of origin. This is unfortunate given one’s home community can be considered an important source of support.

Although positive identity-dissonance was predominantly discussed as being a traumatic experience, Costello (2005) also noted that it could also be an empowering experience. For example, positively identity-dissonant students reported a sensation of ‘finding themselves’ (p. 122) and/or ‘growth or self-revelation’ (p. 123). It can be thus understood that although altering one’s self-identity (as in the case of positively identity-dissonant students) could facilitate a sense of belonging and fit with professional role expectations and values, it was simultaneously characterised by feelings of sacrifice related to the letting go of preferred personal values and identities.

5.8.1.2 Negative identity dissonance

In contrast, Costello (2005) also noted that there were a proportion of students in her study who attempted to minimise the conflict between their self- and professional identity by resisting the demands and expectations of their professional role. These students were described as being negatively identity-dissonant (Costello, 2005). Negatively identity-dissonant students utilised a number of strategies to distance themselves from the values and expectations of the professional role. These tactics included avoiding, subtly resisting some elements and values, or completely rejecting the professional role. In situations where students were unable to avoid or distance themselves from the professional role, they resorted to denying the degree of conflict between their personal and professional identities or trying to maintaining both in a segregated
manner. However, maintaining dual roles was problematic because of the varying and sometimes competing demands associated with enacting multiple identities.

Costello (2005) regarded negative identity dissonance as being a traumatic experience associated with feelings of alienation, isolation, anxiety, doubt, frustration, low self worth, poor academic performance, and a low likelihood of professional success. This has pointed to the difficulties experienced by individuals who expressed identities that diverged from the normative identity values and the inferior outcomes that could be engendered as a result.

5.8.2 *Identity consonance*

Finally, some students in Costello’s (2005) study showed alignment between their personal identity, and the values and expectations of their emerging professional role. These students were labelled as identity-consonant. Costello (2005) regarded that identity-consonant students ‘became swiftly integrated into their [professional] programs and gave the process of becoming acculturated little thought’ (p. 119). In fact, it appeared that these students’ personal attributes and outlook were reinforced or positively extended by the characteristics of their chosen profession. Identity consonance was noted as being a relatively pleasant experience that did not pose significant threats to individuals’ sense of self, and was associated with positive outcomes such as academic and professional success. My interpretation of Costello’s (2005) framework of identity consonance and dissonance is presented in Figure 4.
5.9 Interpreting the identity conflicts in the context of IDHR

Earlier in this chapter I introduced how an individual’s identity within an organisation can be defined using Gee’s (2000) framework. I now apply this framework to the analysis of the identity conflicts experienced by health researchers in the context of IDHR. As discussed in the literature review in Chapter 2, the discipline has continued to provide an important source of meaning, self-esteem, and identity in the higher education institution and in the sector more broadly (Henkel, 2005, 2009; Henkel & Vabo, 2006; Mourad, 1997; Weingart, 2010). Higher education institutions still continue to operate based on disciplinary systems, structures and values, while researchers also work in predominantly discipline-based ways. Although there is changing rhetoric within the higher education sector about the nature and types of forms of knowledge.
and knowing that are valuable (Enders, 2005; Terpstra et al., 2010; Välimaa & Hoffman, 2008), conceptions of identity within the higher education sector is still largely shaped and informed by the discipline. From the perspective of Gee’s (2000) framework and based on the empirical findings presented in Chapter 4, it can be understood that the institution-identity of health researchers in this study was predominantly legitimised in relation to the discipline and was reflective of the dominant ethnocentric values of the institution and its narrow authoritarian views regarding disciplinary diversity.

Gee’s (2000) framework also alerted us to the notion of affinity-identity which refers to an individual’s active affiliation with particular activities or roles, which are socially legitimated by specific communities. In the context of this study, it can be understood that all participants had some degree of personal preference for IDHR since they all self-identified as IDHR researchers, albeit at different levels and for different reasons, as illustrated by the findings presented in Chapter 4. For example, those enacting it at a social-relational level: focused on the collaborative aspect of IDHR; described relatively narrow socialisation experiences (e.g. education and training pathways and career trajectories) in the higher education sector; and expressed stronger disciplinary orientations, allegiances, and conceptions of identity. In contrast, participants enacting IDHR at the personal-embodied level: focused on how it could be enacted by the individual in or outside of the team setting; described eclectic socialisation experiences across multiple disciplines in the higher education sector; and expressed personal values for and notions of identity commensurate with interdisciplinarity.

Thus from the perspective of Gee’s (2000) framework, health researchers’ conflicted experience of IDHR as presented in this thesis can be interpreted as being predominantly underpinned by a tension between participants’ discipline-based narratives of institution-identity and their affinity-identity or personal preferences for interdisciplinary ways of working and thinking. As
mentioned above, all participants in this study self-identified as interdisciplinary researchers and thus can be understood as having a general inclination and affinity for interdisciplinarity. However, based on the multiplicity of levels at which IDHR was enacted by participants it is also possible to understand that some may have had stronger disciplinary orientations and allegiances than others, and may not have appreciated the personal and embodied nature of interdisciplinarity. The level at which these participants enacted IDHR can be regarded as impacting on the strength of the conflict between their institution-identity and affinity-identity in that individuals enacting IDHR at a personal-embodied level may be more vulnerable to conflicts in identity than those enacting IDHR as a tokenistic collaborative activity.

Interposing Costello’s (2005) theoretical lens of identity dissonance can illustrate the different crises in identity experienced by health researchers engaged in IDHR as presented in Figure 5. For example, it is possible to understand that two groups of health researchers engaged in IDHR can experience identity dissonance. The first group includes health researchers with preferences for interdisciplinary ways of working but who are situated within traditional discipline-based organisational environments and cultures. This group is depicted in the upper right-hand ‘dissonance’ quadrant of Figure 5 and typifies the participants in this study.

The second group of health researchers who can experience identity dissonance are those with a strong disciplinary orientation and allegiances working in teams or environments where interdisciplinarity is deeply embedded in organisational culture and practices, due to pragmatic reasons or lack of choice. In such situations, institution-identity may be defined in relation to interdisciplinarity rather than being shaped and legitimised by the discipline. For this second group, identity dissonance can be understood as occurring due to the tension between individuals’ discipline-based affinity-identity narratives and institution-identity narratives which are predominantly interdisciplinary. This group is depicted in the bottom left-hand ‘dissonance’
quadrant of Figure 5. Health researchers with strong disciplinary allegiance and affiliations working in interdisciplinary settings were not part of the sample for this study, and as such this particular experience of identity dissonance is not explored in this thesis.

Also according to Figure 5, there are two groups of health researchers engaged in IDHR who can potentially experience identity consonance in the higher education setting. The first group of identity-consonant researchers are those with strong disciplinary allegiances and affiliations working in the traditional academic model using disciplinary modes of knowledge production. The second group of health researchers engaged in IDHR who can also experience identity consonance, are those with a personal affinity and preference for interdisciplinarity who are working in progressive organisations or environments that support and legitimise interdisciplinary knowledge production, scholarship, and identity. Identity-consonant health researchers were not part of the sample for this study, and as such their experiences are not described as part of this thesis.

<table>
<thead>
<tr>
<th>Affinity-identity narratives</th>
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<td>Institution-identity narratives</td>
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<td>Interdisciplinarity</td>
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Figure 5: Identity conflicts in the context of IDHR from the theoretical perspective of identity
5.10 Summary of chapter

In this chapter I presented a review of the empirical and theoretical literature on identity which was the broad theoretical lens for this study. I then outlined the four dimensions of identity proposed by Gee (2000) related to how individuals may be understood and defined. I then outlined the issues impacting identity and identification in organisations including higher education institutions. This literature provided some insight into the nature and sources of pressure and tension for individuals in the higher education setting particularly in the context of reform. It showed that the changing and sometimes contradicting demands and expectations characterising the higher education landscape has impacted on how individuals understand and interpret their sense of self and identity, and how they conceive of their affiliation and alignment with the organisation.

The empirical literature on identity formation and negotiation in the institutional reform context usefully illustrated that individuals in the higher education setting can experience a tension between their self-identity, and identity expectations espoused by the institution. This literature showed the multiplicity of strategies engaged in by individuals in constructing, managing, and negotiating their identity in response to the identity conflicts that they encounter, including conformist, performative or resistive practices. It also illustrated that individuals are typically agentic and active in negotiating and reconstructing their identity in response to these conflicts.

In this chapter, I also presented Costello’s (2005) model of identity dissonance and consonance as a specific theoretical lens for interpreting the tensions in identities experienced by individuals and how these are resolved. Her framework has provided a way of theoretically understanding how a clash between internalised and embodied notions of self (i.e. self-identity), and the values and expectations of an emerging or new professional role, can result in feelings of dissonance or unease and discomfort for individuals. Costello (2005) noted that the experience of identity-
Dissonance was a largely traumatic and challenging experience that engendered feelings of discomfort and unease for students. This framework has illustrated the multiplicity of ways in which individuals try to minimise the conflict between their self- and professional identity values. Identity-repairing strategies that can be used in achieving a more positive sense of self can be grouped according to whether they involved: alteration of individuals’ internal values and self-identity and alignment with professional norms; or rejection of external professional ideals and preservation of self-identity.

Although Costello’s (2005) model was developed in the context of individuals’ early socialisation into a professional role, the theoretical construct of dissonance has been applied to the interpretation of the experiences of individuals who are further along the continuum of professional socialisation. For example, Warin and colleagues (2006) applied identity dissonance to explore the issues of identity and identification experienced by early/primary years school teachers. The findings of their study illustrated that male teachers experienced feelings of unease and discomfort due to the traditional gendered expectations (i.e. masculinity vs. femininity) and status connotations (e.g. being a male teacher in a traditionally female profession) associated with the role.

It is important to note that the focus of this phenomenologically-oriented thesis is on exploring self-concept or self-identity as interpreted or understood by individuals, rather than identity as a socially constructed phenomenon. Furthermore, the emphasis is on the agentic role of the individual in consciously and actively negotiating between conflicting and disparate narratives of identity available to them (Alvesson, 2010). Micro-level perspectives of identity have been criticised for their limited capacity to attend to the wider social and relational aspects of identity, and the influence of sociological elements, structures, and context (Watson, 2008). Although, I do recognise that there are broader organisational and cultural forces and structures that may
impact on how identities are interpreted, enacted and constructed by individuals in the higher
education institution and the sector more broadly, these contextual factors are not the focus of
this phenomenological thesis.

I earlier identified that the current literature has been critiqued for its failure to provide
theoretical interpretation of interdisciplinarity more broadly and IDHR in particular. Writers have
noted that the literature has not moved beyond descriptive analyses of the opportunities,
challenges, enabler and barriers to interdisciplinary collaboration (Belanger & Rodriguez, 2008).
Although authors such as Manathunga (2008) have theoretically illustrated the liminal,
unhomely and transformative experiences of interdisciplinarity in the higher education setting
with particular recourse to researchers’ identity and conceptions of self, further understanding is
required about the nature of the identity conflicts faced by individuals in the IDHR context and
how these are managed or resolved. Thus, I argue that interpretation of health researchers’
conflicted experience of IDHR from the theoretical perspective of identity, in particular Gee’s
(2000) and Costello’s (2005) frameworks, will be critical in providing new insights into how the
phenomenon is experienced and managed. In the next chapter I present the empirical findings
that have emerged from the theoretical analysis of health researchers’ conflicted experience of
IDHR.
Chapter 6 – The lived experience of IDHR from the theoretical perspective of identity

6.1 Introduction to the chapter

The phenomenological findings presented in Chapter 4 of this thesis illustrated the paradoxical nature and multiplicity of health researchers’ experience of IDHR. In Chapter 5, I argued that these phenomenological findings could be more richly understood from the theoretical perspective of identity, specifically Gee’s (2000) identity dimensions and Costello’s (2005) framework of identity dissonance and consonance.

