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University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

Career Choice in Medicine

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PhD Thesis

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Declaration

This thesis is my own work and has not been submitted for another degree, either at University College Cork or elsewhere.

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Deirdre Bennett

Dedication

To Mike, Kate, Patrick and David

Acknowledgments

Abstract

Background

Career choice in Medicine is important to multiple stakeholders: the medical profession and its trainees, patients, government, regulatory bodies, manpower planners, health service providers and medical educators. Medical schools and postgraduate training programmes aim to produce doctors with skills that are needed, who will work in the locations where they are needed. Yet, both high and low income countries face workforce shortages, skill-mix imbalances, and mal-distribution of doctors. A wealth of published research has addressed the topic. Most of this work, however, has focused on identifying factors associated with particular career choices, and on predicting and influencing those choices.

Despite the framing of medical education as the development of doctor identity, career choice has not, thus far, been viewed explicitly as a matter of identity. The field lacks a unifying theory to account for the non-linear ways in which demographic, attitudinal, experiential factors, and others, combine to shape career choice. The primary aim of this thesis was to offer new insights by exploring career choice using Figured Worlds theory, a socio-cultural theory of identity.

Graduate retention is a challenge for many countries, including Ireland. This study was conducted during a time of upheaval in the Irish health system. Hundreds of Non-Consultant Hospital Doctor (NCHD) posts were unfilled and failure to implement the European Working Time Directive led to industrial action. I have aimed to address a gap in the data on postgraduate trainees in Ireland and their

career plans and pathways. By bringing this descriptive quantitative data into dialogue with richly theorized qualitative findings I have aimed to use the Irish case to illustrate points transferable to other contexts.

Research Questions

My research questions were;

1. What are the career plans and pathways of trainees in Ireland?

2. What are the expectations and experiences of training amongst trainees in Ireland?

3. How does Figured Worlds theory explain professional identity formation in medical students?

4. How can career choice be viewed as an aspect of professional identity formation?

5. How do medical students and doctors self-author their career possibilities and choices?

6. How does self-authoring of career possibilities and choices change over time?

7. How can conflict and tension in practice lead to authoring of new possibilities for career identity?

Methodology

I have undertaken a predominantly qualitative Mixed Methods programme of research to address these questions. I have taken a pragmatic meta-perspective consistent with a Mixed Methods approach. This means that I have not allowed philosophical difference between research methodologies to stand in the way of mixing them in order to answer my research questions. My qualitative studies were oriented towards social constructionism. Figured Worlds theory was the theoretical lens for my qualitative work, with Gee's discourse analysis acting as a sensitising influence.

Methods

Quantitative data: I collated existing, but fragmented, data from the paper based application forms of 870 applicants to postgraduate training programmes under the Royal College of Physicians of Ireland (RCPI) in July 2012. I integrated these data with information from the HSE-MET Non-Consultant Hospital Doctor database, to describe trainees and their career paths. I conducted a survey of new appointees to Basic Specialist Training programmes (n=333), in respect of their career plans. I used the Dutch Residency Educational Climate Test (DRECT) to survey new entrant RCPI trainees' (n=527) expectations of training and all RCPI trainees' experiences of training (n=1246).

Qualitative data: I conducted semi-structured interviews with 18 medical students and doctors, at different points on the career trajectory. A subgroup of these participants (n=6) provided audio-diary recordings and/or a follow-up interview

over an 18 month period. These were analysed using Figured Worlds theory and Gee's discourse tools to address the research questions.

Results

Drawing my quantitative and qualitative studies together, I have used the case of medical training and career choice in Ireland to explain how social, political and cultural context, and day to day experiences in the cultural world of medicine, shaped doctors' career choices. Trainees left Ireland for lifestyle reasons and to pursue training opportunities. Working abroad was part of the career plan of over ninety per cent of junior trainees surveyed. Trainees commencing BST viewed quality of training in Ireland positively and had high expectations of it. Expectations of training quality were not matched by BST training experience. My findings suggested that policy makers had failed to understand the value placed on overseas experience within the cultural world of Medical Careers and had underestimated the impact of negative experiences in daily practice on trainees' identities and choices.

My qualitative findings have demonstrated the affordances of Figured Worlds, as a unifying theory with deep explanatory power in respect of the processes of career choice. I have described a unified model of career choice based on Figured Worlds theory, consisting of priming, exposure, positioning and open-endedness, which can guide the design of interventions to shape and support career choice. Meta-themes from my qualitative studies were: first, that career choice should be viewed as aspect of professional identity formation; second, that career choice is a complex process which demands complexity thinking; third, that the personhood and agency

of individuals is core to the process of career choice. These themes represent new ways to explain career choice and have potential to impact research and practice in the field.

Conclusion

My original contribution has been to demonstrate the fruitfulness of framing career choice in terms of identity development. This represents a turn in the conversation about career choice, which brings new starting points and moves the dialogue forward.

Chapter 1

Introduction

How does a surgeon become a surgeon? By nature or by nurture? Why does one medical student choose General Practice while another chooses Pathology? Why not vice versa? Can career choice be shaped to meet societal need? If so, how can this be achieved? These are some of the questions which swirl around the topic of *Career Choice in Medicine;* questions I aim to address in my thesis.

1.1 Introduction

Worldwide in 2015, there are in excess of a million medical students and an estimated 9.2 million doctors (World Health Organisation 2013). Over the course of each of their professional lives they make choices which lead to their becoming a certain 'type' of doctor. Most obviously, this is reflected in their choice of a medical specialty, but it also encompasses other elements, such as geographical location of practice, and the broader characteristics of their area of practice, for example, more or less person-centred or technology-focussed. The processes through which medical students and doctors make career choices, and progress along career pathways, are poorly understood but are of key importance to multiple stakeholders: the medical profession and its trainees, patients, government, regulatory bodies, manpower planners, health service providers and medical educators. Medical schools and postgraduate training bodies aim to produce doctors with skills that are needed, who will work in the locations where they are

needed. However, both high and low income countries face workforce shortages, skill-mix imbalances, and mal-distribution of professionals (Crisp & Chen 2014). Career choice in medicine is problematic and has far reaching implications.

The purpose of this thesis is to deepen understanding of career choice through a mixed methods programme of research which triangulates on the issue. It aims to contribute to conversations currently on-going both nationally, in Ireland, and in the international medical education literature. These conversations are about what it means to be a doctor and the ways in which people come to understand themselves as doctors; conversations about professional identity formation. They are conversations about the role medical education can, should, and does play in shaping identity towards desired outcomes; conversations about clinical learning environments and medical culture. They are also conversations which spring from the very practical concerns arising from doctor shortages in the Irish health system; conversations about quality of training and graduate retention. The objective of my work is to move these conversations forward, to bring new starting points and ways to frame the issue of career choice (Eva & Lingard 2008). Furthermore, I aim to inform stakeholders, to what extent and how, career decision making might be shaped to meet the health needs of society.

1.2 Education and training of doctors

Doctors are educated and trained in two phases: basic medical education, undertaken in medical schools, and post-graduate medical training (or graduate medical education), which happens predominantly in workplaces, in the course of supervised medical practice. The duration of training and programme structure vary between countries. In Europe, including the UK and Ireland, most entrants to medical school come directly from secondary school (high school). They spend 5-6 years in basic medical education before graduation, and often must complete a year of internship post-qualification before becoming fully registered medical practitioners. By contrast, entrants to medical school in the US and Canada have a prior degree and can complete basic medical education in as little as 33 months. Over the past fifteen years, a number of UK (Lambert et al. 2001), Irish (Finucane et al. 2008) and Australian (Searle 2004) universities have initiated accelerated 4 year 'graduate entry' programmes in addition to their traditional school leaver programmes. One of the objectives of these newer programmes is to broaden access to medical school (Prideaux & McCrorie 2004). This is an objective which is in part related to the anticipated career choices of a more diverse medical student group (Powis et al. 2004).

The postgraduate phase of training also varies internationally. In the US and Canada, entry into specialty training occurs immediately on graduation. Programmes in broader specialties, such as internal medicine, as well as more specific areas, such as dermatology, neurology and plastic surgery, are available. In

Europe, there are at least an initial 1-2 years of general training, involving a range of specialty areas, such as internal medicine, surgery and family medicine. Therefore, during medical school and perhaps the early years post qualification, a process is expected to take place leading to a decision to pursue a particular medical career. The structure of the training system will force trainees to choose a path at certain points and may not allow for easy cross-over to other paths once choices are made (Maudsley & Strivens 2000). The traditional view of career choice has been that it is a matter for the individual (Lambert & Goldacre 2007). More recently, structured support for students and trainee doctors in choosing their careers has become more widely available in recognition of the importance of these choices (NHS 2015; AAMC 2015).

1.3 Career choice: An overview of the literature

The importance of Career Choice as a topic is reflected in an extensive literature relating to the subject. Here I outline the main themes which arise in published work and locate my work within the field.