This chapter answers two secondary research question for this thesis which are ‘how can the lived experience of IDHR be interpreted from the theoretical perspective of identity?’ and ‘how do health researchers construct and manage their identity in the context of IDHR?’ In this chapter I illustrate the identity conflicts encountered by health researchers in the context of IDHR and the different identity management strategies they use to resolve these tensions. This chapter therefore addresses the research objective of providing insight into health researchers’ lived experience of IDHR in the higher education setting from the theoretical perspective of identity, and in particular illustrating the identity tensions in identity that are experienced and how these are managed.

6.2 Health researchers’ experience of identity dissonance

As discussed in Chapter 5, health researchers in this study experienced a significant discord between their institution-identity which is discipline-based and their affinity-identity for interdisciplinary forms of inquiry and IDHR. Participants in this study expressed that they struggled with deciding whether to follow an interdisciplinary pathway that was personally
satisfying and enriching or to work in traditional discipline-based ways that were more socially valued and accepted in the institution. Ralph indicated that he felt personally discontent with having to pursue a discipline-based model of knowledge production and his comments conveyed the sense of the disillusionment associated with having to relinquish his preferred interdisciplinary identity. Identity dissonance has been previously described as involving implicit pressure to adopt an alien or threatening role or values (Costello, 2005).

“...the more traditional academic path is to find a subject and stick to it, and you develop a name in your particular thing, like the Ponzo illusion\(^1\) or something like that (laughs) and become the world expert on the Ponzo illusion. I can’t do that...I couldn’t be happy with that” [Ralph]

Amy, who I earlier described as an interdisciplinary scholar enacting IDHR at the personal-embodied level, noted that she felt unsettled and anxious because she could not define herself or her work in relation to a single academic discipline as was expected and valued within the traditional academic model. This tension between institutional values and expectations and the personal preferences of researchers engaged in IDHR can be understood as contributing to their feelings of apprehension and torn-in-between.

“...it’s quite difficult to define yourself for other people, or even for myself. Sometimes I find myself wishing that I just had you know a small discipline that was mine which I could identify with” [Amy]

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\(^1\) refers to an optical illusion where two identically-sized lines appear to be different sizes when placed across a pair of parallel lines which appear to converge as they recede into the distance. Demonstrated by Italian psychologist Mario Ponzo (1882-1960) in 1913
Other participants also indicated struggling with negotiating between their interdisciplinary understandings and conceptions of self, and the narrow discipline-based notions of identity privileged in the higher education institution and sector more broadly. The frameworks by which academic scholarship and excellence are traditionally defined in the higher education sector can be understood as functioning to marginalise interdisciplinarity including in the health domain. As a result of the difficulties faced in choosing or enacting their interdisciplinary identity, some health researchers questioned how well they would be served by choosing an IDHR career pathway in the higher education sector.

“...it is all very well to be doing interdisciplinary work and be open to all kinds of things but I also need to establish an academic identity for myself and it’s sometimes hard to know what that would be. You know I play with a bit of sociology here and a bit of philosophy there but I don’t have the formal background in any of those fields so I couldn’t go and teach an undergraduate course in any of those areas even though I’m reading about them and writing about them. So it definitely does raise issues to do with personal identity and professional identity” [Rita]

Participants noted that their intrinsic motivations and preferences for being involved in IDHR (whether at the social-relational or personal-embodied level) were at risk of being eroded within the entrepreneurial culture of the higher education sector. Kelly indicated that in order to keep pace with institutional expectations related to research performance and productivity, new authorship criteria were being developed within IDHR settings which imposed an entrepreneurial dimension to the process of research.
‘...I don’t actually care about my name appearing on things, I’m interested in doing the work, I like hearing about what people are doing, I like helping them, and sometimes writing little bit.... [But] now that we’ve been told that if we don’t shape up in terms of meeting criteria for formal recorded output, everybody’s agreed that anyone who is involved in a project will have their name on it’ [Kelly]

There was a discernable conflict between some participants’ personal priorities and goals, and the higher education institution’s emphasis on research productivity and performance. In particular, participants with health education responsibilities discussed that their key goal was to provide quality health education and training which was not aligned with the university’s focus on research. As a result of this conflict between personal aspirations and institutional values, these health researchers were vulnerable to experiencing a sense of detachment from the institution and its values, and feeling uncertain about their belonging or fit.

“...there is a real tension between the university’s expectations of what the faculty will do and the faculty’s expectations of what the faculty ought to be doing. And I’m absolutely convinced that most of the people I work with, if you ask them ‘what is your number one duty?’ they would say something like ‘my number one duty is to produce safe allied health practitioners for the Australian community’. Whereas I believe the university’s expectation would be ‘your number 1 priority should be to produce research’ and this is become more and more a point of conflict especially over the last few years” [Fiona]

The corporatisation of the higher education sector has been identified as contributing to a separation of professional activities such as research and teaching (Neumann & Guthrie, 2002).
The division is in direct conflict with Boyer’s (1990) expanded notion of scholarship, and may serve to denigrate the position of teaching as a legitimate and valued academic activity. The literature has shown that teaching is already less socially valued within higher education (Brew, 2006). In the academic medicine context, an institutional focus on research was shown to engender feelings of marginalisation and lack of credibility for individuals who privileged teaching over research (Kumar, Roberts, & Thistlethwaite, 2011). This separation can detrimentally impact interdisciplinary endeavours that seek to strengthen the links between education and research, and promote a culture of research-enriched or enhanced teaching within the higher education institution.

As a result of the various ambiguities encountered in the IDHR setting in relation to their sense of self as a researcher, participants viewed that interdisciplinary scholars and teams needed to be personally robust. Penny articulated a need for researchers to be able to critically reflect on their IDHR experience and develop a resilient attitude and outlook. The literature has noted that a degree of ‘investigator perseverance and tenacity’ [including] ‘against the intellectual challenges raised by scientific sceptics’ (Rosenfield & Kessel, 2008, p. 439) is necessary in the interdisciplinary research setting.

“There is an understanding that it happens all the time so you learn very quickly not to take it personally. It still hurts, rejection is always painful but you learn to recognise in the reviews that a person is not really engaging with what you’re doing at all” [Penny]

The narratives presented in this section of the chapter have illustrated the tensions in identity and associated feelings of discomfort, anxiety, and unease experienced by health researchers engaged in IDHR in the higher education sector. These findings have also shown how conflicts
between health researchers’ affinity and institution identity manifested in the context of their daily research practice. Using the analytical lens of identity dissonance (Costello, 2005), it was possible to further differentiate between two categories of health researchers experiencing identity dissonance, based on how they responded to and negotiated the experience of conflicting identities. These participants’ experiences and the nature of the identity work strategies they used in resolving their identity conflict are detailed below.

6.2.1 Health researchers experiencing positive dissonance

Some participants in this study responded to the conflict between their institution and affinity identity by attempting to alter aspects of their self or personal values. These participants were regarded as being positively identity-dissonant (Costello, 2005). These participants used a range of different strategies to manage the conflict in identities that they encountered in the IDHR setting. Some positively-dissonant participants attempted to actively align themselves with the normative-discipline based expectations of the traditional academic model by making links with a discipline and disciplinary community, while others managed the tension in identities by altering their personal preferences and affinities. It is important to note that these strategies were interchangeably used by some participants depending on the requirements of the particular research environment, project, team or role that they occupied in a particular place and time.

6.2.1.1 Seeking or reinforcing connections with a discipline

Some positively-dissonant health researchers engaged in IDHR sought to resolve the tension they experienced between their institution- and affinity identities, by attempting to align themselves with the normative discipline-based expectations of their institution and the higher education sector. They did this by seeking new links or reinforcing existing connections with a discipline and by participating in the practices of an associated disciplinary community.
Angela, who had a nursing background, reported that she actively sought opportunities to reinforce her connections with the nursing discipline and community. She indicated how making these links helped her to feel a sense of kinship and connection with a particular disciplinary community, and provided a way of balancing her interdisciplinary preferences and ways of working with the normative discipline-based expectations in her workplace and research team.

“For example now I’m trying to engage with more health people. That’s the way I’m coping, I’m trying to find that balance where I can still do my job but try to engage with people that I feel more comfortable working with” [Angela]

Colin also expressed the value of opportunities to connect and interact with the discipline of sociology in which he was formally trained, and its members. The metaphor of ‘speaking the same language’ and being ‘with my people’ conveys a notion of shared worldviews, values and discourses. This shared background and understandings can be understood to facilitate a sense of belonging to a specific community.

‘...I think touching base with your roots and validating your point of view really helps sometimes.....it’s so good to be with my people just to be able to speak the same language’ [Colin]

Fiona, who had a background in medicine, similarly indicated that research projects in the clinical settings offered a welcome opportunity to re-engage and re-associate herself with the knowledge and interpretive frameworks that she had been socialised into as a student and health practitioner. It was clear that shared knowledge, membership, community acceptance, and validation functioned to shape and reinforce these participants’ understandings of self. The
literature has shown that possessing shared and insider knowledge can provide a foundation for trust within professional relationships and interactions (Tierney, 2008). Trust is seen not only as a shared experience, but also a conditional experience influenced by assumptions about social and moral obligations and the competence of the trusted (Tierney, 2008).

‘...when I go into clinician land, and I go in and I talk to health professionals, that rekindles that knowledge and that social world that I was a member of, and the importance of those issues that you can only really know if you’re a member’

[Fiona]

The warm emotional tones and rich descriptive language such as ‘crave’ and ‘really enjoy’ used by Fiona, illustrated the personal value of opportunities to connect with those from a similar background and in a familiar environment. The value of these interactions was so significant that they almost appeared to invoke a physiological response, as depicted by Fiona’s use of the phrase ‘my heart starts beating quicker’.

“...but I do crave working with health people. I do. I feel relieved sometimes when I get a project, a research project where it’s in hospitals, in a place that is so familiar and I identify with, I really enjoy it. I really feel that um......my heart starts beating quicker (laughs)” [Fiona]

The accounts presented above have clearly that a number of positive outcomes such as feelings of belonging, wellbeing, acceptance and validation were associated with health researchers’ attempts to establish or revive particular disciplinary connections and relationships. However, it was also clear that this process of making disciplinary connections could further reinforce the incommensurability characterising participants’ lived experience for IDHR. Gloria discussed that
she often sought external opportunities for dissemination, discussion and validation of her research since her qualitative expertise was not accepted and recognised in her IDHR team. These included linking in with individuals or groups and networks with an interpretive research orientation, such as the qualitatively oriented health research network which was the main source of recruitment into this study. Although, the strategy of seeking external validation and acceptance was important in facilitating feelings of wellbeing, the primarily self-directed and autonomous nature of this activity functioned to further alienate Gloria from her current IDHR team.

“I never present my qualitative research to my group. I have to present them outside to be evaluated because it is not widely accepted in my group. So that is a big barrier”

[Gloria]

Sarah’s comments also illustrated that the activity of seeking out and participating in the activities of other groups, exacerbated her feelings of detachment from her current IDHR team and emphase her already marginalised position within the team.

“So I’m not going as a team but I’m going as an individual searching for those opportunities and trying to grow within the organisation but individually, so that is kind of hard.” [Sarah]

Overall, the findings presented in this section of the chapter have shown that health researchers engaged in IDHR sometimes actively sought connections with a discipline and disciplinary community as a way of reconciling their tensions in identity, and minimising associated feelings of discomfort and unease. Seeking connections with a discipline and disciplinary community was a more natural option for health researchers engaged in IDHR who expressed stronger
disciplinary affiliations and allegiances, and who enacted interdisciplinarity at the social-relational or collaborative level.

6.2.1.2 Sacrificing personal preferences

Some positively-dissonant health researchers engaged in IDHR, indicated they coped with the tension between their institution and affinity identities, by relinquishing their interdisciplinary values and preferences which were less socially valued within the normative discipline-based model in the higher education setting. Gloria described that she was actively trying to change her interdisciplinary ways of doing research in order to ‘blend’ and ‘fit’ in with the expectations and demands of her IDHR team.

“...I’m the one who’s trying to blend in, I have to try to somehow fit into their thing and their expectations, so. ....I have to change the way I do things to make them suitable for what they expect’ [Gloria]

Participants noted that it was at times easier to sacrifice their personal preferences and adopt normative discipline-based ways of working, rather than to expend undue personal energy in resisting these demands or enacting their preferred identity. It can thus be understood that the notion of protecting the self was a key priority for some participants, and shaped the nature of the strategies they used to reconcile their conflicted identities.