1.3.1 Individual characteristics and demographic factors in career choice

There have been many studies, which have examined demographic and attitudinal characteristics which correlate with entry to particular specialties (Bland et al. 1995; Straus et al. 2006; Newton et al. 1998; Erzurum et al. 2000; Sobral 2006; Scott et al. 2011b). Such analyses have been undertaken in response to recruitment difficulties,

prompting questions as to whether students might be selected for, or subsequently influenced to follow, a specific career pathway. Recent large scale studies have used regression analysis to identify a range of demographic characteristics and attitudes associated with choosing a primary care career (Scott et al. 2011a; Jeffe et al. 2010). Smaller studies have been conducted in surgery (Sobral 2006), academic medicine (Straus et al. 2006) and emergency medicine (Boyd et al. 2009; Svirko et al. 2014) . Proposed solutions arising from these studies are to select students from certain demographic groups (Scott et al. 2011a; Scott et al. 2011b), to engage them through exposure to the specialty and offering stronger role modelling (Smith 2011).

A range of influences have been identified by undergraduate students and trainee doctors as impacting their career choices. Large cross sectional surveys in a number of countries have shown broadly similar results. Amongst US medical students, Borges et al (2009), identified the top five influencing factors as parents, income, coursework, faculty, and lifestyle, whilst, among German students, work-life balance, job security and income were most important. Factors identified as important in graduates are individuals' assessment of their own skills and aptitudes, intellectual content and challenge of the specialty, and working hours (Harris et al. 2005).

A repeated finding is that the relative importance of influencing factors varies across specialties. Those entering person-oriented specialties are more likely to be influenced by their personal physician, by school faculty, and by medical school activities. They are less likely to be influenced by expected income. While those entering procedure-oriented specialties are less likely to be influenced by role models and more likely to take income into account in their decision making (Borges et al. 2009). Lifestyle and income have been shown to be becoming more important in career decision making (Newton et al. 2005; Dorsey et al. 2005). The precise meaning of lifestyle varies between studies. It is frequently conflated with the idea of more free time and 'controllable' working hours, although students' perceptions of the lifestyle friendliness of specialties and their arbitrary classification by researchers into 'controllable/uncontrollable' do not always match (Newton et al. 2005).

A single factor can lead to different outcomes in different contexts. This can be seen in a French study where those entering Primary Care were more motivated by opportunities for private practice than those choosing medicine or surgery (Lefevre et al. 2010), which is opposite to US findings (Borges et al. 2009). Cultural differences in findings may be seen between Western and non-Western countries. An example is a study of medical students in Jordan (Khader et al. 2008) who cited several major influential factors in common with their Western counterparts; however, on-call schedules were not strongly influential. This is in contrast to the importance of lifestyle and work/life balance in the West. A limitation, therefore, in

attempting to predict how factors will influence choice is that influence is mediated by the context in which it occurs.

Studies on the influence of gender in career choice have also thrown up some contradictions. The important factors for career choice, for women entering Medicine in the 1970s in New Zealand, were interest, flexibility, women friendliness and job security (Lawrence et al. 2001). A more recent study of Swiss graduates has shown that women differ from men in placing more importance on work and time related aspects and patient orientation than career related aspects such as prestige and salary (van der Horst et al. 2010). Although work life balance appears important to men and women, women may be more prepared to compromise professional attainment (Drinkwater et al. 2008; Sanfey et al. 2006). In the US however, women have been found to be slightly more likely than males to enter specialties classified as 'uncontrollable' and therefore less lifestyle friendly (Dorsey et al. 2005).

Research which looks at the influence of individual factors has generally been conducted in large groups and has taken an epidemiological approach to link these factors to specific career choices. While there have been some consistent findings context has a powerful modulating effect in how individual factors mediate career choice. Therefore the relationships which have been identified may change as the context for healthcare delivery changes over time.

1.3.2 Experiential factors in career choice

1.3.2.1 Curriculum

In addition to the 'personal' variables outlined above, the impact of 'experiential' variables on career choice has also been the focus of many studies (Bland et al. 1995; Woodward 1990). Exposure to clinical specialties at both undergraduate and postgraduate level appears to shape career decision making in different ways; confirming existing choices (Sobral 2006) and/or providing an opportunity to develop interest in, or to reject, previously unconsidered areas (Burack et al. 1997; Scott et al. 2007). Firth & Wass (2011) showed a shift in attitude towards primary care amongst UK foundation trainees following completion of a four month post in General Practice. Negative impressions garnered at undergraduate level and negative attitudes towards primary care prevalent hospital settings were redressed by positive first hand experiences. This led some trainees to re-consider General Practice as a career (ibid). The one-to-one student-teacher relationship offered by General Practice was identified by trainees in this study as an attractive aspect of the specialty. High quality teaching on rotations has been shown to make specialties more attractive to students and trainees (Williams et al. 1997; Griffith et al. 2000; Okayama & Kajii 2011).

 Students have also been shown to use 'free choice' electives to explore career interests (Mihalynuk et al. 2006). These are elective rotations in which they can choose to spend time in any specialty area. It has been proposed such tailor-made

electives offer greater benefit to students when compared with mandatory experiences because the students have chosen them as personally salient (ibid).

The range of factors which can contribute to career choice and the time lag between an individual rotation and subsequent matching to a specialty can make demonstration of a clear relationship difficult. There is evidence that experience of primary care in the first undergraduate curriculum year increases the likelihood of selecting a primary care residency (Grayson et al. 2001), as do third year family medicine clerkships (Bland et al. 1995). Similarly, curricula specifically designed to promote practice in remote, rural or underserved areas have demonstrated that time spent in these areas as a student or trainee is central to promoting practice there in the longer term (Eley et al. 2012; Myhre & Hohman 2012; Jamar et al. 2014; Stagg et al. 2009). None the less, it cannot be said that exposure promotes recruitment to a specialty in every case. For example, one study conducted across medical schools in the US did not show any correlation between inclusion of a third year Emergency Medicine clerkship in the curriculum and the number of students subsequently pursuing a career in Emergency Medicine (Zun & Downey 2004). Furthermore, in a study of the impact on Internal Medicine residents of working in a Continuity Clinic, while residents' satisfaction with most aspects of the clinic was high, they were less likely to want to pursue a career in General Internal Medicine having been exposed to the clinic (Peccoralo et al. 2013). This finding suggests that there were other elements at play, which were not identified by the authors and points to the limitations of looking at any single factor in isolation.

Rejection of a previously favoured specialty, amongst US undergraduates, has been found to occur most commonly during the third year (of a four year programme) (Dyrbye et al. 2012) and has been linked to negative aspects of the specialty of interest, rather than positive aspects of another (Katz et al. 1984; Durning et al. 2011). Both low satisfaction with the undergraduate clinical experience in a specialty and a perception of dissatisfaction amongst residents have been identified as important factors in pushing students interested in Internal Medicine away from the specialty (Durning et al. 2011). Quality of life, decline in interest in job content, poor career opportunities, arduous training and examinations and poor working relationships were cited by the 33.1% of UK graduates who had seriously considered, but ultimately rejected a career option (Lambert et al. 2003). The literature, however, is not entirely consistent. Student distress and decline in empathy, as measured by validated scales of depression, burnout and quality of life, and the Jefferson Scale of Physician Empathy, were not associated with a change in career choice over one year in one study (Dyrbye et al. 2012).

1.3.1.2 Culture

Medical school culture has been shown to be influential in relation to students choosing careers in primary care. Poorer quality primary care clerkship experiences were associated with a higher prevalence of students and residents 'bad mouthing' primary care and a lower number of students choosing it as a career (Erikson et al.

2013). Cleland et al (2014), in a multi-centre study, found evidence that even when differences in the demographic profiles of students selected for different schools were taken into account, that there were differing patterns of career choice amongst exiting students, pointing to the influence of curricular process and school culture.

The question of gender in medical culture and its relationship to career decision making extends beyond its framing as just another demographic marker. Medical specialties are gendered in consistent ways internationally (Sanfey et al. 2006), which has implications for the possibilities that female medical students and trainees envisage for themselves (Hill & Vaughan 2013). Gender discrimination and sexual harassment are rife in medicine, with one study reporting that over eighty three per cent of students had experienced, witnessed or heard about at least one episode (Stratton et al. 2005). Students' subsequent choice of residency was shown to be influenced by these experiences. Of note, although men were less frequently the targets of gender discrimination, when they did have such experiences the impact on career choice was even greater than for women (ibid). Gender based assumptions have also been shown to impact mentoring relationships on both sides, shaping the advice given and what the mentee chooses to disclose (Levine et al. 2013). Overall the literature suggests that gender shapes career choice in several ways.

Students' perceptions of specialties have been the focus of several studies in an attempt to better understand recruitment difficulties in specific areas. Perceptions arise from experiences of undergraduate placements and encounters with individuals working in those specialties, but also include indirect knowledge of a specialty and stereotypical doctors associated with it (Hill & Bowman et al. 2014). Pathology, for example, is an unpopular residency choice internationally. In a studies by Hung et al (2011) and Ford (2010) senior medical students described negative stereotypes of pathologists, as 'weirdos in bow-ties' and the specialty itself as a technician's job which was all about 'dead people'. Most students did not have clerkship experiences in pathology, and didn't even consider it as a career option. Psychiatry (Rajagopal 2004), Surgery (Hill & Bowman et al. 2014) and Pulmonary and Critical Care Medicine (Lorin et al. 2005) are amongst the specialties which students and trainees view negatively. Proposed solutions include actively addressing misperceptions, communicating positive aspects of specialties to students and adjusting the 'tone' of undergraduate teaching within them. These studies are often carried out my members of the specialty in question and often lack critical reflection on how the specialty has come to be perceived as it is.