“...so I basically said ‘alright let’s just get to the end of this process and its fine, simply because, you know I just couldn’t be bothered to argue. It was just not worth the energy” [Julie]
Kelly provided a poignant example of the struggles associated with giving up one’s preferred identity and personal values and preferences. She described how she had recently transitioned from an interdisciplinary research environment and research project, into a uni-disciplinary academic centre and research team. Although, this transition had been prompted by a pragmatic desire to advance her career, it was clear that Kelly was struggling to work within the confines and the boundaries imposed by the traditional discipline-based model. The metaphorical expression of ‘gone backwards’, ‘my wings have been clipped’ and ‘I’m in a box’ presented evocative images of the immense challenges and frustrations that she was experiencing in her daily research practice.

“I feel now transitioning to working in a department now, in the School of X, in a team that’s made up of only sociologists very stifling. I feel like my wings have been clipped. I feel like I have gone backwards 30 years. I feel like I’m in a box and that I’m being asked to think in an old style.” [Kelly]

Although aligning with normative discipline-based expectations enabled participants to negotiate the feelings of uneasiness and discomfort associated with identity dissonance, this strategy was also associated with a variety of tangible and intangible costs. For example, Gloria expressed that giving up her preferred ways of working and in order to fit in with the expectations of her workplace and research team, was associated with a distinct sense of loss in relation to her fundamental sense of self and identity.

“...and what gives is that identity because sometimes to catch up with them, by trying to catch up with them, I’m losing a bit of who I really am” [Gloria]
The existing literature has shown that there are gender differences in how identity is enacted in the higher education setting. Barry and colleagues (2001) illustrated that female participants in their study faced greater challenges in asserting their preferred identity and resisting institutional norms and expectations, than their male counterparts. Although this finding was not explored in detail by the authors, it points to the issues faced by women engaged in interdisciplinarity in the higher education workplace. The literature has noted the challenges faced in attracting and retaining women in an interdisciplinary research career pathway (Rhoten & Pfirman, 2007a, 2007b).

Overall, the accounts presented in this section of the chapter have illustrated that health researchers engaged in IDHR often need to make a difficult compromise in terms of letting go of their personal values and preferences related to IDHR and complying with discipline-based demands and expectations of the higher education institution and the sector in general. Although, these strategies may be undertaken for pragmatic reasons and may enhance researchers’ feelings of acceptance and belonging, participants’ accounts also pointed to the detrimental impact of their decision to sacrifice their preferred identity for a more socially valued one, on their emotional and mental health and wellbeing, of. These findings support the notion that researchers engaged in IDHR who chose to give up their interdisciplinary identity for a traditional discipline-based one, did so at considerable personal and professional expense.

### 6.2.2 Health researchers experiencing negative dissonance

In contrast to the narratives expressed above by positively-dissonant participants who tended to use identity negotiation strategies characterised by conformity or compliance with normative discipline-based values, some participants in this study used more resistive practices characterised by distancing themselves from normative values. These participants used different strategies to minimise the tension between their affinity and institution identity that they encountered in the
IDHR setting. Some attempted to manipulate aspects of their identity, actively affirm their interdisciplinary affinities and identity, or seek alternative environments in which IDHR was permitted and valued.

6.2.2.1 Manipulating identity

Some participants in this study described how they attempted contort their self-image or presentation of self by drawing on flexible identity-labels depending on the research environment and requirements of their role. This resonates with the notion of performative strategies (Collinson, 2003) articulated in the literature. It can be understood that health researchers engaged in IDHR were attempting to present an impression of self as credible researchers engaged in legitimate forms of knowledge production. The financial discourse used by Kelly illustrated how participants actively switched or traded between different images of self and identity labels in order to engender a favourable impression of themselves and their work within the boundaries imposed by the traditional academic model.

“...you’ve got to be able to switch hats between being someone who can operate in this world of certainty and rigour and certain outcomes, and then someone who can sit with what it actually means which is often uncertainty. I think there is a skill between switching hats, you have to sell different aspects of yourself in the world” [Kelly]

The metaphorical expression of ‘chameleon’ utilised by Helen pointed to the identity shape-shifting activities that health researchers working in an interdisciplinary manner engage in, depending on the demands and expectations of the research environment, role and audience.
“But you do manipulate it, so depends which group you’re in you put more emphasis in to, if I’m with a health professional I’m more likely to say ‘I actually have a pharmacy background’ but if I was with another group I would say ‘oh I’m a health services researcher’, so you like to try to, like a chameleon you have to change depending on who you’re talking to” [Helen]

Participants engaged in qualitative research expressed that the challenges to legitimacy they encountered in the health research field as discussed in Chapter 4, engendered an implicit pressure to incorporate a quantitative dimension to their work in order to convey a degree of credibility as well as to avoid alienating mainstream funding bodies. Shannon noted the pressure to ‘throw in a survey just to please the funding body’ was a dilemma that her qualitatively-oriented IDHR team grappled with regularly in the context of applying for funding. However, properly positioning a project as mixed-methods research involves not only altering tangible aspects such as the sampling approach or data collection and analysis methods, but also its underpinning philosophical and epistemic framework, which as indicated by Shannon, may be difficult or in fact undesirable to do.

“...that’s only really a problem when it comes to funding, like we never know whether we need to make sure we have a quantitative and qualitative to a project. It becomes difficult, you don’t want to just throw in a survey just to please the funding body, you kind of what to be able to do it properly. So that’s a real tension, that’s something we struggle with” [Shannon]

Amy described how her interdisciplinary team engaged in a degree of ‘contortion’ to enhance its fit and alignment with the discipline-based expectations and criteria of funding bodies. This can be necessary for teams to do in order to meet the external demands and avoid alienating
funding bodies in an increasingly competitive research environment. This lends weight to the observation made in Chapter 4 about IDHR being vulnerable to tokenistic use or employed as a label (Greckhamer, 2008)

“...So we end up having to be incredibly vague and use keywords like patient experience or something which doesn’t describe what we’re doing at all, but it’s just a way of, we have to do a bit of contortion, contorting ourselves to get into some of those boxes” [Amy]

The findings presented in this section of the chapter findings illustrate the performative nature of the identity management strategies used by health researchers and teams engaged in IDHR to present a favourable image of self or the collective. Goffman’s (1973) seminal work on the dramaturgical presentation of self has illustrated how individuals or groups can continuously create and re-create particular impressions of reality through the processes of interpretation and enactment. The manipulation of self is particularly evident in high-stakes situations. In the research environment, high stakes situations can include the process of applying for funding or research dissemination.

Despite the positive outcomes such as enhanced perceptions of credibility associated with manipulating impressions of self, it can also be understood as being challenging due to the need to manage the complex demands and expectations associated with these identities. Kelly identified that ‘there is a skill between switching hats’ while Lisa discussed that she found it difficult to draw on multiple identity labels because she did not consider herself an expert in any particular discipline.
“...I find it very difficult because I don’t think I have the depth of expertise in any of those disciplines compared to somebody” [Lisa]

Overall, these findings have illustrated that some negatively-dissonant participants chose to draw on multiple identities in order to convey a favourable impression of themselves as competent and credible researchers. The specific identities that were used by participants varied depending on the research context and the specific nature of the situation. Costello (2005) identified that managing behaviours and expectations associated with multiple identities can be distracting and exhausting. She also cautioned that the use of sustained performative strategies involving multiple identities such as role play, could result in external values and beliefs being potentially internalised or embodied (Costello, 2005).

6.2.2.2 Actively affirming personal preferences and affinity for IDHR

Some negatively-dissonant health researchers engaged in IDHR indicated that they responded to the contradictions in identity, by actively affirming their values and affinity for interdisciplinarity and IDHR. These participants were dismissive of the narrow discipline-based identity labels which are common in the higher education sector.

“...your label no longer really matters that much, it’s like a problem oriented research focus so you bring what you have and whether you are this or that doesn’t really matter, it’s what comes out of your mouth, how you look at a problem, how you can contribute rather than your label” [Kelly]

Conceptualising the boundaries between disciplines as being in flux and constant negotiation, provided these researchers with a more suitable framework for thinking about their identity and research practices. This resonates with the existing literature which has shown that researchers
in the higher education sector were increasingly defining their identity in fluid, flexible and confluent ways in terms of ‘being between several different areas’ (Brew, 2008, p. 431) or as ‘free floating in no particular discipline but between various disciplines or sub disciplines’ (Brew, 2008, p. 431). Specifically in this study, participants tended to define their identity in relation to their methodological expertise and skills, rather than in relation to a specific discipline. Thus, identity labels and descriptors that were skill-based rather than discipline-based were popular among these participants. Sandra described how she used her qualitative research skills and expertise as a means of identification or ‘calling card’.

“...so now when I introduce myself I will say you now ‘I’m a qualitative research person’ or ‘I’m primarily a methodologist’, you know I use that as my calling card” [Sandra]

“It is more about having particular skills and being situated in a particular way of working” [Ralph]

Although, the rejection of discipline-based identity labels in the normative discipline-based academic model can be understood as being difficult for participants, it was also overwhelmingly clear that benefits gained by participants from affirming their interdisciplinary preferences and embracing their preferred identity, could outweigh these negative elements. Ralph commented how enacting his preferred interdisciplinary identity was satisfying, enriching and fulfilling, and as such he was not particularly concerned about not being defined in relation to a discipline.

“I don’t think I’m particularly worried about who I identify with. I found something interesting to do, its intellectual, its stimulating, it involves working with invariably nice and interesting people, always doing something that is
worthwhile for the communities so, it keeps me happy and if I don’t have a name to call myself......so be it” [Ralph]

Similarly, Amy noted that although she had felt initially insecure and uncertain about actively affirming her interdisciplinary identity, she had developed the confidence to embrace her preferred identity. It was clear that as a result of participants’ cumulative interdisciplinary experiences and personal and professional growth over time, they were developing increased skills and feelings of self-efficacy to engage with interdisciplinarity and IDHR as a legitimate and valuable approach to research inquiry.

“I now say kind of laugh it off and say oh I’m one of those people that doesn’t come from anywhere in particular, or I’m one of those people ambles around all over the place. So for a long time I felt defensive about that, but increasingly I can see the benefit of it” [Amy]

Overall, participants’ accounts reflected their evolved thinking about aspects such as research quality and rigour (Kincheloe, 2001) and notions of researcher professionalism (Evans, 2010). It was clear that these participants considered it more valuable for researchers to have particular analytical, problem-solving or methodological skills and expertise that could be flexibly adapted across research settings, rather than in-depth and narrow disciplinary understandings.

Although some participants chose to affirm and embrace an interdisciplinary values identity, they did so with the awareness that the legitimacy, credibility, and recognition of this identity would be contested within the normative discipline-based framework in the higher education sector. The existing literature has shown that rejecting disciplinary notions of identity can be associated with various costs. Humphreys and Brown (2002) showed that individuals who
expressed complete or partial dis-identification with organisational identity narratives could be at risk of experiencing feelings of alienation, isolation and exclusion, and a sense of ambivalence regarding their role and towards the organisation itself.

6.2.2.3 Seeking alternative environments that permit interdisciplinarity

Some negatively-dissonant health researchers engaged in IDHR identified that they were faced with limited options in their current research environments or teams to reconcile the conflict between their institution and affinity identities. Participants overwhelmingly agreed that due to the risk-laden perception of IDHR as discussed in Chapter 4, it was not explicitly supported by workplaces or higher education institutions as a legitimate form of knowledge production and approach to research inquiry. Penny discussed her frustration with the dismissal of IDHR. Her comments illustrated the systemic barriers and frustrations faced by scholars engaged in IDHR as they try to enact interdisciplinary approaches to knowledge production and research inquiry in the higher education setting.

“I felt incredibly frustrated and wanted to be able to explore and test these ideas and the message that I got from the environment was ‘this is a waste of time, why are you asking these questions?’” [Penny]

This observation about the lack of permission was reinforced by participants already working in environments that supported and encouraged IDHR. They expressed a sense of privilege, but also despondency, because of the potentially limited opportunities for mobility or progression within or between organisations.