1.3.1.3 Role modelling

Role modelling has been proposed as being core to professional character formation for doctors (Kenny et al. 2003) and role models are often referred to in the career choice literature as an important influence on specialty choice (Ambrozy et al. 1997; Minor et al. 2003; Ravindra & Fitzgerald 2011; Griffith et al. 2000;

Wright et al. 1997). Negative role models, it is suggested, can cause students to turn away from a specialty (Ford 2010). Inconsistent use of the term 'role model', however, and the lack of a clear definition of the term in respect of careers in particular, create some difficulty in interpreting the literature. The BEME systematic review of Doctor Role Modelling in Medical Education (Passi et al. 2013) uses a definition from Irby (1986), of role modelling as a process in which 'faculty members demonstrate clinical skills, model and articulate expert thought processes and manifest positive professional characteristics'. This definition makes sense when the role being modelled is a broad one; skilful communicator, empathic doctor, or effective team member, but perhaps less so when the role in question relates to a specific career path. If a role model is a person whom one aspires to emulate, then a career role model for one student may not necessarily be a career role model for another. In general, the literature which calls for more and better role models to attract students to particular specialities has used the term 'role model' vaguely, describing the characteristics of career role models in much the same way as more general role models. Most papers have not explored the ways in which role models might influence career choice. However, a small number of authors have taken a more analytical approach. Hill and Vaughan (2013) used the concept of paradigmatic trajectories, drawn from Communities of Practice theory (Lave & Wenger 1991), to examine the way in which a lack of female surgical role models deterred female students from embarking on surgical careers. They suggested that, rather than providing a simple uni-directional role modelling process, the presence of women in surgery created possibility and space for female students to imagine themselves as future surgeons.

In a study comparing students entering primary care and non-primary care specialities, Burack (1997) found that those entering primary care were more likely to cite influential role models. While the role models were described as having excellent clinical knowledge, teaching skills and rapport with patients, the manner in which they influenced career choice did not relate directly to these characteristics. Like Hill and Vaughan's findings (2013), Burack's career role models functioned to demonstrate the feasibility of certain career options and to refute negative stereotypes associated with particular specialties, for example by being a patient and considerate surgeon. Non-primary care students identified role models as exemplifying characteristics they wished to emulate and often drew on role models from specialties other than their chosen area of practice. This group discounted role modelling as influential in their career choice. Burack's study demonstrated that career decision making was complex and belied traditional notions that career role models function simply by virtue of their individual characteristics as good doctors.

The overall picture which emerges from the literature on experiential factors in career choice is a complex and nuanced one. There is evidence that experiences, positive and negative, have impact on career intentions and decisions, but the processes through which that influence is mediated are unclear. There is also evidence of more subtle influences; an informal curriculum of medical careers, through which students gain impressions of different specialties indirectly. The

ways in which individual factors, experiences and perceptions of the options available to them come together to shape students' career choices require further exploration.

1.3.3 Location of practice

Research into choice of location of practice has been stimulated by the difficulty in recruiting doctors to underserved and rural areas and by the issue of medical migration, where doctors choose to practice outside their country of origin. Mal-distribution of doctors is an issue as familiar in sub-Saharan African nations as in the rural areas of Canada and Australia. Factors affecting decisions in this area can be broken down into 'push' factors relating to the country of origin and 'pull' factors relating to the destination (Guilbert 2006). For African graduates, issues such as remuneration, access to technology and training and personal safety are 'pull' factors. The politics of healthcare in Africa has been identified as a 'push' factor. A study of final year medical students in six African schools found 40% intending to train outside the Sub Saharan region and 21% planning to relocate permanently (Burch et al. 2011). Policy aimed at addressing this issue has been significantly hampered by the lack of detailed data to allow the tracking of African graduates.

Although countries such as the UK and Ireland are destination countries for medical migrants from other parts of the world, they too have some issues with retention of domestic graduates. The proportion of pre-registration house officers who have

reported their intention to 'continue practicing medicine in the United Kingdom for the foreseeable future' declined from around 90% in the 1980s to 75% in the 1990s (Lambert et al. 1997). Those intending to leave the UK to practice abroad most commonly cited a desire to live outside the UK as a 'pull' factor, although working hours and conditions were 'push' factors (Moss et al. 2004). The authors concluded that some of the factors leading to the decision to leave the UK were outside the remit of health policy.

In relation to rural practice in Canada and Australia, the approach has been to attempt to identify demographic and attitudinal characteristics to select students who are likely to practice in such areas. Students have been found to be likely to practise close to the geographical area from which they come (Pretorius et al. 2010; Baker et al. 2012). Students from rural areas with an interest in rural family practice at entry to medical school are more likely to be in rural practice 30 years later (Rabinowitz et al. 2012). Early undergraduate exposure to medically underserved areas, and training in those settings, has been shown to positively influence choice of practice location (Tavernier et al. 2003).

The literature on location of practice has identified factors, both individual and experiential, which are associated with greater likelihood of practising in underserved, low-income or rural areas and these findings have proved useful in designing programmes to address the issue. The literature on graduate retention at

a national level emphasises that stakeholders have limited scope to address the problem. Graduate retention is impacted by factors such as the international medical jobs market, national economic performance and even climate, which are beyond the remit of health service providers and medical educators.

1.3.4 Interventions to influence career choice

Interventions to influence career choice have varied in scale and focus. Selection of students for admission to medical school on the basis of demographic and attitudinal characteristics is one strategy which has been proposed as a solution to recruitment difficulties in under-served specialties and geographic areas (Smith 2011; Schwartz et al. 2005). In the United States, Canada (Kapadia & McGrath 2011) and Australia, medical schools with a mission to increase the numbers of doctors choosing to practice in rural locations have introduced preferential admission of students from rural locations (Tesson et al. 2005). In combination with curricula which provide longitudinal exposure to rural practice, this approach has proved effective in producing doctors who are willing and prepared to practice in rural locations (Stagg et al. 2009; Kapadia & McGrath 2011).

During the 1990s there were two large scale projects in the United States aimed at improving recruitment to generalist or primary care careers. The Robert Wood Johnson Generalist Physician Initiative (Matson, Ullian, & Boisaubin, 1999; Schwartz et al., 2005) was a large scale project which ran in 13 medical schools. Curricula

were re-designed to ensure high quality generalist placements and generalist physicians were appointed to senior academic positions within these schools. The number of students entering generalist residencies increased by 39% at participating schools; however, concomitant external factors in the health care system led to similar increases in non-participating schools. The Interdisciplinary Generalist Curriculum Project (Kahn et al. 2001) was a similar project, which ran in ten demonstration schools for seven years but, like the RWJ Generalist Physician Initiative, the evaluation of its impact on primary care career choice was swamped by wider changes taking place in the US Health System at that time. Both projects were valuable explorations of the challenges of undertaking significant organisational change and demonstrated how difficult it is to prove the impact of interventions on career choice, even when the intervention has been major curricular reform.

A successful intervention, albeit on a smaller scale, has been implemented at Boston University, where a Family Medicine Student Track (FaMeS) was introduced in 2004 (Wilkinson et al. 2010). This programme runs throughout the curriculum and features curricular, extracurricular and career planning elements for students who express an interest in a primary care career. The authors reported an almost doubling in the odds of a student matching to Family Medicine during the time the programme had been running. Various smaller scale interventions, of briefer duration, have also been undertaken. Recognition that students' perceptions of specialties are formed early in medical school, or even beforehand, has led to

programmes such as Surgical Exploration and Discovery (SEAD) (Gawad et al. 2013) and Introduction to Primary Care (Grayson et al. 2001) elective modules pitched at pre-clerkship students. One group described an even earlier intervention of structured work experience in General Practice for school students interested in studying medicine (Curtis et al. 2008). Building on what is known about factors which influence career choice; these programmes offered a combination of observership, teaching in the relevant domain, exposure to clinicians and discussion of careers in those areas. Students evaluated such programmes positively but evidence of longer term impact on career decision making is limited (Grayson et al. 2001).

Increasing awareness that career choice can be problematic at individual and wider levels has resulted in recommendations that career information and counselling should be made available to students and trainee doctors (Greenaway 2013). In the UK, a national survey of trainee doctors showed that while over ninety per cent agreed that career advice was important to support their career choices, only a third had been able to access such advice, and one third of more experienced doctors agreed that a lack of career advice had made their career decisions more difficult (Lambert & Goldacre 2007). Over the past decade both the Association of American Medical Colleges and the UK National Health Service, amongst others, have developed websites to support students and trainee doctors in making career decisions (AAMC 2015; NHS 2015). These websites are repositories of information regarding individual specialties and also feature tools which use students' interests

and values to identify potentially suitable careers. The tools in question are inventories derived from vocational psychology which seek to determine 'fit' between an individual and various specialties. The AAMC uses the Medical Specialty Preference Inventory, Revised Edition, which claims to predict one of a student's top three eventual residency choices in 76% of cases. Many medical schools and postgraduate training bodies provide careers information and counselling, sometimes in innovative ways (Welbergen et al. 2013). Evaluations of these interventions, however, have not been published.