“So...when I compare the opportunities I have here compared to other colleagues I know that it’s a very privileged place to be” [Lisa]
“...I mean part of the problem though with this kind of thing is that there’s not that many places in the world that fill this, that are like this, so it can make you feel a bit like you know ‘if I wanted to leave this city where would I go?’” [Rita]

As a result of the lack of explicit support for IDHR, some participants reported that they often had no choice but to disassociate themselves with a particular team, workplace or institutional setting which may have been the setting for contested identities and work practices. These participants extolled the importance and value of finding alternative research opportunities and work environments in which their interdisciplinary preferences and identity were legitimated and supported rather than questioned or discarded.

“....it was about finding a place where I could be secure with the idea of interdisciplinary rather than feeling like a person that had no discipline and actually seeing that in fact I was drawing on lots of different disciplines at once and that was a good thing” [Shannon]

Sandra noted she had been able to reflect on and consolidate her core values, identity and work practices in relation to IDHR as a result of moving to a workplace that was ‘explicitly interdisciplinary’ in that it articulated notions of diversity in its mission statement as well as within its research culture, discourses and practices.

“...I really became conscious of interdisciplinarity as an important part of my practice after I came to this centre because this centre is very explicitly interdisciplinary. So it talks about itself as multidisciplinary, and quite deliberately employs people from many backgrounds” [Sandra]
In Sandra’s case it was evident that there was a considerable degree of alignment between the public front stage discourses or images and the more private backstage climate and culture (Goffman, 1973) of the work environment. However, as discussed in Chapter 4, IDHR and interdisciplinarity are vulnerable to being used tokenistically by individuals, teams or organisations in order to meet various strategic demands (Greckhamer et al., 2008) or to convey a public image of cohesive and synergistic work across disciplines, without necessarily being underpinned by a commensurate backstage collaborative culture or ethos.

Although participants advocated the importance of seeking research environments in which they felt supported and legitimated, they also acknowledged that leaving a particular research team was not always easy. The expectations associated with the notion of ‘playing for the team’ was identified a key factor exacerbating the challenges of leaving.

6.3 Summary of chapter

This chapter addressed the research questions of ‘how can the lived experience of IDHR be interpreted from the theoretical perspective of identity?’ and ‘how do health researchers construct and manage their identity in the context of IDHR?’ In this chapter I used insights from Gee’s (2000) model outlining the four dimensions of identity and Costello’s (2005) identity dissonance framework to provide theoretical insight into health researchers’ conflicted experience of IDHR, and in particular the manner in which they responded to their conflicted experience and managed the tensions in identity within this context.

This chapter has provided insight into the nature and sources of pressure and tension for researchers in the higher education setting, particularly those engaged in approaches to knowledge production and research inquiry that are in conflict with the normative discipline-
based academic model. Using Gee’s (2000) model, I outlined that the key issue for participants in this study was the tension between the affinity identity that was predominantly interdisciplinary and their institution identity which was discipline based. The findings presented in this chapter illustrated that discipline-based demands and expectations of the higher education landscape presented challenges for health researchers engaged in IDHR in positioning not only their work but also their fundamental sense of self. The conflicts, ambiguities and insecurities encountered within their daily research practice were shown to engender feelings of dissonance which are unpleasant, and which individuals attempted to minimise in a number of different ways.

I used Costello’s (2005) model as a theoretical and organising framework to further explore how health researchers engaged in IDHR in the higher education sector managed their tensions in identity. This framework enabled analysis of the complexities involved when an individual is faced with a new identity. I illustrated that the strategies used by participants included: conformist practices involving alignment with dominant and socially valued identities at the expense of participants’ personal values or conceptions of self; performative methods involving manipulation of identity and self-image; and resistant practices involving affirmation of individuals’ interdisciplinary preferences and affinity identity at the expense of normative discipline-based conceptions of identity. The strategies used by participants were shown to engender different experiences and outcomes for participants.

Positively-dissonant health researchers utilised conformist strategies which brought them into line with the normative expectations of the institution. Burke (2003) has noted that when conflicting identities are activated, some individuals may choose to conform to the dominant identity validated by the social structure and interactions within a particular environment. Some positively-dissonant participants chose to establish new or revive old connections with a discipline and disciplinary community. This was a natural and easier option for health
researchers who had strong allegiances and identification with a particular health discipline or profession. Although, these interactions, connections, and relationships with a discipline facilitated feelings of validation and kinship, participants often pursued these activities alone and without support, thus exacerbating their feelings of isolation and detachment. Other positively-dissonant health researchers sacrificed their interdisciplinary values and preferences in order to align with the dominant discipline-based values in the institution and the higher education sector more broadly. Although this enabled health researchers to achieve a sense of fit and belonging, it was also associated with feelings of emotional vulnerability and a sense of loss associated with letting go of their personal values and sense of self. This resonated with Costello’s (2005) observation of the physical and physiological distress that could be experienced by positively-dissonant individuals.

The findings presented in this chapter also illustrated that some health researchers responded to the conflict in identities by distancing themselves from or rejecting dominant institutional narratives of identity which are legitimised in relation to a discipline. Negatively-dissonant participants questioned the value of bounded notions of scholarship and notions of identity. Some of these participants attempted to manipulate their self-image and engaged in actively trading between multiple identities in order to convey favourable impressions of self. Although this strategy enabled participants to establish their credibility, competence and legitimacy in line with normative expectations, managing the complex demands and expectations associated with multiple identities and communities was tiring and difficult.

Other negatively-dissonant participants actively rejected institutional norms of identity and identification, and instead chose to affirm their interdisciplinary preferences. These participants utilised skill-based identity labels as a way of making explicit their values and preferences in relation to research. The process of rejecting normative discipline-based expectations was
associated with some negative outcomes such as feelings of uncertainty and isolation associated with not having a disciplinary identity or a disciplinary home. This has pointed to the difficulties experienced by individuals who expressed identities that diverged from the normative identity values and the inferior outcomes that could be engendered as a result. However, the findings concurrently showed that there were some positive outcomes associated with participants affirming and enacting their preferred identity, such as feelings of authenticity, personal satisfaction, enrichment and fulfilment, self-confidence and self-efficacy which contributed to health researchers’ growing feelings self-empowerment. Therefore, this thesis has illustrated that negative identity dissonance can in fact be associated with positive outcomes thereby extending Costello’s (2005) observation that it is generally a traumatic experience.

Another strategy used by negatively-dissonant participants was to exit a workplace or organisation in which their identities were contested. The notion of protecting the self emerged as a key driver for leaving, but key barriers included existing obligations and commitments. Some of these participants sought out alternative work environments where interdisciplinarity was recognised as a valuable approach to research inquiry. These workplaces tended to be characterised by the presence of leaders and other socialising agents such research leaders, supervisors or mentors who could help orient participants to interdisciplinary research practice and identity. However, the lack of environments where interdisciplinarity was explicitly supported meant that individuals had limited mobility within and between organisations.

Overall, the findings presented in this chapter have illustrated that intentionality and agency were key features of health researchers’ attempts to reconcile their competing identities and achieve a positive sense of self in the higher education setting. This resonates with the existing literature which has documented that an inward focus on self and ‘reflections about whom one is and through every day practices of doing work and life’ (Wieland, 2010, p. 505) can prompt
individuals to engage in identity reparation strategies. It also aligns with Alvesson’s (2010) view that individual actively negotiate between conflicting and disparate narratives of identity that are available to them within the particularities of the context. Micro-level perspectives of identity which privilege a focus on the individual and their agentic role have been criticised for their limited capacity to capture the social and relational aspects of identity, and the influence of sociological elements, structures, and context (Watson, 2008). However, I have shown that such micro-level perspectives are in fact necessary to sensitively capture the complexity and dynamicity of the identity construction experience. In the context of this thesis, a focus on the individual actor enabled an analysis of how identity is interpreted, enacted and constructed by individuals in higher education organisations.

In the next chapter I summarise the key findings of this thesis, the scholarly significance of this study and the practical implications of findings, the strengths and limitations of the study, and the insights it has provided regarding future research possibilities.
Chapter 7 - Discussion

7.1 Introduction to the chapter

The purpose of this chapter is to reflect on the thesis as a whole including the research approach and methods that were utilised, the findings that were generated, and the insights that have been provided into how IDHR is lived in the higher education setting. This chapter therefore addresses the research objective of analysing the scholarly significance of the study in advancing contemporary understandings of IDHR, and the practical implications of findings for individuals, teams, workplaces, higher education institutions, as well as the sector more broadly. I first summarise the justification for this thesis and its key findings. I then discuss the scholarly significance of this study including its methodological and theoretical contributions. Next I consider the practical implications of study findings. Finally I review the strengths and limitations of this thesis as well as look ahead to future research possibilities.

7.2 Justification for this thesis

Interdisciplinarity involves linking, blending, and integrating (Klein, 2010) knowledge, theories, concepts, and methods across two or more disciplinary areas or fields of specialised knowledge or practice into a common research framework (Aboelela et al., 2007; Choi & Pak, 2006, 2007; Flinterman et al., 2001; Giacomini, 2004; Porter et al., 2006). In the health research context, interdisciplinary health research (IDHR) specifically involves the integration of perspectives among multiple disciplines related to health (Hall et al., 2006) as well as disciplines within the same or spanning research paradigms (Carey & Smith, 2007). IDHR provides the focus for this thesis.

The literature on interdisciplinarity and IDHR has been dominated by anthropological and sociological perspectives which have privileged a view of the academic disciplines as separate,
bounded and discrete. This has resulted in the contemporary empirical and theoretical literature focussing on the interdisciplinary team as the unit of analysis (Klein, 2010; Wagner et al., 2011), exploring the interpersonal level of collaborative dimension of interdisciplinarity (Pfirman & Martin, 2010), and identifying implications for practice and future research agendas linked to interdisciplinary collaboration (Jacobs & Frickel, 2009). Although the literature has recognised that those engaged in interdisciplinary research may experience ‘particular stresses, pressures, and obligations that are notably different from those scholars that operate within single conventional disciplines’ (Spanner, 2001, p. 356), there is a marked lack of empirical and theoretical insight provided regarding what it is actually like to be an interdisciplinary researcher in the higher education sector. As such, there have been increasing calls for researchers to utilise sophisticated methodologies and theory in order to advance insight into interdisciplinarity (Belanger & Rodriguez, 2008).

In the health research domain, little is known about how researchers enact IDHR within their daily practice; their experience of traversing and negotiating across multiple disciplines; the nature of the challenges and struggles they may encounter; how they negotiate and manage these issues; and the impact of the IDHR experience on their personal and professional sense of self. These gaps in the literature have provided the impetus for this thesis and have lent weight to my argument that there is a need for newer and more meaningful descriptions and interpretations of IDHR that can illustrate how it is experienced as an essentially human phenomenon. This thesis has set out to explore health researchers’ lived experience of IDHR in the higher education sector. It has successfully used a hermeneutic phenomenological framework to gather and meaningfully interpret rich idiographic data from twenty-one health researchers in the Australian higher education sector. Data interpretation was multi-pronged and involved both a phenomenological analysis aimed at exploring the essential features of the
lived experience of IDHR, and a theoretical analysis aimed at making visible the links between health researchers' lived experience of IDHR and their personal and professional identity.

7.3 Key findings of this thesis

The key phenomenological findings of this thesis were that health researchers' lived experience of IDHR was essentially characterised by conflict in that it was simultaneously enabling and disabling; and that health researchers enacted IDHR at multiple levels including at the social-relational or collaborative level as well as the personal-embodied or individual level. The key theoretical insights afforded by this thesis were that the conflicted experience of IDHR was characterised by a tension between health researchers’ affinity-identity and institution-identity (Gee, 2000), and that this conflict in identities was resolved using conformist, performative or resistive identity repairing strategies. These key phenomenological and theoretical findings are summarised in more detail below.