1.3.5 Theory in career choice

The vast majority of the literature on medical careers is a-theoretical. The assumption that career choice in medicine involves the logical weighing up of various factors to achieve a good 'fit' between oneself and a specialty, however, is inherent in most papers. This notion of the process of career choice has parallels with vocational psychological theories (Dawes 1982). Holland's theory (Holland 1997) is perhaps the best known of the vocational psychology theories and is widely used in the United States in general careers counselling. Holland proposes that there are six basic vocational personality types: Realist, Investigative, Artistic, Social, Enterprising and Conventional. A similar typology can be applied to various career options. Individuals' dominant personality type is determined based on their responses to a questionnaire relating to likes and dislikes in a work environment. Holland's theory proposes that individuals will thrive in career environments that match their dominant personality type. Secondary and tertiary personality types

can also be determined to provide more nuanced guidance towards suitable careers. Holland's model has been shown to be consistent with patterns of career preference expressed by medical students (Petrides & McManus 2004). The approach has also been used to examine medical school entrants' personality types and their later specialty choices. This second study drew the conclusion that there was significant heterogeneity in the types entering particular specialties, such that the typology was not helpful for providing guidance in relation to suitable specialties (Borges et al. 2004). Holland's model, with its focus on personality type, an individual factor, misses the influence of experiential factors, curricular and cultural elements which we know can shape career decision making. A theoretical perspective which accounts for career choice in a more holistic way would afford more to researchers and stakeholders in the area.

Social Cognitive Career Theory (SCCT) aims to unify the individual and the experiential factors in career choice. Drawing on Bandura's social cognitive theory (Bandura 2001), Lent et al (1994) proposed a theory of interest development, career choice and performance based on self-efficacy, expected outcomes and goals, and related to individual and contextual factors, as well as learning experiences. They proposed that interest development and subsequent career choice come about through a process of person-environment interaction. Individuals develop interest in activities in which they have strong self-efficacy. Self-efficacy beliefs are strengthened and positive outcome expectations are formed by personal success experiences, exposure to successful role models, social and verbal

persuasive communications, and positive affective reactions (e.g., low anxiety, relaxed state) while completing a task. Individuals set goals, which if achieved, further build self-efficacy and deepen interest. Career choice is an extension of this process. In other words, people choose careers on the basis of what they feel they are good at and what they expect will bring valued outcomes. Achievement of goals, or failure to achieve them, continually feeds back into this process allowing the individual to change course as necessary.

Social cognitive career theory has been used to underpin studies focusing on attracting doctors to work in rural Scotland (Cleland et al. 2012) and rural Australia (Rogers & Searle 2009), as well as to examine the self- efficacy of those pursuing careers in medical research (Bierer et al. 2014) and successful medical career in general (Woolf & McManus 2011). Rogers et al (2009) have developed an instrument to predict future specialty choice based on SCCT and it has also been proposed that the theory could form the basis for a rubric to evaluate the potential of programmes aimed at fostering career choice and development in specific areas (Coleman et al. 2012). Cleland et al (2012) commented that use of SCCT helped to clarify the interaction between individual and contextual factors in career decision making. In all, the literature suggests that SCCT offers significant affordances, as a unifying theory for the process career choice in medicine.

While theories of career choice have proven useful in understanding medical careers, further fruitful possibilities may be found by taking a broader theoretical view. Medical education has been framed as a process of identity formation (Cooke et al. 2010; Cruess et al. 2014). It might seem obvious to state that choosing a career path is also part of identity development, yet very few studies have used theories of identity to explore the topic of career choice. Burack et al (1997) touched on ideas consistent with socio-cultural identity theory in their paper which used a social constructionist approach to explore 'how choosers choose'. Without directly referencing identity theory, they describe how medical students go through a socially situated process of constructing and 'trying on possible selves'. These projections of future possibilities, the authors tell us, are powerfully motivating and include wider aspects of students' lives. Hill and Vaughan's work (2013) examining students' perceptions of surgical careers drew on Communities of Practice theory (Lave & Wenger 1991), which views learning and identity formation as one and the same process. Their use of the concept of paradigmatic trajectories sheds new light on the difficulty in recruiting women to surgery, by showing how a lack of possibilities for women in surgery, constructed by female students, deterred them from entering surgical training. The work of Burack (1997) and Hill and Vaughan (2013) demonstrates that viewing career choice as an aspect of professional identity formation offers a rich vein of new insights into the topic.

1.4 What's the problem?

The purpose of medical school and postgraduate training is to produce doctors who will serve society, working in the specialties and areas in which patients need them. Yet, despite extensive research aimed at predicting and influencing career choice, the problems of skill mix and mal-distribution remain. Theoretical approaches in general, and identity theory specifically, have been under-utilised in research into career choice. The field is in need of a unifying theory with the explanatory power to account for the fragmented and contradictory findings in the existing literature. While Social Cognitive Career Theory does offer some affordances towards unifying our understanding, approaching career choice as part of the process of professional identity formation has the potential to offer new ways to consider problematic aspects of the topic. I aim to address this theoretical gap by using a socio-cultural theory of identity, Figured Worlds (Holland et al. 1998), to explore the processes underpinning career decision making. Socio-cultural approaches have been described as particularly suitable for medical education because of their emphasis on participation in practice and identity formation (Bleakley et al. 2011). Figured Worlds Theory has recently begun to be cited in the exploration of the development of professional identity in medical students (Dornan et al. 2015) and in medical career choice (Hill & Vaughan 2013; Hill & Bowman et al. 2014). It emphasises a diversity of possibility in terms of identity development. Individual agency, in choosing identities, and the role of imagination and daily experience in building understandings of oneself are key elements of this theory. While much of the existing research in career choice has been conducted in large populations,

Figured Worlds theory refocuses attention on the personhood of individuals and their journey of identity development.

A further deficit in the literature, which I will address in this thesis, relates to the local context in which the research was conducted, the Irish health system. This programme of research was in part stimulated by the suggested linkage of an 'exodus' of graduates of Irish medical schools to negative aspects of postgraduate training in Ireland (Bruce-Brand et al. 2012; McCann 2012). The inadequacy of demographic data on those applying for, entering and progressing through medical training in Ireland was highlighted almost ten years ago in a government commissioned report, *Preparing Ireland's Doctors to Meet the Health Needs of the 21*ST *Century* (Buttimer 2006). This failure to track graduates and trainees was identified as a barrier to effective policy responses to challenging issues. In early 2010, there was a recruitment crisis in the Irish healthcare system which left hundreds of non-consultant hospital doctor posts unfilled (Jordan 2010). This crisis raised questions about the number of graduates of Irish medical schools leaving Ireland, temporarily or permanently, to train and practice abroad. While some progress has been made in relation to data on medical training since 2006 (Medical Council 2013), there remain areas in which basic descriptive data is lacking, such that debate about graduate retention has often been characterised by anecdote and opinion.

Training in Ireland has been compared unfavourably with training abroad and implicated as a factor in the decision of graduates of Irish medical schools to leave the Irish healthcare system (Bruce-Brand et al. 2012; Burke 2012). Evidence to support this position has been derived from trainee surveys which focussed on satisfaction with current training. In 2004, 63% of the 2004 cohort of interns agreed with the statement that training abroad was better than that available in Ireland (Finucane & O'Dowd 2004). This was supported by the Career Tracking Survey 2005, looking at the 1994 & 1999 graduating cohorts who identified better training facilities, further training and better career prospects as advantages of training outside Ireland (McEntee et al. 2005). More recently, in 2012, a survey of Non-consultant hospital doctors (NCHDs) (Bruce-Brand et al. 2012) reported that 50% (n=190) of respondents then working fulltime in Irish hospitals were dissatisfied with their current post, in terms of the general nature of the job and the quality of training they were receiving. The available data in relation to satisfaction of trainees across PGMET in Ireland, however, is patchy.

In summary, simple baseline demographic data on the career plans and pathways of trainee doctors in Ireland, and validated measurements of the quality of training environments are needed to better understand the current manpower crisis. I will address this gap in Chapter 3 of the thesis. This data will also provide a context for the project and although not widely generalizable has the potential to have high impact within the Irish healthcare system.

1.5 Theoretical framing

The conceptual orientation of this thesis and the theoretical and methodological approaches used will be described in detail in Chapter 2, *Conceptual Orientation & Methodology*. The project has been conducted with a social constructionist orientation, which is consistent with the choice of Figured Worlds theory as both an epistemological and subject matter theory. Figured Worlds theory, which originates in the field of cultural anthropology is a discourse theory. This means that it emphasises the use of language to construct identity, a process referred to as 'self-authoring'. Figured Worlds is also a theory of social practice, which holds that identity develops through organised practices involving social interaction with others, such as the practice of medicine. As a socio-cultural theory, Figured Worlds theory also attends to the social, historical and cultural contexts in which identities are formed (Holland et al. 1998).

The descriptive information which I present in relation to the Irish context has been derived from the collation of existing but fragmented sources of demographic and careers data. I have used a Likert scaled survey to measure career intentions and influences, and quality of training has been evaluated using the Dutch Residency Educational Climate Tool (D-RECT), a validated tool for the measurement of postgraduate training environments (Boor et al. 2011). This tool is theoretically grounded in principles of social constructionism and social learning theory and is therefore consistent with the overall orientation of the thesis. I have conducted a mixed methods programme of research to address the research questions outlined

below. I aim to bring my quantitative and qualitative findings into dialogue with each other to deepen understanding of the process of career choice, in general, and within the context of the Irish health system in particular.

1.6 Research questions

1. What are the career pathways and plans of trainees in Ireland?

2. What are the expectations and experiences of training amongst trainees in Ireland?

3. How does Figured Worlds theory explain professional identity formation in medical students?

4. How can career choice be viewed as an aspect of professional identity formation?

5. How do medical students and doctors self-author their career possibilities and choices?

6. How does self-authoring of career possibilities and choices change over time?

7. How can conflict and tension in practice lead to authoring of new possibilities for career identity?

1.7 Summary of the remaining chapters

This thesis is comprised of eight chapters. I lay out the rationale and methodology for the thesis in the current introductory chapter and the *Conceptual Orientation and Methodology* chapter which follows. There are then five empirical chapters. In the first of these I provide descriptive data regarding the career plans and pathways of trainees in Ireland and their expectations and experiences of training. The remaining four chapters are qualitative studies which use Figured Worlds theory. In Chapter 4, *Figuring Doctor Identities*, I demonstrate the application of Figured Worlds theory to professional identity development showing how Figured Worlds can bring new perspectives to the field of doctor identity development. Medical students' written reflections are used to show a diversity of possible doctor identities and professional identity is then linked to career specific identity, and career choice. In Chapter 5, *Self-authoring in Cultural Worlds of Medical Specialties*, I describe the self-authoring of medical students and doctors in relation to their career possibilities and choices. This chapter focuses particularly on the way in which individuals come to develop identities within the cultural worlds of medical specialties. Chapter 6, *Self-authoring Career Identity Over Time,* looks at how self-authoring changes over time and emphasises the open-endedness of identity. This idea of continual 'becoming' is a central tenet of Figured Worlds theory. In Chapter 7, *Making Worlds in Medical Careers*, I look at the ways in which conflict and tension, in self-authoring and in practice, can create new possibilities for doctor identity. This chapter is about 'making worlds', a technical term in Figured Worlds theory, which refers to the ways in which change happens in cultural worlds.

Finally, in Chapter 8 I synthesise the findings of the individual studies and consider how they can further develop Figured Worlds theory. I discuss the impact of the findings and identify further areas for research.

Chapter 2

Conceptual Orientation & Methodology

*'When **I** use a word,' Humpty Dumpty said, in rather a scornful tone, 'it*

means just what I choose it to mean—neither more nor less.' 'The question

*is,' said Alice, 'whether you **can** make words mean so many different things.'*

'The question is,' said Humpty Dumpty, 'which is to be master—that's all.'

(Carroll 1934, p.205)

Words; how we choose them and use them; how we think through them; how we make them our own. These are themes which permeate my thesis. In this chapter I lay out the philosophical and theoretical landscape on which this focus on language is founded.

2.1 Introduction

A researcher's epistemological positioning has implications which run through a research project, from the conception of the research question, to the choice of methodology and the interpretation of results (Carter & Little 2007). Declaration of a particular position at the outset is important, so that meaning can be made of what follows. In this chapter I lay out the paradigm within which my work has been conducted and explain how my choice of theory and sensitising influences align with it. I provide an outline of the key tenets of Figured Worlds theory and situate it within broader identity theory. I pay particular attention to discourse analysis

methodology and how it has shaped my methods. Methodological procedures for the type of analysis I am undertaking using Figured Worlds theory have not been defined in the literature; therefore, to ensure rigour, clear description and justification are needed.

2.2 Epistemological stance

Research paradigms can be defined as sets of beliefs about the nature of reality (ontology), the nature of knowledge (epistemology) and the nature of research (methodology) (Bunniss & Kelly 2010). Research philosophy is a complex and contested world full of 'isms' and 'ologies' which overlap and nest within each other. Inconsistent use of terms to describe the different ways of thinking about ontology and epistemology can be confusing to the novice; especially a novice coming from a background of taken-for-granted biomedical positivism (Kneebone 2002). Even the meaning of the term 'paradigm' itself has been subject to debate (Morgan 2007). In this account of my epistemological stance, I will not enter into the labyrinthine philosophical arguments which characterise the field of research philosophy. I provide instead a researcher's account of the core tenets underpinning my work.

In simple terms, research is knowledge production, and in order to justify or make claims for the knowledge produced, a researcher must have a position about what is 'out there' and what can be known about it (Bunniss & Kelly 2010). There are

widely varying schools of thought on these matters and what follows is a thumbnail sketch. Reality can be perceived as a single truth which exists independent of the observer. At the other end of the ontological scale, reality can be viewed as entirely subjective; as multiple truths existing only as the perspectives of those participating in it. Between these two extremes, of realism and relativism, there are more nuanced views, for example the acknowledgement that there may be an independent objective reality, but that our access to it is limited (Lincoln & Guba 1994).

Along with theories of reality, research paradigms incorporate epistemological stances, or ideas about knowledge and its relationship to the 'knower' or researcher. Positivism is founded on realist ontology; the assumption that reality can be objectively measured and that measurement in an appropriate sample can be generalised to a wider group. Interpretivist approaches based on relativist ontology recognise multiple constructed realities, which are not directly measureable, but understood through the perspectives of participants. In the positivist tradition the researcher is a neutral, value free observer; involvement of the researcher in the creation of data is viewed as bias. In interpretivist approaches the role of the researcher is explicitly acknowledged. S/he is not viewed as 'independent' but as part of the research. These epistemological stances have implications for the way in which research is conducted, the methodology. The positivist paradigm is generally associated with quantitative approaches and the

interpretivist paradigm with qualitative methods although there is no rule that this must always be the case.

2.2.1 Mixed methods research

I have employed both qualitative and quantitative methods in this mixed methods programme of research. Mixed methods research (MMR) is becoming increasingly popular (Creswell & Plano Clark 2011, p.1) and has been defined in different ways by those who conduct it (Johnson et al. 2007). Some would not define my work as MMR because the quantitative and qualitative elements address different research questions, albeit within a programme of research. Morse (Johnson et al. 2007) has defined MMR as follows;

> *'A mixed method design is a plan for a scientifically rigorous research process comprised of a qualitative or quantitative core component that directs the theoretical drive, with qualitative or quantitative supplementary component(s). These components of the research fit together to enhance description, understanding and can either be conducted simultaneously or sequentially'.*

This definition fits well with the approach I have taken; using primarily qualitative methodology, supplemented by descriptive quantitative data which provides context for the qualitative work. Johnson's definition of Qualitative Dominant MMR (Johnson et al. 2007) confirms this categorisation of my work:

> *'Qualitative dominant mixed methods research is the type of mixed research in which one relies on a qualitative, constructivist-poststructuralist-critical*

view of the research process, while concurrently recognizing that the addition of quantitative data and approaches are likely to benefit most research projects.'

There is a growing literature relating to typologies of mixed methods approaches. The focus of the typological literature has been the dominance of one approach over the other and the sequence in which the two elements are undertaken (Fetters et al. 2013). The philosophical issues raised by MMR have also been much discussed. Mixed methods research has been described as being both at the centre of contradictions between different research paradigms and transcending them (Sommer Harrits 2011). The 'metaphysical' tradition of research philosophy would suggest that combining methodologies underpinned by differing paradigms creates a problem; firstly because a researcher should have a consistent world view (Morgan 2007), and secondly because knowledge produced within different paradigms is incommensurable – cross communication is not possible (Lincoln & Guba 1994; Howe 1988). In the face of these objections others have argued that mixed methods research is a research paradigm in itself, one grounded in a research philosophy of pragmatism (Johnson & Onwuegbuzie 2004; Morgan 2007; Johnson et al. 2007). Sommer Harrits has suggested that pragmatism should be viewed as a meta-perspective in MMR, within which other epistemological approaches can be nested (Sommer Harrits 2011).

Pragmatic research philosophy is based on the work of Charles Sanders Peirce, William James, and John Dewey (Johnson & Onwuegbuzie 2004). A central tenet of

their perspective was that the value of a proposition depends on its practical consequences. If a statement does not have practical consequences then it is not viewed as important. From this perspective, the practical consequences of mixing methods with conflicting underpinning ontologies, if indeed there are any, are what matters (Johnson & Onwuegbuzie 2004). A pragmatic approach continues to recognise the importance of epistemology and its relationship to methodology and methods, but gives more weight to the daily practices of groups of researchers than to ontological contradictions (Morgan 2007). Within this perspective it is valid to use different methodologies and to integrate their findings in order to answer a research question. The emphasis is on persuasion, shared meaning and communication between the different positions (Morgan 2007; Johnson & Onwuegbuzie 2004).

I characterise my work as mixed methods research, with a pragmatic meta-perspective. The gaps in the existing literature, which this thesis attempts to fill, are best addressed through a mixed methods programme. I aim to bring my quantitative and qualitative findings into dialogue with each other to bring new insights to the topic of career choice in medicine (Lingard et al. 2008).

2.2.2 Social constructionism

I have used predominantly qualitative methodologies oriented towards social constructionism. There is no single definition for social constructionism. Gergen (1985) stated that;

> *'Social constructionist inquiry is principally concerned with explicating the processes by which people come to describe, explain, or otherwise account for the world (including themselves) in which they live.'*

Burr (2003) laid out the core elements of this orientation under the heading 'things you would absolutely have to believe to be a social constructionist'. The first of these is to be critical of taken-for-granted observations of the world. In contrast to positivism, which holds that unbiased observation reveals truth, social constructionism questions how that which seems 'natural' has come to seem so (Gergen 1985). Secondly, social constructionism views understanding of the world as historically and culturally specific. In other words, that which is seen as truth changes over time and in different contexts. Thirdly, knowledge of the world is constructed in social interaction with others. We construct, or build, our understanding through exchanges with other people. Knowledge, therefore, is not in our heads but emerges from activity, primarily linguistic exchange, with others. Social constructionism, therefore, puts particular emphasis on discourse, or language in daily use. Finally, constructions of the world sustain some patterns of action and exclude others and are therefore bound up with power relations because they influence what is allowed and how people treat each other (Burr 2003). Social constructionism challenges the traditional concept of objective,

individualistic, a-historic knowledge and denies that experience of the world reflects an unproblematic reality (Gergen 1985).