7.3.1 Health researchers’ conflicted experience of IDHR

In Chapter 4, I illustrated that health researchers’ lived experience of IDHR was simultaneously enabling and disabling, and thus fundamentally underpinned by conflict. The first narrative of enablement expressed in this study related to IDHR being experienced as valuable due to its capacity to: generate new insights; enhance research quality and rigour; increase the translational potential of findings; contribute to the flexibility and adaptability of the research approach; as well as its capacity to engender personal benefits for researchers such as enjoyment, fun and enrichment. The existing literature has shown that research value and significance is typically interpreted in terms of impact on or contributions to the: individual researcher and their personal and professional gains; research community; and wider society (Bruce, Pham, & Stoodley, 2004). In particular, enabling change and contributing to change in a
wider community of practice have been identified as key dimensions of value for researchers (Åkerlind, 2008).

The second narrative of enablement expressed by health researchers, related to IDHR being experienced as facilitating learning. The findings of this study showed that IDHR was associated with learning about other disciplines’ perspectives and approaches, as well as one’s own discipline. As participants encountered the knowledge frameworks and social practices of other disciplines within the IDHR context, they were prompted to reflect on and critically question their own thinking and ways of working. The literature has shown that since interdisciplinarity as a form of knowledge production, involves exposure to alternative viewpoints, interpretations and practices, it can naturally engender a ‘reflexive orientation on the part of inquirers’ (Romm, 1998, p. 63).

It was also evident that learning could take the form of acquiring theoretical book-based knowledge as well as more tacit knowledge related to the practice and culture of research. The tacit nature of some of the knowledge, practices, and values in the interdisciplinary collaborative setting can pose challenges for how these are made visible to and then appropriated by individuals. As such, some writers have cautioned that interdisciplinary teams need to engage in ‘careful reflection on team processes, their origins and implications so that [they] can articulate a team’s logic of practice to newcomers rather than expecting them to intuit it through the work process’ (Lingard et al., 2007, p. 515).

Finally, learning occurred via self-directed and individual activities, as well as through informal interactions and relationships with others in the IDHR collaborative setting. The interdisciplinary team has been identified as site in which researchers gain insight into collaborative research practices and processes including teamwork and develop new research skills (Choi & Pak, 2006;
Flinterman et al., 2001). It has been thus conceptualised as a learning community (McCallin, 2006) within which researchers can collectively engage in acquiring, developing, and sharing expertise. It was evident that some of the learning in the IDHR collaborative setting involved the transmission of knowledge from expert to novice thus resonating with the apprenticeship model (Brown, Collins, & Duguid, 1989). The apprenticeship model has been critiqued for not recognising that learning is co-constructed between expert and novice and shared and accessed across multiple individuals in the collaborative setting (Bleakley, 2002).

The final narrative of enablement expressed in this study related to IDHR being experienced as transformative not only in terms of facilitating change in how health researchers approached the process of knowledge production and inquiry, but more critically, in how they perceived, interpreted and understood their own sense of self and identity. The findings of this thesis also pointed to the transformative impact of IDHR at an institutional level in terms of structural changes in the higher education institution and the sector more broadly that were facilitative of interaction and exchange across disciplines. However, whether the structural changes discussed by participants in this study were underpinned by a commensurate shift in organisational ethos and culture and a growing appreciation for intellectual and cultural exchange across disciplines, remains to be substantiated.

The literature has documented that the experience of interdisciplinarity can be associated with a ‘profound transformation’ (Couturier et al., 2008, p. 341) of self, ‘deconstruction of knowledge and identity’ (Hall et al., 2006, p. 764). However these observations are yet to be comprehensively empirically and theoretically substantiated. Manathunga (2009) has perhaps best illustrated the personally transformative nature of the interdisciplinary research and the associated ‘transculturation’ (p. 140) in individuals’ personal and professional identities. In the
health research domain, Hagoel and Kalekin-Fishman (2002) have shown that interdisciplinarity is associated with transformation as a person.

The findings of this study showed that health researchers expressed four narratives of enablement related to their experience of IDHR. The first narrative of disablement expressed in this study, related to health researchers’ experience of IDHR as lacking legitimacy and credibility within the normative discipline-based framework in the higher education sector. Health researchers engaged in IDHR reported feeling isolated, marginalised and alienated within the normative discipline-based framework in the higher education sector. In addition, IDHR situated within the interpretive or qualitative paradigm encountered additional challenges in getting acknowledged as valuable and legitimate within the positivist epistemological framework dominant in the health research field. As a result of these challenges to their legitimacy and credibility, participants in this study expressed feelings of uncertainty and unease regarding the value, fit and acceptance of their work, their methods of knowledge production and research inquiry, and more fundamentally, their sense of identity.

The literature has widely documented that the discipline continues to underpin much of the academic and social activity that happens within the higher education setting (Henkel, 2005, 2009; Henkel & Vabo, 2006; Mourad, 1997; Weingart, 2010). In most higher education institutions and in the sector more broadly, the discipline underpins approaches to knowledge production and research inquiry, notions of scholarship and excellence, systems of reward and recognition, socialisation practices, quality assurance and evaluation practices, and funding and dissemination frameworks. The discipline is regarded as providing an important source of meaning and self esteem in the higher education sector (Henkel, 2005).
This cultural and historical orientation towards disciplinarity has been discussed as functioning a key barrier to the acceptance and legitimisation of interdisciplinarity in the higher education sector (Boden et al., 2011; Clark et al., 2011). The literature has documented that within the discipline-based system where knowledge is still produced, situated, enacted, and authorised and recognised primarily by disciplines and within disciplinary communities, ‘interdisciplinarity as an act of knowledge production’ (Greckhamer et al., 2008, p. 317) is seen as fundamentally impossible and illegitimate. From this perspective, although researchers engaged in IDHR do appropriate and use concepts, theories and methods from other fields, these are defined, used and validated in relation to a discipline (Greckhamer et al., 2008).

The second narrative of disablement expressed by participants related to their experience of IDHR as risky because it did not align with conventional expectations of the traditional academic model. The literature has shown that interdisciplinarity is regarded as being associated with higher ‘transaction costs’ (Pfirman & Martin, 2010, p. 390) such as increased energy and time needed for establishing and maintaining interdisciplinary relationships and projects. In addition, both established and emerging researchers tend to perceive interdisciplinary research as professionally risky because of the difficulties associated with establishing a career and getting tenure (Rhoten & Parker, 2004). Other risks documented in the literature relate to the perceived unpredictability of interdisciplinary intellectual activity and outcomes, the lack of mechanisms for reward and recognition, and the challenges engendered by the logistics associated with interdisciplinary collaboration (Pfirman & Martin, 2010). These issues have been identified as being particularly problematic for emerging or early career researchers (Pfirman & Martin, 2010) who may not have the personal skills and expertise to deal with these challenges in a constructive way, nor access to appropriate role models or mentors who may provide a guiding role.
A third narrative of disablement expressed in this study related to the experience of IDHR as vulnerable to tokenistic use. Tokenism has been identified as a situation where disciplines are co-present but not co-active (Reich & Reich, 2006). Participants viewed that IDHR could be used as a way of meeting a range of institutional and social expectations in a fast-paced, complex, competitive and chaotic research environment, without necessarily being underpinned by a degree of cohesion or synergy among the involved disciplines. The disciplinary chauvinism and hierarchies of status prevalent in the health field (Bate, 2000; Weller, 2012) has been documented as resulting in some disciplines’ voices being marginalised relative to others. Couturier et al (2008) have articulated that authentic interdisciplinarity involves disciplines being co-present and co-active in terms of their perspectives, theories and methods informing and shaping the development of a common research framework.

Greckhamer and colleagues (2008) have cautioned that interdisciplinarity can be used as a ‘label’ (p. 315) by groups or organisations to comply with the complex demands of funding bodies, policy makers, and consumers. From this perspective, interdisciplinarity can be understood as being actively pursued by teams and organisations as a symbolic resource and legitimate strategy for achieving alignment with cultural and societal pressures and expectations (Greckhamer et al., 2008). However, interdisciplinarity as a label is also regarded as reproducing and reinforcing discipline boundaries (Greckhamer et al., 2008) thus critically undermining its conceptual, theoretical, and methodological power.

The final narrative of disablement expressed in this study related to IDHR being experienced as being subject to the pressures of productivity and performance associated with the entrepreneurial ethos of the higher education sector. Participants described how the entrepreneurial culture of the higher education sector and expectations related to research performance and productivity, have engendered a focus on research quantity rather than quality.
and influenced the nature of research topics and activities being pursued. Neumann & Guthrie (2002) have observed that the emphasis within the higher education sector on making activities ‘measurable and commodifiable’ (p. 722) has reinforced selectivity in terms of the type of research approaches and problems that are pursued in the higher education sector. In this, entrepreneurial context, there is a risk that nonconventional and less socially accepted and valuable forms of inquiry such as IDHR may be less likely to be pursued.

Figure 6 below illustrates my depiction of the conflicting narratives of enablement and disablement expressed by health researchers in relation to their experience of IDHR. The figure depicts the conflicted experience of IDHR as being associated with a push-and-pull effect. On one hand, the experience of IDHR as enabling can be understood as contributing to researchers’ feelings of wellbeing and enrichment. This can be interpreted as the pull factor that can increase the appeal and attractiveness of IDHR to individuals, research teams and higher education institutions. On the other hand, the experience of IDHR as disabling can be understood as contributing to researchers’ feelings of marginalisation, isolation, and lack of perceived fit and belonging in the higher education sector. This can be interpreted as the push factor that impedes researchers from pursuing IDHR.
7.3.2 The multiple levels at which health researchers enacted IDHR

The findings presented in Chapter 4 of this thesis illustrated the multiplicity of levels at which health researchers enacted IDHR. Participants in this study predominantly enacted IDHR at the social-relational level i.e. in the form of collaboration between researchers from multiple disciplines usually within a team. This resonated with the notion of interdisciplinarity at the interpersonal level (Pfirman & Martin, 2010). Participants enacting IDHR at the social-relational level gave primacy to disciplinary knowledge, skills and expertise, and conceptualised their main role as translating disciplinary insights and perspectives for interdisciplinary colleagues within the collaborative setting. The concept of broker and brokering (Lingard et al., 2007; Wenger, 1998, 2000) has been used in the literature to refer to an individual or a process respectively, which aim to facilitate the interaction between communities and fields of knowledge and
Researchers enacting IDHR at the social-relational level tended to express stronger allegiances to a single discipline or professional field and described relatively narrow professional socialisation experiences within the higher education sector.

In contrast, some participants in this study enacted IDHR at the personal-embodied or individual level in terms of making connections across and drawing on the insights from multiple disciplines, within or outside of the interdisciplinary team. Participants enacting IDHR at the personal-embodied level tended to interpret their sense of identity in relation to working between or across the boundaries of multiple disciplines. Thus they expressed fluid and flexible conceptions of identity. This substantiates the observations regarding interdisciplinarity at the intrapersonal level (Pfirman & Martin, 2010) and the notion of bricolage described by Kincheloe (2001).

The findings of this thesis showed that the level at which health researchers enacted IDHR was mediated the concerns that they emphasised about their experience. For example, participants enacting IDHR at the social-relational level emphasised interpersonal, interactional, leadership and relational issues associated with IDHR collaboration. In contrast, participants enacting IDHR at the personal-embodied level emphasised challenges associated with working in the normative discipline-based framework in the higher education institution and beyond. The findings also illustrated that the level at which health researchers enacted IDHR could be complementary and synergistic, in that an individual researcher enacting IDHR at the personal-embodied level could also enact it at the social-relational level. In fact, as shown in this thesis, many individuals who enacted IDHR at a personal-embodied level worked in or actively sought opportunities to participate in interdisciplinary teams and environments as these were sites in which their identity and approaches to research inquiry were more likely to be supported and legitimated. However, individuals enacting IDHR in a tokenistic manner at the social-relational level due
pragmatic reasons, institutional or other expectations or demands or lack of choice, might be less likely to appreciate that IDHR could be embedded in the individual research endeavour and within researchers’ self-understandings and identity.

Despite an increasing awareness of the different levels at which interdisciplinarity can occur (Pfirman & Martin, 2010; Rhoten & Pfirman, 2007a, 2007b), exploration of the collaborative dimension of the phenomenon has been privileged in the existing literature, at the expense of how it can occur at the level of the individual researcher. By empirically illustrating the multiple levels at which IDHR can occur and in particular describing how it is experienced at the personal-embodied level, this thesis has advanced understanding about the different ways in which it can be enacted within researchers’ daily practices.

7.3.3 The conflict in health researchers’ identity

By theoretically interpreting health researchers’ conflicted experience of IDHR from the perspective of identity, I illustrated that the key issue for participants of this study was the disharmonious relationship between their institution-identity and their affinity-identity (Gee, 2000). As previously discussed, institution-identity is traditionally legitimated in relation to a discipline (Gee, 2000), whereas participants’ affinity identity can be described as having personal preferences for IDHR since they all self-identified as being engaged in interdisciplinary research, albeit at different levels and for various pragmatic and personal reasons.

As a result of this conflict in their identities, health researchers engaged in IDHR expressed various feelings of vulnerability and unease which prompted them to focus inwards and question their fundamental interpretations and understandings of self in terms of who they were (and were becoming) as a researcher, and what they did. Thus a key observation of this thesis was
that health researchers’ conflicted experience of IDHR was in fact underpinned by significant concerns and questions related to notions of identity and identification.

By utilising identity dissonance (Costello, 2005) as a specific analytical and organising framework, strived to reconcile their conflict in identities and associated feelings of discomfort and unease, by constructing and negotiating their identity in different ways. Positively identity-dissonant health researchers engaged in IDHR tended to utilise conformist practices (Collinson, 2003) to align themselves with normative discipline-based expectations including in relation to identity, dominant in the higher education institution and sector more broadly. Specific strategies used by participants included establishing new or renewing old connections with a discipline or disciplinary community, or sacrificing personal interdisciplinary values and affinities in lieu of discipline-based ones. By using these strategies, participants were able to achieve a sense of fit and belonging, which enhanced their feelings of wellbeing.

Hagerty and colleagues (1992) have defined sense of belonging as the ‘experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment’ (p 173). These authors have suggested that feelings of belonging can manifest in terms of valued involvement which refers to the experience of feeling valued, needed and accepted, and in terms of fit which relates to the person’s perceptions that his or her characteristics align with or compliment the system or environment that they are in. However, the findings of this study also showed that in addition to positive outcomes, these conformist strategies also engendered feelings of detachment, loss and sacrifice for health researchers due to the letting go of personal affinities, values and preferences.

In contrast, negatively identity-dissonant health researchers used strategies aimed at distancing themselves from normative identity expectations and ideals. Some of these participants utilised
dramaturgical strategies (Collinson, 2003) in order to present a favourable impression of themselves and their work within the boundaries imposed by the traditional-discipline based framework. However, although participants in this study experienced a sense of validation associated with positioning themselves as legitimate and credible researchers, they concurrently experienced difficulties and feelings of torn-in-between related to the experience of managing the competing demands and expectations associated with the different identities.

Goffman’s (1973) dramaturgical framework can be used to understand how health researchers engaged in IDHR attempted to convey specific impressions of themselves as insiders rather than outsiders in the discipline-based normative model to various audiences. These included funding bodies, review panels, research colleagues, and the institution itself. Elements of Goffman’s (1973) framework relevant to participants in this study included the adoption of roles such as of the knowledgeable and credible researcher, and the manipulation of scripts or dialogues in order to appear persuasive and in control particularly in applying for funding and in the dissemination of their work. Such positioning can be viewed as a way of conveying shared interpretations and interests in order to establish credibility, competence and trust, and the legitimacy of one’s identity and work practices (Goffman, 1973).

Other negatively identity-dissonant participants engaged in resistive strategies (Collinson, 2003) that involved actively rejecting normative discipline-based identity labels and expectations, and instead embracing and affirming their interdisciplinary preferences and affinity. Here, researchers actively questioned and critiqued disciplinary knowledge and norms, and explored the positive contributions made by other disciplines to knowledge production. This finding can be understood as illustrating that these participants were becoming more aware of the influence of wider socio-cultural factors shaping knowledge production, and recognising that research needed to be responsive to the complexity and multiplicity of the world.
Kincheloe (2001) has articulated that as researchers engage in interdisciplinarity and consider the diverse methodological approaches, theoretical frameworks and philosophical underpinnings of the disciplines, and the linkages and relationships between these, they begin to realise ‘the necessity of new forms of rigour in the research process’ (p. 681). This suggests that researchers engaged in interdisciplinarity have evolving professionality orientation and views (Evans, 2010) and notions of professionalism that extended beyond discipline boundaries.

Although participants in this study expressed feelings of alienation associated with resisting institutional or other pressures to conform to discipline-based values and discourses, these were to some extent outweighed by the feelings of empowerment, confidence and wellbeing related to affirming their personal values and preferences and becoming a more authentic self. This finding significantly extends Costello’s (2005) framework in which negative identity dissonance is viewed as a traumatic experience.

Finally, some negatively-dissonant participants preferred to leave a team, work environment or organisation in which identities were contested and seeking alternative environments where interdisciplinarity was recognised as a valuable approach to research inquiry. Belnkinsopp and Stalker (2004) have observed that in some situations ‘when the identity work required to continue to “fit” in one’s current environment becomes very great, it may make more sense to change one’s environment’ (p. 427). Cast (2003) has also identified ‘when individuals are confronted with a persistent mismatch between identity meanings and perceptions of the social environment, one possibility is simply to exit the role’ (p. 45). However, leaving was sometimes difficult due to perceived obligations to the IDHR team, as well as due to the lack of environments in which IDHR was explicitly supported and legitimated in the higher education institution and the wider sector.
The alternative environments sought by individuals tended to be characterised by explicit recognition and acknowledgment of the value of interdisciplinarity and having support and resources aimed at helping participants orient to interdisciplinary practice and identity. The literature has identified that support for interdisciplinarity can manifest not only in terms of resources, funding, and strategies for facilitating interdisciplinary work, but also in terms of having a research climate that promotes positive messages regarding interdisciplinarity (Aboelela et al., 2007; Amabile et al., 2001; Sargent & Waters, 2004). In particular, Rosenfield and Kessel (2008) have articulated that ‘leadership and incentive structures provide the requisite time and space’ (p. 438) for interdisciplinarity to become embedded within institutional practice and culture.

In particular, team, workplace or institutional leaders were seen to have a key role in developing a climate of trust, providing mentoring and guidance, and championing the interdisciplinary agenda. Research leaders, mentors, supervisors and peers can be thought of as important socialising agents in helping individuals develop understandings of values of research (Coulehan, 2005). Those in senior and leadership roles such as research supervisors and mentors have been identified as being particularly ‘helpful in easing the anxieties of junior scholars’ (Pfirman & Martin, 2010, p. 390) as they can provide individuals with the necessary guidance and support for interdisciplinarity. However, due to the documented lack of interdisciplinary role models and mentors in particular for women (Rhoten & Pfirman, 2007a, 2007b) within the context of interdisciplinarity, it can be difficult to find and access these socialising agents.

7.4 Scholarly significance of this study

I have analysed the scholarly significance of this study in terms of how it has addressed the research objectives for this thesis. The first research objective was to situate this study within the existing empirical and theoretical literature on interdisciplinarity and interdisciplinary
research in the higher education setting, with a specific focus on IDHR in the health research domain. In Chapter 2 I illustrated that, reinforced by the anthropological and sociological perspectives of the academic disciplines (Krishnan, 2009), the current empirical research has privileged a focus on the collaborative dimension of the phenomenon and the interdisciplinary team as the unit of analysis. I discussed that accounts of researchers’ subjective experience of IDHR were particularly lacking in the existing literature. I argued that newer empirical explorations were needed to capture the complexity of the lived experience of IDHR in the higher education setting, illustrate health researchers’ personal experiences in relation to it and make the individual researchers’ voice heard.

In Chapter 2, I also illustrated that the limited literature that did exist about how IDHR is lived in the higher education sector, has remained descriptive and devoid of theory. Where theory has been used in the context of IDHR, it has been used to explain the nature and impact of interaction between bounded disciplines within the collaborative setting. Social identity theoretical perspectives currently dominating the literature have been critiqued for their limited capacity to illustrate the dynamic and evolving nature of identity construction and negotiation among disciplinary or professional groups (Helmich & Dornan, 2012) as well as the complexity of identity construction and reconstruction and new forms of becoming within interdisciplinary settings (Bleakley, 2011). Based on these observations, I argued that the lived experience of IDHR needed to be theoretically interpreted in order to extend taken-for-granted assumptions and conventional wisdom which have typically been focused on what happens as researchers try to ‘craft creative conversations across conventional disciplinary boundaries’ (Rosenfield & Kessel, 2008, p. 431).

The second research objective of this study was to use appropriate methodology to describe and interpret the lived experience of health researchers including how they enact IDHR and manage
their lived experience. In Chapter 3, I situated this study within the interpretive research paradigm (Cohen et al., 2011; Crotty, 1998; Guba & Lincoln, 1994), and in particular, within the methodological framework of hermeneutic phenomenology as informed primarily by the work of van Manen (1997). In doing this, I provided a framework which facilitated the exploration of how participants understood and interpreted their lived and subjective experiences of social reality and the social world. Thus, this thesis delved into the meanings associated with the lived experience of IDHR as constructed, interpreted and embedded within the particularities of the historical, social and personal context occupied by participants in this study. In particular, I was able to gather and interpret rich textual and idiographic data related to participants’ lived experience of IDHR in the Australian higher education setting, in a manner that was inductive, iterative and phenomenologically oriented. Hermeneutic phenomenology provided a framework for data interpretation that was inductive and grounded in participants’ accounts, iterative in terms of moving between parts and the whole of the dataset and different phases of the analysis, and facilitative of crafting a rich, authentic and evocative narrative of health researchers’ lived experience of interdisciplinarity.

The third research objective of this thesis was to provide a phenomenological account of how IDHR is lived and experienced as an essentially human phenomenon in the higher education setting. In Chapter 4, I illustrated the complexity and multiplicity of health researchers’ lived experience of IDHR in the higher education setting, including its enabling and disabling thus essentially paradoxical nature. A phenomenological account of IDHR has not previously been reported in the literature, thus pointing to the scholarly significance of this study, both in terms of its methodological innovation as well as in enhancing and advancing current understandings of the phenomenon.
The fourth research objective for this study was to make visible the links between interdisciplinarity, IDHR and identity, by situating the study within the relevant empirical and theoretical literature, and interpreting the lived experience of IDHR from the theoretical perspective of identity. By providing this additional level of analysis, I added dimension and depth to the interpretive framework utilised in this thesis. By referring to Gee’s (2000) model, I illustrated that health researchers’ conflicted experience of IDHR was in fact underpinned by a disharmonious relationship between the discipline-based notions of identity that are dominant and more socially valued in the higher education sector, and participants’ own values and preferences for interdisciplinary forms of working and conceptions of self. This thesis has thus essentially illustrated that IDHR can be understood as a lived space within which individuals’ identities are contested and challenged.

By using identity dissonance (Costello, 2005) as a specific theoretical lens and organising framework, I provided insight into the strategies of identity construction and negotiation engaged in by agentic health researchers as they actively managed and negotiated their identity. From this perspective, dissonance, in the context of the lived experience of IDHR, prompted health researchers to look inward and consider their own self understandings and interpretations. This thesis has also extended the application Costello’s (2005) model which was developed in the context of socialisation of new members into a profession, to the experiences and journeys of individuals who are further along the process of socialisation, and specifically in relation to their researcher identities and activities. In addition, I have extended Costello’s (2005) original observations by showing that resistive strategies utilised by health researchers, can be associated with feelings of authenticity and self-worth resulting from embracing and enacting ones’ preferred identity, leading to enhanced feelings of wellbeing and resilience.
The fifth research objective of this study was to analyse the scholarly significance of the study and practical implications of findings. This objective is being addressed in the current chapter. A final research objective was to adopt a reflexive stance in articulating and exploring my interpretive influences and my position in this study. In the Prologue to this study, Chapter 3, and the concluding Epilogue, I have articulated and reflected on my personal connections to and interests in IDHR. I have discussed how this study, including the nature of the research question, the methods chosen to gather data, the nature of the data gathered as well as the interpretations made, have been fundamentally shaped my own philosophical and epistemological views and values, and my insider position to the phenomenon being explored, as well as the local setting for this study and the broader higher education sector.