Social constructionism was first defined as a distinct perspective by Berger and Luckman (1966), however it has roots in a range of philosophical and theoretical camps (Hruby 2001; Burr 2003). As originally described (Berger & Luckmann 1966), social constructionism side stepped the question of ontology. Latterly, however, it has been critiqued as taking an extreme relativist perspective (Gergen 1985; Johnson et al. 2007; Burr 2003; Hruby 2001). Such a perspective creates difficulty because, if there are multiple equally valid interpretations of reality, a question arises as to how a particular stance (of which social constructionism itself is one), can be justified or defended above others. The response to this critique has been varied. One has been to argue that as soon as we enter a discourse, to think or to talk about something, we have entered into a process of construction which narrows the way in which we perceive the world (Burr 2003, p.90). Therefore, social constructionism does not deny a reality external to discourse, but emphasises that we have no way to consider that reality. Gergen's (2001) response is to stress that having a multiplicity of perspectives still allows one to choose a stance and defend it. He envisages knowledge as emerging from the dialogue between perspectives. Social constructionism is a broad church and includes critical realist researchers who do not share Gergen's view. Burr has suggested that a solution to these tensions lies in finding a way to transcend the dualist, either / or, terms of the debate (Burr 2003, p.102).

Since the 1960s, social constructionism has been widely taken up as a paradigm for social sciences research and thinking has developed in different directions. Social constructionism has contributed to a shift in perspective in relation to identity theory over the past twenty years (de Fina 2011). This has come about through a re-conceptualisation of the self, moving away from the idea that self is a property in the mind of the individual, and from Cartesian notion of the self as separated from its social environment (Packer & Goicoechea 2000). Rather, the situated self is seen as emergent from the interaction between the individual and their socio-cultural surroundings. Social constructionism frames identity as a process, as 'doing' rather than 'being' and as something that happens in day to day activity, predominantly through language, or discourse (de Fina 2011). My exploration of career choice as identity formation has been informed by these perspectives.

2.3 Socio-cultural theory

Socio-cultural theory, which is based on the work of Vygotsky and Bakhtin (Wertsch 1991), has also been a sensitising influence in my work. A socio-cultural approach to identity is characterised by recognition of the fluidity of identity and its relationship to participation in practice (Packer & Goicoechea 2000). It is an approach which resonates with the social constructionist perspective outlined above. Medical education has been described as 'ready-made' for the application of socio-cultural theory, with its focus on workplace learning, incremental participation in practice and doctor identity formation (Bleakley et al. 2011). There are increasing calls for the application of sociocultural theory to how we train

doctors (Mann 2011; Eva 2013). Figured Worlds, the theory of identity that I have used in my work, is a socio-cultural theory of identity, heavily influenced by the work of Vygotsky (Vygotsky 1978; Holland & Lachicotte 2007) and Bakhtin (Holquist 1990).

2.3.1 Relationship to social constructionism

The relationship between socio-cultural theory and social constructionism has not been clearly or consistently defined in the literature. Vygotsky's work has most commonly been referred to as social construct_iv_ism (Young & Collin 2004) . While some authors appear to use social constructionism and social constructivism interchangeably (Liu & Matthews 2005), others have defined differences between these perspectives (Burr 2003, p.19). Social constructivism has most commonly been associated with the work of Piaget (DeVries 1997). Burr described social constructivism as arguing that each person perceives the world differently and actively creates their own meaning from events. Within this perspective, the emphasis is more on individual cognitive processes than on interaction with others, as is the case in social constructionism (Burr 2003, p.19). Locke and Strong (2010) have identified Vygotsky's and Bakhtin's theories as a key 'tributaries' to social constructionism and commented on the appropriation of Vygotsky's work by the field of cognitive psychology, without due regard to its emphasis on situativity. Bakhtin's theory of self has been identified as a vision compatible with social constructionism (Cresswell 2011). However, Burr did not reference Vygotsky or Bakhtin in her eponymous book on social constructionism (Burr 2003). Packer and

Goicoechea (2000) separated social constructivist ontology from that of socio-cultural theory, defining social constructivism as a dualist theory, in the Cartesian sense, in contrast to socio-cultural theory, which views the mind and its socio-cultural environment as one. Vygotsky and Bakhtin's works were not introduced to the West until the late 1970s and early 1980s, and therefore cannot have contributed to the initial description of social constructionism published in 1966 (Berger & Luckmann 1966). Both social constructionism and socio-cultural theory, however, share early roots in the work of Marx (Wertsch 1991, p.16) and Kant (Holquist 1990, p.3).

Attempting to plot clear domains and relationships between research perspectives is perhaps an exercise in vain. Perspectives have developed over time in the dialogue of researchers, through the literature and in practice. Terminology has been appropriated and re-defined; concepts have been interpreted in new ways. Theoretical positions are social constructions in themselves and should not be treated as truth, but seen as open to negotiation and exchange. In this spirit I add my own voice to the melee.

I see social constructionism as an over-arching perspective which encompasses socio-cultural theory amongst others. Following Packer and Goicoechea (2000), I do not locate Vygotsky and the socio-cultural school with the social constructivist work of Piaget. Rather, I place Vygotsky and Bakhtin squarely in the realm of social

constructionism. Socio-cultural theory provides a means to understand the emergence of knowledge from social interaction, in cultural and historical contexts, posited by social constructionism. It is arguable from a pragmatic standpoint that these issues do not have significant impact on the outcomes of my work. Yet, as a researcher, I want to understand the foundation on which my work stands. It is ironic that a researcher taking a social constructionist perspective should struggle so much to pin down the multiple conflicting interpretations.

Socio-cultural theory is founded on a non-dualist ontology, in the Cartesian sense, which means that the individual and the social context are seen as one. Within this perspective, there is mutuality and reciprocity between the individual and the context. The mind is part of a highly connected set of inter-relationships which extend 'beyond the skin' (Wertsch 1991), into the socio-cultural environment and the minds of others.

Themes of socio-cultural theory, described by Packer and Goicoechea (2000) are: first, that the individual is not a natural entity but a social and historical product. Second, that formation of the individual occurs in social contexts, through practical activity and in relationships of desire and recognition. Finally, the self is not a single entity but is split into a relational self/other. The dialogical relationship between these sites of the self is at the core of self- understanding. I will expand on these

points in the sections that follow, detailing the contribution of Vygotsky and Bakhtin to socio-cultural theory.

2.3.2 Vygotsky

The origins of sociocultural theory lie with the work of Russian psychologist Vygotsky (1896-1934) and his followers. In post-revolutionary Russia, at a time when behaviourism was the dominant psychology, Vygosky sought to develop a theory for higher mental function, which took account of social, cultural and historical processes. A key element of Vygotsky's work was the proposition that all higher mental function, or meaning making, is mediated by cultural means which are socially constructed and derived from context (Holland & Lachicotte 2007). These cultural means are physical and psychological tools, which allow individuals to organise their thoughts and emotions, and free the individual from automatic response to environmental stimuli.

Vygotsky described a developmental process whereby cultural means are first used on the interpersonal plane and later applied to self on the intrapersonal plane (Wertsch 2007; Vygotsky 1981). Language is such a cultural means. Social languages, such as the language of medicine, are used by novices interpersonally at first; they repeat the words of others but have not yet appropriated the tool. Over time, they begin to internalise the social language. On the intrapersonal plane, the words of others are altered and become inner speech. Inner speech differs from social speech. It is a compressed form of speech, in which sense (situated and

personalised meaning) dominates over generalised meaning for others (Holland et al. 1998, p.177). Vygotsky did not focus on identity in his work but his higher mental functioning or meaning making captures the concept. Vygotsky's work on semiotic mediation was built upon by Leontiev (1981) and Engestrom (2009) who further emphasised the situatedness of mediated action and the shared nature of the mental models which guide and motivate human activity.

2.3.3. Bakhtin

The work of Bakhtin (1895-1975), a Russian philosopher and literary critic, has also been very influential in sociocultural theory in general and in Holland et al's (1998) theory of identity in particular. Bakhtin proposed a theory of dialogism (Holquist 1990; Bakhtin 1981), which means that individuals are in a constant state of being addressed by the world and responding to it. For Bakhtin this 'addressivity' defines existence; from birth to death we are in dialogue with the world. The world addresses us with a variety of physical stimuli, social languages and discourses, and in responding, we make meaning, both of the world and of ourselves. This meaning making is referred to as 'authoring'. The author's response to the world moment to moment is crafted from the words of others, their discourses and social languages. These words carry the motivations and intentions of others until the author appropriates them for his/her own intention. The words of others are melded to a greater or lesser extent with inner speech and a response is authored, in the form of external speech. In responding the individual attempts to orchestrate the multi-voicedness (heteroglossia), by which s/he is addressed (ibid).