7.5 Practical implications of findings

In considering the practical implications of our findings about the phenomenon of IDHR, I argue that individual researchers, research teams, and higher education institutions need to take heed of the conflicted nature of the lived experience and the impact this may have on researchers’ motivations and aspirations as well as the individual and collective experience of working across disciplines. I consider the practical implications of the findings of this study first at the level of the individual researcher engaged in IDHR, then at the level of the IDHR team, higher education institution, and sector more broadly.

At the level of the individual, I see a need for researchers engaged in or planning to get involved in IDHR to become cognisant of the complexities, ambiguities and contradictions that can characterise their lived experience. Researchers engaged in IDHR need to consider their personal preferences and values in relation to research and understandings of research professionalism or professionality (Evans, 2010) and how these may align or not with the expectations and demands of the higher education organisation and the sector. In particular, individual
researchers need to understand that their preferred approaches to knowledge production and research inquiry, and conceptions of identity, can be contested and challenged resulting in feelings of vulnerability and unease. This type of analysis can also help individuals clarify their orientation towards IDHR or for working in more discipline-based ways. Given that these personal values, preferences and identities can remain hidden and somewhat implicit, how can individuals be helped to recognise and articulate the potential for identity conflicts and manage these tensions, within the IDHR setting? In the first instance, research leaders, supervisors or mentors can be understood as having an important facilitative role in prompting and guiding these reflections and analysis.

At a team level, I have identified need for collective discussion and consideration what IDHR actually means to different members within the team, the meanings that team members attribute to their experiences of IDHR, the different levels at which IDHR can be enacted by different team members, individuals’ and the team’s values and orientation towards research inquiry, and how this may interact and impact the collaborative IDHR experience. Guided by team leaders and senior members, IDHR teams need to actively utilise reflexive techniques and practices in making clear their tacit knowledge and values. Teams also have a shared responsibility to co-create collective understandings and histories, as well as to make explicit their rules of the game regarding the interdisciplinary research process and practices (Lingard et al, 2007).

The capacity of research teams to be collectively reflexive about the process of working together has been shown to contribute to effective interdisciplinary collaboration (Barry et al., 1999; Lingard et al., 2007; McCallin, 2005; Savin-Baden, 2004). Reflexive practices embedded within collegial relationships have also been identified as functioning to strengthen and develop ‘a richer narrative of self which then functions to accommodate competing feelings about the past,
present and future, as well as mismatches between existing and preferred selves’ (Warin et al., 2006, p. 237). Furthermore, institution-wide professional development activities that involve researchers from multiple disciplines are also ideal fora for these deliberations, as they may bring to the fore the different disciplinary expectations and values in relation to research. Such activities can provide researchers with the opportunity to consider who they are (and who they are becoming) as well as the nature of the scholarly work that they do.

At the organisational level, I suggest that higher education institutions and their leaders need to recognise the complexity and the multiplicity characterising the IDHR experience. In particular, they need to recognise the multiplicity of identities, the potential for tension between researchers’ institution and affinity identities, and how this can engender dissonance. In acknowledging the essentially conflictual nature of the lived experience of IDHR, organisations and their leaders need to consider how institutional structures, systems, values and expectations may stymie interdisciplinary knowledge production and scholarship, and identity, and how discipline-based structures and cultures can be modified to minimise identity dissonance and support interdisciplinary scholarship. In particular, I suggest there is a need to explicitly identify how appropriate interdisciplinary social or physical spaces such as research departments or networks can be developed in order to foster intellectual and cultural contact and interaction and exchange across disciplines. Writers have identified that researcher development programs which ‘tap into some symbolic dimensions of both institutional and professional culture’ (Frost & Jean, 2003, p. 140) can facilitate a sense of connection and belonging to an interdisciplinary community of scholars.

Understanding of the conflicted nature of the IDHR experience and the identity dissonance that is associated with the experience, speaks to the importance of higher education organisations supporting its researchers in constructively managing identity conflicts and integrating their
identities. Managing competing demands and expectations in relation to identity can lead to feelings of discomfort, stress, emotional exhaustion, and dissatisfaction for individuals. Colbeck (2008) has identified that finding ‘synergistic connections’ between multiple identities can enhance productivity, energy, and well-being. Burke (2003) has suggested that the integration of identities can be enhanced by helping individuals to develop a sense of shared meanings across their different identities.

It is also clear that institutions and their leaders need to consider how they can move beyond lip service in supporting and encourage interdisciplinary research including in the health domain. I maintain that any structural or system change such as the creation of cross-disciplinary research clusters or horizontal integration of departments, must be accompanied by meaningful and explicit transformation in institutional research culture. This could be achieve by revising institutional policies to signpost interdisciplinarity as a priority area and identify specific strategies for its advancement, including the reward and recognition of interdisciplinary scholarship, providing to appropriate socialising agents such as mentors and interdisciplinary research communities that can provide adequate role-modeling, guidance and support, making more visible the career pathways for interdisciplinary research which are traditionally less defined (Boden et al., 2011) and proactively engaging researchers in these opportunities. Another way in which an institution can demonstrate its commitment to cultural change is through creating a senior position, for example a Deputy or Pro Vice Chancellor, to oversee the interdisciplinary research portfolio, champion the interdisciplinary research agenda and sustain its momentum.

The literature has noted that a progressive and forward looking institutional research culture is necessary for legitimising interdisciplinarity as a valuable approach to research inquiry and knowledge production (Frost & Jean, 2003; Frost et al., 2004; Kezar, 2005). Although the
literature has documented the potential reciprocal impact of structural changes on institutional research culture, this remains to be empirically explored. I argue that higher education institutions and research leaders will need to direct more energy into formally and systematically exploring how researchers including those in the health domain, can be helped to develop and sustain more complex identities and ways of working and thinking that transcend disciplines.

This thesis has also illustrated that the dichotomy that exists between current discipline-based education and training and socialisation practices in the higher education setting, and the demands of real-world research inquiry. As such, institutions and workplaces need to explicitly consider how education, training and professional socialisation practices may be modified to support interdisciplinary scholarship. The educational system can be understood as ‘the principle lever for promoting collaborative values’ (San Martin-Rodríguez et al., 2005, p. 137). As discussed earlier in this thesis, there is increasing recognition of the value of deliberative and structured activities in helping students and practitioners develop the knowledge and skills for collaborative working in the health professional education and practice contexts (Barr, Koppel, Reeves, Hammick, & Freeth, 2005; Davidson, Smith, Dodd, Smith, & O'Loughlan, 2008; Hammick, Freeth, Koppel, Reeves, & Barr, 2007; S Reeves et al., 2008; Remington, Foulk, & Williams, 2006). However, in the health research domain, there appears to be little systematic effort directed at crafting formal opportunities for researchers across disciplines to learn, interact and work together.

The literature has documented that interdisciplinary education models (Boden et al., 2011; Canadian Academy of Health Sciences (CAHS), 2005; Hall et al., 2006; Larson, Landers, & Begg, 2011) are highly valuable in socialising research into interdisciplinary research career pathways, and building future research capacity. Manathunga (2009) has suggested that restructuring of
higher degree research programs as a way of engaging the future generation of researchers in interdisciplinary work. Brew (2006) has identified that these research education and training programs need to prompt consideration of ‘big picture questions about the nature of disciplinary knowledge, and about its relationship to reality’ (p. 64) and to challenge ‘students’ sense of personal identity and values’ (p. 64). These programs will also need to incorporate interdisciplinary problem-solving and collaboration activities as well as experiential learning opportunities (Priest, 2006). They will need to involve more than just academic disciplines, but also be based on cross sectoral partnerships with government and industry so that skills and competencies needed for the workplace are addressed (Canadian Academy of Health Sciences (CAHS), 2005; Hall et al., 2006). Despite the exciting possibilities and opportunities for interdisciplinary research training, there is a requirement for more systematic exploration and evaluation of the educational outcomes of such programs, as well as the specific pedagogical elements, strategies and practices that may contribute to the development of particular graduate attributes and skills (Lattuca, Voigt, & Fath, 2004).

Finally, at the system level, I suggest that the higher education sector needs to more explicitly acknowledge interdisciplinary scholarship as a legitimate form of knowledge production. This aligns with Boyer’s (1990) call for ‘a more inclusive notion of what it means to be a scholar’ (p. 24). I would argue that the sector has an important social and ethical accountability and role to play in developing and preparing future researchers who have an understanding of the ontological and epistemological conditions, methodological frameworks, and philosophical underpinnings of other disciplines, as well as the skills for engaging in constructive dialogue across disciplines, and attitudes commensurate with integration and synergy rather than separation and competition.
Governments, universities and industry need to engage in a constructive dialogue about the nature and purpose of higher education and its role in the preparation of work-ready researchers with interdisciplinary skills and competencies. This may involve broader conversations related to reconceptualising the purpose and role of doctoral education (Lee & Boud, 2009) including perhaps the role of work-integrated learning in developing researchers’ capacities and skills. Furthermore, these interdisciplinary skills and competencies will need to be defined including for the undergraduate and postgraduate levels of tertiary education as well as for work-place based training and education.

7.6 **Strengths and limitations of the study**

This is the first phenomenological and theoretical account of IDHR in the literature. The phenomenological findings of this study have illustrated that health researchers’ experience of IDHR in the higher education setting is essentially conflictual. The theoretical analysis of these findings from the perspective of identity and in particular Gee’s (2000) framework and Costello’s (2005) model of identity dissonance, has shown how the conflicted experience of IDHR is underpinned by a tension in health researchers’ identities and the different strategies use to manage this conflict. A key strength of this study is that it has gathered and interpreted rich idiographic data from twenty-one health researchers working within diverse settings and projects, at different levels of seniority, and with different IDHR experiences. This broad approach to sampling and the depth of the phenomenological data interpretation has given rich and detailed insight into how IDHR is lived as an essentially human phenomenon. Study findings have extended the limited empirical literature (cf. Hagoel & Kalekin-Fishman, 2002; Manathunga, 2009) about the personal journeys and experience of researchers engaged in interdisciplinarity in the higher education sector.
A limitation of this study is that insight into the lived experience of IDHR has been captured from the perspective of individuals in the health sciences research domain and from one particular research network. This thesis has privileged a focus on the role of the agentic and intentioned individual in actively constructing and negotiating their identity in response to the tension in identities they experience. However, it is important to recognise that there are wider sociological forces and structures in organisational settings which may constraint individuals’ capacity to construct and negotiate their identity.

I do not claim to have captured the ultimate ‘truth’ or essence of how IDHR is lived, enacted or experienced by health researchers in the higher education setting. It is important to recognise that the narratives expressed by participants about their experiences were expressed within the context of an actual and metaphorical time and place in their own research journey. These accounts may have differed if expressed at a different point in time or to a different audience. Also, this research is located within a specific ontological, epistemological and interpretive framework which has shaped what I have focused on and how I have approached the process of inquiry. Furthermore, my own understandings and personal experiences related to IDHR in the higher education health research sector, as well as my insider position in this research study have also influenced the interpretations that have been made within this thesis.

7.7 Directions for future research

One exciting possibility for future research is developing further understandings of how identity is constructed and negotiated in the interdisciplinary research context, including in the health research domain. In particular, future studies could sample those with strong disciplinary views or in a different research domain so as to illustrate the complexity of the lived experience. There is also a need to better understand the synergies between the personal-embodied and social-
relational level of IDHR, the implications for collaborative work across disciplines, and how this may impact on researchers’ personal and professional identities.