Bakhtin also considered the relational nature of the self, which deals with the ways in which individuals objectify themselves, experiencing themselves through the categories of others. The self is to experience as the 'I' is to language. They are positions from which self- authoring occurs. The self is open ended and emerges in the constant flow of being addressed and responding. It is invisible to itself. The self that attempts to 'arrest' itself and reflect upon itself is not the self that responds to the world. This is what is meant by the self being split (Packer & Goicoechea 2000); for Bakhtin, the self is dialogic. Holquist (1990), analysing Bakhtin's writings, identifies at least three elements of the self: a centre (I-for-itself), a non-centre (the not I-in-me) and the relation between them. These are ideas which are prominent in sociocultural approaches to identity.

2.4 Identity in medical education: Theoretical approaches

Medical education has been framed as a process of identity formation (Monrouxe 2010; Helmich & Dornan 2012; Clandinin & Cave 2008; Cooke et al. 2010; Cruess et al. 2014). Appealing and intuitively simple as the word 'identity' may seem, it is open to different interpretations. There are a multitude of theoretical accounts of identity: individual and developmental perspectives; social and contextual perspectives; and theories which focus on motivation, well- being, gender, sexuality, ethnic and cultural identity and civic participation (Schwartz et al. 2011). There are many aspects of identity which are open to debate: do individuals have

freedom to determine their identities? To what degree are they constrained by social structures – roles, for example? Do people have single or multiple identities? If people have multiple identities, are they like pieces of clothing that can be taken on and off, or are they simply facets of a person's core being, which reflect differently in different lights? Are identities constant or are we different people in changing contexts and over time? The answers to these questions differ according to theoretical stance.

A number of reviews have addressed how different theoretical approaches can explain how medical students develop the professional identity of a doctor and how the formation of such an identity might be promoted (Monrouxe 2010; Jarvis-Selinger et al. 2012; Burford 2012; Cruess et al. 2015). A review by Monrouxe (2010) synthesized multiple theoretical perspectives into the following points, which resonate with the social constructionist perspective on identity: identities are constructed by individuals through inter-subjective processes; people construct their identities through language, including their narratives of the self; identity is embodied and 'performed'; identity development involves a two-way process between individuals and the communities in which they live and work, each influencing the other; identity is distinct from knowledge and skills, but it enables people to apply their competence in effective ways (Monrouxe 2010).

Jarvis-Selinger and colleagues, likewise, presented identity and competence as separable, albeit related to one another, arguing that medical education must support the development of both (Jarvis-Selinger et al. 2012). Identity, according to them, develops through socialization into professional roles. Taking a social psychological perspective, Burford's account (2012), of identity as self-categorisation in relation to membership of social groups, located identity squarely within individuals. According to his perspective, identity arises from how an individual 'fits' a socially accessible category. From this perspective, the salience of different available identity categories changes in different contexts, thereby allowing for multiple identities. When learners meet a doctor whose identity fits them, they adopt and internalize the doctor's identity (Burford 2012).

Most recently, Cruess et al (2015) have attempted to integrate a range of theoretical perspectives on identity to support curricular design in medical education. Drawing on cognitive, social cognitive and situated learning theories they produced a schematic of professional identity formation. Their paper demonstrates the need for a unifying theory which can capture the complexity of identity formation; however, it also shows the confusion and ambiguity which arise when concepts of identity arising from different perspectives are 'promiscuously mingled' (Holland & Lachicotte 2007). Cognitive psychologists and social learning theorists define identity very differently. It is unclear where Cruess et al (2015) locate their schematic in respect of these definitions, as they draw on a range of perspectives without describing their stance on identity.

The articles of Monrouxe (2010), Jarvis-Selinger et al (2012), Burford (2012) and Cruess et al (2015) have much to say about psychological perspectives on identity, but they consider only one theory of identity as a product of social and cultural existence – Communities of Practice (COP) theory (Lave & Wenger 1991) – and only one of those publications examines the underpinning assumptions of COP in any depth (Monrouxe 2010). Yet, the practice of medicine is a product of the social and cultural context in which it occurs and the identities that develop amongst medical students and doctors do so day-to-day in social and cultural activity within that world. In this thesis I take a socio-cultural approach to identity. As mentioned earlier, social constructionism has had an impact on how identity is viewed and has shifted emphasis to a perspective which aligns well with socio-cultural theory.

2. 5 Figured Worlds theory: Identity and agency in cultural worlds

Figured Worlds theory (Holland et al. 1998) originated in cultural anthropology. It was borne out of a desire to develop a theory of identity which took account of both the continual emergence of identity through activity in cultural settings and the more durable aspects of identity which have formed over time in those settings. Holland et al (1998) lay out the theory in their book Identity and Agency in Cultural Worlds, and support it with examples from ethnographic studies conducted, for example, amongst alcoholics in Alcoholics Anonymous, individuals with mental health problems, women in Nepalese villages and women college students. Figured

Worlds is a theory of social practice, which means that it emphasises the development and expression of identity through organised daily activity with others in cultural and historical settings. Figured Worlds is also a discourse theory, which means that individuals construct themselves through language, using the words available to them. These aspects of Figured Worlds theory tie it closely to the perspectives of Vygtosky (Holland & Lachicotte 2007; Vygotsky 1978), Leontiev (1981)and Bakhtin (Holquist 1990) and align the theory with social constructionist and socio-cultural perspectives.

2.5.1 Figured Worlds

Holland et al (1998) describe four ways in which individuals make meaning of themselves in cultural worlds; four contexts for identity. The first of these is the Figured World. Holland et al draw heavily on Vygotsky's semiotic mediation (Wertsch 2007) to describe how individuals internalise cultural means to develop understandings of themselves and to motivate themselves to action. The Figured World is a cultural model or means, a distillate of reality, a thinking tool which relates to social practice (Holland et al. 1998, p.53). It is characterised by 'typical' narratives, figured by 'types', and associated with certain valued actions and outcomes. The types within the Figured World are socially indexed; power and hierarchical relations are part of the typical narratives (Holland et al. 1998, p.58). The Figured World forms a context for meaning and is a concept similar to that of a cultural model or discourse model, described elsewhere (Gee 1999). Following Vygotsky, the Figured World is a semiotic mediator of understanding. We index, or

point to, Figured Worlds in every day conversation, as a form of shorthand. If I tell you that I went to the doctor yesterday, you understand the generality of what I did, because there is a socially constructed cultural world associated with going to the doctor, which we share. The Figured World is not simply an abstract concept. Figured Worlds are lived in day to day social practice. The world itself is reproduced in the practices of its participants.

Vygotsky (1981) provides some of the ground work for Holland et al's (1998) proposition for how individuals come to learn and think with Figured Worlds. The Figured World is a cultural mediational means which is first experienced on the interpersonal plane. Initially, the Figured World might allow us to recognise others and the meaning of their actions within that world. We might use the social language of the Figured World but in the form of the words of others and without fully understanding the motivation behind them. Holland et al use 'identification' to describe the shift that occurs when we begin to use the cultural means, on the intrapersonal plane, the point at which we appropriate the Figured World (Holland et al. 1998, p.106). We now apply the Figured World to ourselves. We have a sense of ourselves within the Figured World and we have learned to attend to and value, to emotionally connect with, the motivations of the Figured World (Holland & Lave 2009). As expertise within the Figured World develops, we no longer rely in such an obvious way on the mediation of the Figured World – it becomes 'fossilised'. This is a Vygotskian term which means that responses mediated by the Figured World move out of awareness and become 'natural' (Holland et al. 1998, p.141).

Figured Worlds is a social practice theory and this process of appropriation of the Figured World occurs through practice. Identities are formed by participating in activities organised by a particular Figured World. Identities form in the day to day activities undertaken in their name. Figured Worlds provide a context of meaning for people to understand themselves and to direct their own behaviour in these worlds. Understanding of oneself mediated through a Figured World is a figured identity, but these are not stable, particularly at first. The Figured World itself and evaluation of self in relation to it may change. At first, knowledge of the Figured World may be incomplete and activity within it imagined, thought about and talked about rather than enacted. Vygotsky described how in imagination or play, the individual's desires are related to the 'fictitious-I'. By modelling possibilities, Figured Worlds inspire action (Holland et al. 1998, p.99). This is what has been referred to as 'semiotic boot-strapping', a means to organise and modify thoughts and emotions – part of higher mental functioning (Holland et al. 1998, p.38). Individuals use Figured Worlds to motivate themselves to act in particular ways.

Holland focuses on the relationship between involvement (salience and identification) and expertise within a Figured World, using the example of the world of romance. Salience here refers to the degree to which the Figured World is present in one's thoughts. Expertise is considered in terms of ability to take an overview of the Figured World, direct oneself within it and respond to situations

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within it. In Chapter 5 I will examine in detail the relationship between expertise and involvement in Figured Worlds and identification within them.

2.5.2 Positional identity

Positionality is the second context for identity proposed by Holland. Positional identity refers to a person's apprehension of their social position in the lived world (Holland et al. 1998, p.125). We claim position and we are positioned by others day to day through social interaction. While Figured Identity is an imaginative framing of self in typical narratives, relating to particular types, positional identity is about inclusion and exclusion, entitlement, silencing, distance and affiliation. The artefacts and indices of position may vary between Figured Worlds, but many, such as the major social categories, cut across Figured Worlds. Positions are built again and again in interaction, maintaining the value of the markers. Novices as they enter a Figured World will gain a sense of their position with in it. They may take up or contest this positioning. Like the internalisation of the Figured World, social positions become dispositions through participation in, identification with, and development of expertise within the Figured World (Holland et al. 1998, p.137). Day to day positioning within the Figured World is therefore another mediator for identity. Over time this disposition may become fossilised, when the response no longer relies of use of the mediating tool and reasons for behaviour move out of awareness. Other positional identities remain more accessible to reflection. Holland et al stress that semiotic mediation also offers a means to overcome positioning – once one appropriates the cultural artefacts mediating positions (Holland et al.