Further research is also warranted to explore how researchers’ construct and negotiate their professionalism or professionality (Evans, 2010) within the complexity of the interdisciplinary collaborative setting, the professional dilemmas and conflicts that may be encountered by individuals and teams, and how these are resolved. A systematic effort needs to also be directed at exploring how interdisciplinary researchers in the making including in the health research field, can be effectively socialised into and supported in the higher education setting. Finally, future research could also be aimed at exploring identity construction and development across a longer lifespan (Lemke, 2008), as well as the broader macro-level sociological forces, structures, and discourses that may impact on the interdisciplinary research experience.

7.8 Summary of chapter

In summary, in this chapter, I reviewed the key findings of this study and considered the methodological, theoretical and practical significance of findings. The chapter has drawn together the key contribution and insights provided by this thesis. The significance of this thesis is that it uses hermeneutic phenomenology as a methodology to illustrate health researchers’ conflicted experience of IDHR and the multiple levels at which they enacted interdisciplinarity. Another key contribution of this thesis was this it used identity dissonance as a theoretical lens to draw out the tension related to identity that underpinned health researchers’ conflicted experience of IDHR, and the strategies used by individuals to respond to and manage these tensions. A final contribution of this thesis is in the practical implications it recommends for how health researchers can be supported in the development of complex identities and ways of working and thinking that transcend discipline boundaries.
Epilogue – Concluding reflections

This short epilogue briefly summarises the key findings of this thesis, how this research study began and evolved, and my personal connections to it. This epilogue addresses the research objective of adopting a reflexive stance in articulating and exploring my interpretive influences and my position in this study, and complements the prologue to this thesis.

This thesis has shed light on the complexity and multiplicity of the personal and lived experience of IDHR in the health research setting. I have argued that IDHR can be conceptualised as a conflicted space within which individuals’ interdisciplinary preferences and affinities can be contested and marginalised by the normative discipline-based values, expectations and notions of identity. The findings of this thesis point to the efforts required by individuals engaged in IDHR, interdisciplinary research teams, workplaces, institutions and even the higher education sector more broadly in recognising the conflicted nature of the lived experience of IDHR, minimising the associated dissonance, and more critically in facilitating and nourishing the development and maintenance of more complex identities and research practices that transcend discipline boundaries.

This study began and evolved from my standpoint as an academic in the health professions education and research context. My own journey in the higher education sector has been characterised by a transition in disciplines, collaborating with colleagues from other disciplines, working across and navigating the intellectual and cultural frameworks, expectations and norms of different disciplines. It was these personal experiences and insights that underpinned my interest in exploring how IDHR is enacted, experienced and lived as an essentially human phenomenon. I was curious to find out more researchers’ own voices and accounts of what interdisciplinarity in the health domain meant to them, and the personal significance of the
experience. It also became quickly evident that these personal stories and narratives were relative infrequent in the academic literature.

So what are my thoughts about the findings of this study? What has surprised me or challenged me? As I engaged in gathering and interpreting participants’ personal stories, I was surprised to discover that the feeling of torn-in-between was a relatively prominent and consistent aspect of participants’ narratives about IDHR in the higher education sector. This theme emerged in the accounts expressed by participants from different research institutions, teams and projects, levels of seniority, and diverse IDHR experiences. I found it challenging to identify an appropriate interpretive lens that could unpack the paradoxical nature of health researchers’ lived experience of IDHR. I was also not expecting to discern that health researchers could enact IDHR at multiple levels. This was something that had been theorised in the literature, but it was not until I began to engage with the different ways in which participants were enacting and living IDHR that I began to appreciate there were different dimensions to the phenomenon.

My aim throughout this thesis has been to fully articulate and embrace my own subjectivity and to illustrate the various interpretive influences that may have shaped the nature of the story being told and how I have narrated it. As I write this concluding chapter, I have become even more aware that all I can claim to have captured in this thesis is a specific interpretation of how interdisciplinarity is enacted, experienced and lived by health researchers in the higher education setting at a level of shared humanity (MacCleave, 2006; Smith et al., 2008). This thesis has been partly a journey of self reflection and discovery, in that I have become more aware of my own sense of identity as a researcher engaged in IDHR in the higher education sector.


Bourdieu, P. (1975). The specificity of the scientific field and the social conditions of the progress of reason *Social Science Information, 14*(6), 19-47.


Neumann, R., & Guthrie, J. (2002). The corporatization of research in Australian higher education. *Critical Perspectives on Accounting, 13*(5-6), 721-741.


## Appendices

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Appendix 1: Participant recruitment email

Copy of email sent to the qualitative health research network and to chief investigators of health research teams

Hello

My name is Koshila and I am a PhD candidate at the Office of Postgraduate Medical Education, University of Sydney.

I thought that some of you may like to participate in my PhD research which explores peoples’ experiences of interdisciplinary research. This most commonly takes place in the form of research teams where members from diverse academic disciplines or professional backgrounds work together in a collaborative and integrative manner.

My research is aimed at exploring what drives interdisciplinary research, how it takes place, the nature of challenges faced in interdisciplinary contexts, and how these challenges are managed in the academic research environment. I am particularly interested in the experiences of researchers working broadly within the Public Health, Allied Health, Health Sciences, Medical/Health Education, and Social Sciences disciplines.

It is anticipated that findings will provide insights into and lead to improved theoretical understanding about interdisciplinary health research in the academic setting.

I am currently recruiting participants for interviews, and would like to invite you to participate. The interview will take up to 1 hour. If you are interested in finding out more about the study or
in participating in an interview, I’d love to hear from you. Please contact me at k.kumar@usyd.edu.au or on (02) 9351 3130.

Regards

Koshila
Appendix 2: Participant information sheet

Project title: Experience of interdisciplinary research

There is a growing emphasis on interdisciplinary research including in the health research domain. However, qualitative exploration into the reality of interdisciplinary research including in the health research setting is lacking. Interdisciplinary research most commonly takes place in the form of research teams where members from diverse academic disciplines or professional backgrounds work together in a collaborative and integrative manner.

My research is aimed at exploring what drives interdisciplinary research, how it takes place, the nature of challenges faced in interdisciplinary contexts, and how these challenges are managed in the academic research environment. I am particularly interested in the experiences of researchers working broadly within the health research domain including in Public Health, Allied Health, Health Sciences, Medical/Health Education, and Social Sciences disciplines.

It is anticipated that findings will provide insights into and lead to improved theoretical understanding about interdisciplinary health research in the academic setting. Your participation in this study is hugely valuable and we look forward to working with you.

This study is being conducted by Koshila Kumar to meet the requirements for the degree (PhD) under the supervision of Chris Roberts and Jill Thistlethwaite of the Office of Postgraduate Medical Education, Faculty of Medicine.

Participation:
This study involves collecting data regarding peoples’ experiences of doing interdisciplinary health research in the higher education setting. Interdisciplinary research involves members from multiple academic disciplines or professional backgrounds working together in a collaborative and integrative manner (often in the form of research teams). If you are a researcher with current or past experiences of taking part in interdisciplinary research in the health research field, you are eligible to participate in this study.

Data will be collected via an interview. The anticipated time commitment is 1 hour. The interview will be scheduled based on your preference and availability. With your consent the interview will be audio-taped.

Please be aware that the researcher may follow-up with you regarding additional issues/themes emerging from the analysis of your data.

Ethical Considerations

Please be assured that the PhD candidate (Koshila Kumar) will be the only person who will be privy to your identity and other data associated with you. She will de-identify all data before any analysis or reporting. So there is no possibility of any person or team being identified by others. Your written consent will be sought for participation in this study.

Furthermore as part of establishing the credibility and trustworthiness of findings, you shall be provided with access to your interview transcript, if you wish to see it.

Further information

If you have any further questions or concerns that need clarification please contact Koshila Kumar on (02) 9351 3130 or at k.kumar@usyd.edu.au
Complaint or concerns

Any person with concerns or complaints about the conduct of a research study can contact the Senior Ethics Officer, The University of Sydney, on (02) 9351 4811 (Telephone), (02) 9351 6706 (Fascimile), or gbriody@usyd.edu.au (Email).

This information statement is for you to keep.
Appendix 3: Consent form

Project title: Experience of interdisciplinary research

I............................................. give consent to my participation in the research project

   Name (please print)

Project title: ..........................................................................................................................

In giving my consent I acknowledge that:

1. The procedures required for the project and the time involved have been explained to me, and any questions I have about the project have been answered to my satisfaction.

2. I have read the Participant Information Statement and have been given the opportunity to discuss the information and my involvement in the project with the researcher/s.

3. I understand that I can withdraw from the study at any time and in a number of different ways, without affecting my relationship with the researcher(s) now or in the future.

4. I understand that if I do not wish to continue, any information I may have given to the researcher up to this point will be destroyed.

5. I understand that my involvement is strictly confidential and no information about me will be used in any way that reveals my identity.

6. I understand that being in this study is completely voluntary – I am not under any obligation to consent.

7. I consent to the audio recording of my interviews.

8. I understand that the researcher may contact me to follow up with issues/themes emerging from the analysis of my initial interview

   Signed: .............................................   Date: ..........................................................

   Name: .............................................................................................................
Appendix 4: Interview schedule

1. Background
   - Thank you for volunteering to take part in this interview
   - As explained in the information sheet, the purpose of this interview is to explore your experiences interdisciplinary research in the academic research setting.
   - The interview will take up 1 hour

2. Confidentiality
   - I will be audio taping our conversation so that I have an accurate record of what was discussed
   - However please be assured that all data collected here will be de-identified (by assigning codes to participants) prior to any analysis or reporting. Verbatim comments may be reported but you will not be identified

3. Consent form
   - Do you have any questions about the study?
   - Can you please sign the consent form

4. General Question areas
   - In what contexts have you worked an interdisciplinary manner? (research, education, clinical)
   - What are your experiences of interdisciplinary research? What does this term actually mean to you? How did you come about to be engaged in interdisciplinary research?
   - What form has your interdisciplinary research work taken?
Are you currently working in an interdisciplinary team?

What other disciplines or professions have been involved in the interdisciplinary projects or teams?

Can you tell me about what’s been exciting and valuable about working across disciplines or team members from different disciplines working together?

Can you give me an example of a situation where this value was demonstrated?

What are some of the difficulties or challenges associated working across disciplines or on an interdisciplinary team? Can you give me an example?

What happened or was at risk of happening in this difficult situation? Who was involved?

How did the team or individuals respond to this situation?

Was there anything that could have been done differently?

How do these difficulties and challenges impact the team or individual team members?

How do you build and maintain relationships within teams where there are people from different paradigms and disciplinary backgrounds?

What kinds of support do team members look for or need to work in interdisciplinary settings? Where do they look for this support?

Can you tell me about what happens to your identity in the interdisciplinary context? Does it change? How so?

Do teams usually develop a collective identity over time?

Have you had to juggle your personal interests and goals with the overall goals or direction that the team is taking? How have you done this?

What are your reflections about the value of these interdisciplinary experiences? How have they contributed to your professional and personal growth?

What do you understand by the term resilience?

5. Wrapping up
Those were all the questions I had for you.

In the interests of providing a demographic context for this study, I’d now like you to complete this short questionnaire regarding your background

Thanks again for your time.
Appendix 5: Demographic survey

In the interests of providing a demographic context for this study, please respond to the following questions. Please try and be as specific as possible in your responses to the open-ended questions.

1. Are you currently working in an interdisciplinary research team?
   - □ YES  □ NO

If no, please go to Question 5 overleaf

2. If yes, what project is your team working on?
   ________________________________________________________________

3. What is your role in this interdisciplinary team?
   ________________________________________________________________

4. Please list the other core members of this team in terms of a) their role in the project & b) their disciplinary or professional backgrounds (don’t use names instead list as member 1, member 2 etc):
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

5. Where are you currently working? If you are a student, where are you studying?
   ________________________________________________________________
6. What is your current role?
_____________________________________________________________________

7. What is your educational background?
_____________________________________________________________________

8. What academic discipline would you describe yourself as primarily belonging to?
_____________________________________________________________________

9. What is your gender?
□ Male  □ Female

10. What is your age group?
□ 20-25 □ 26-30 □ 31-35  □ 36-40 □ 41-45 □ 46-50
□ 51-55 □ 56-60 □ 61-65 □ 66-70 □ 71 +