1998, p.63). Positional identity impacts how people behave and it is rooted in day to day experiences.

2.5.3 Space of authoring

The third context for identity is the space of authoring. Bahktin's dialogism (Holquist 1990) forms the basis for this part of the theory. The space of authoring is defined as

> *'a broad venue where social languages meet, generically and accentually, semantically and indexically, freighted with the valences of power, position and privilege.'* (Holland et al. 1998, p.191)

Bahktin's focus was on language; however, other cultural means, such as for instance Figured Worlds, also address the individual in Holland et al's vision (Holland et al. 1998, p.235). The space of authoring can be seen as the nexus of the self, where figured and positional identities come into contact with inner speech and a multitude of other voices. The space of authoring is the site of the heteroglossic address of the world to the individual. A multiplicity of perspectives are represented, through the voices of specific others, experiences of positioning by others, types from various Figured Worlds and their values. These voices are socially indexed, some carrying more weight than others. Where Vygotsky would have a monologic internal dialogue, this is the dialogic self of Bakhtin; the dialogism of inner speech. External speech becomes inner speech. An 'internally persuasive discourse' is formed by marrying the words of external speech to one's own words,

directed towards oneself. The self is compelled to respond but has choice in terms of how the response is crafted. This element of agency is an important aspect of Figured Worlds theory. Over time there may be a tendency to combine or orchestrate certain voices in a consistent manner; this is referred to as the development of an 'authorial stance' (Holland et al. 1998, p.183). In terms of self-authoring, an authorial stance represents the formation of a more durable aspect of identity. Bakhtin's ideas about self- authoring provide a basis from which to analyse discourse and to explore individuals' understandings about the world and themselves.

2.5.4 Making worlds

If Figured Worlds guide and motivate people's practice, and that practice shapes the Figured World, then how can change come about? The fourth context of identity, Making Worlds, addresses this point. Holland et al provide two main examples of the creation of new Figured Worlds, and therefore new possibilities for identity: that of courtly love in the fourteenth century and of the identity of a 'good woman' amongst Nepalese women. Vygotskian concepts of play are important in understanding this context for identity. Through social play, for example through the arts, new possibilities and new Figured Worlds can be imagined. This was the case with courtly love which was a 'game' of sorts, in which day to day gender relations were suspended and a different order was played out (Holland et al. 1998, p.239). This links with the Bakhtinian idea of 'carnivalisation' (Holquist 1990, p.26), where normal rules do not apply. Over time, courtly love, a play-world, came to

shape activities between men and women beyond the context of the game. This example provides an illustration of how the arts can allow people to figure themselves in new ways and thus re-shape their practices. Similarly for the women of rural Nepal, the opportunity to figure new possibilities for themselves came about through a festival, the Tij, during which time normal cultural rules did not apply. Through song, women publicly imagined new ways in which to be a good woman. The political landscape at the time in Nepal created space for their voices (Holland et al. 1998, p.231).

The space between different Figured Worlds is a discursive space where new worlds can be authored. While the changes wrought by courtly love and the Nepalese women were dramatic in scale, Holland et al (1998) also acknowledged the small readjustments and shifts that occur daily in Figured Worlds, leading to significant change over time. Holland and Lave (2009) later described how new identities emerged in the course of contentious local practice, outlining the dialogic relationship between local practice and wider social, historical and cultural landscapes. These ideas are developed in Chapter 7.

Vygotsky and Bakhtin contribute to Holland's theory in complementary ways. Vygotsky's contribution underpins the developmental aspect of the theory, through appropriation and internalisation of cultural means over time. Bakhtin provides a theoretical framework, through dialogism, which explains how cultural means, once

internalised, are dealt with by the self and contribute to meaning making. Figured Worlds is a rich theory which has the potential to offer new insights into the professional identity of doctors in general and their career identities in particular. It takes account of 'history in person' or more durable aspects of identity. It emphasises ways in which identity is formed minute to minute in the flow of practice. And it points to the cultural means through which we think, as well as recognising the agency of the individual to author their own identity. As such it provides a holistic and integrated account of identity. Figured Worlds theory touches on many of the themes already identified in the medical careers literature: demographic and attitudinal characteristics, clinical experiences, perception of specialties, stereotypes and role models. It provides a novel means to consider the relationship between these elements which I will explore in Chapters 4-7.

2.6 Discourse

The construction of meaning through language, or discourse, is a central element in social constructionism and socio-cultural theory. Discourse studies is a cross-discipline which has its beginnings in Anthropology, Linguistics, Literary Studies, Sociology, Psychology, Communication Studies and Political Science(Van Dijk 1997, p.xv). Within this broad field, language is viewed in different ways. A general definition of discourse analysis is the study of 'language-in-use' (Gee 2011); however, this masks widely varying definitions of discourse and approaches to its analysis. For example, conversation analysis is associated with a realist epistemology and views language as transparent or 'natural' (Morgan 2010).

Discourse, in that case, refers to what is spoken, the text. The key point of interest is the structure of the language up to sentence level; grammar, syntax etc. which people use to construct uncontested reality. Foucauldian discourse analysis (Kuper et al. 2013; Hodges et al. 2014), by contrast, is based on a relativist epistemology and views discourse as a collection of ideas which reflect how a particular topic has been constructed in society. The focus of Foucauldian studies is on the historical context for the development of discourses, the dominance of some discourses over others, and the way in which discourses shape social structures and vice versa (Morgan 2010). Foucauldian discourse analysis has been a dominant form of discourse analysis in the medical education literature (Hodges & Kuper 2012), although other approaches, including Figured Worlds approaches, have been used latterly (Dornan et al. 2015).

Preceding discourse analysis with the word 'critical' implies an interest in how discourse affects power and status (Dornan 2014). Broadly speaking there is an inverse relationship between the focus on linguistic structure and interest in the wider social, cultural and political meaning of language. The discourse element of Figured Worlds theory primarily comes from Bakhtin. As has already been outlined in sections 2.3.3 and 2.5.3, Bakhtin sees our utterances as constructed from the discourses available to us. When we talk about the world, we author it. We can only make meaning of the world, and ourselves in it, through existing discourses. By examining what people say, therefore, we can unravel the sources they have used to author themselves.

A significant critique of discourse analysis has been the lack of clear procedures (Morgan 2010). Discourse analysis is the deconstruction of a text; looking beyond the surface for patterns of language use; and the construction of a critical interpretation of those patterns, in respect of a research question. There are no strict guidelines for analysts to follow. It has been suggested that analysts may devise their own procedures, guided by the specific topic, research question and theoretical perspective, providing the researcher explains their detailed and thorough procedure with justification for their choices (Taylor 2001) This is the approach I have adopted.

2.7 Methodology

My overarching objective in Chapters 4-7 of this thesis is to examine the self - authoring of medical students and doctors in respect of their professional identities (Chapter 4), career possibilities and choices (Chapters 5-7). To this end I have used an overarching methodological approach which I will outline here. There was some variation in methods used between the individual studies and those will be described in the relevant chapters.

2.7.1 Figured World theory and Gee's discourse analysis

Written reflections (Chapter 4), transcriptions of interviews, and audio-diaries (Chapters 5-7) formed the text for my analysis. I will describe here my general

approach to the analysis of this textual data. As I have discussed above, the space of authoring is the nexus for making meaning of the world and oneself. Figured identities, positional identities, world making, internally persuasive discourse and the multiple voices and perspectives of others meet in the space of authoring and are combined to form an utterance, a response to the world. An utterance is a situated unit of meaning. During the course of writing a reflection, being interviewed, or recording audio-diaries, participants produce utterances which make meaning of that situation. The questions or prompts used were designed to lead to responses in which participants built or constructed their identities from the multiple discourses available to them.

I aimed to bring Figured Worlds theory into direct transaction with the text, to shed light on self- authoring as figuring, positioning and world making and to use discourse analysis techniques to interpret participants' own interpretations of themselves. The theory led nature of the analysis supports the validity of my approach. Through this process, I aimed to explain participants' framing of themselves and the possibilities and choices available to them, as well as the cultural models and daily experiences which mediated their understanding of themselves. There is no agreed procedure for undertaking this kind of analysis. Following Taylor, I will explain my approach in detail to support the trustworthiness of my work.

Gee's approach to discourse analysis acted as a sensitising influence to my approach (Gee 2011; Gee 1999). Gee's methodology falls between the micro-linguistic approach which involves close analysis of the structure of language, and the Foucauldian approach which is not concerned with linguistic structure. His approach examines the structure of language but also deals with social, cultural and political meaning. Gee describes twenty seven 'tools' for discourse analysis. He defines tools as questions the researcher asks of the data, and suggests that researchers can adapt them to their own research questions and theoretical stances (Gee 2011). Gee has been influenced by Figured Worlds theory in his approach to discourse and many of his discourse tools have relevance to bringing the theory to the text. Examples include the 'Identities Building' tool which involves asking what socially recognisable identity or identities the speaker is trying to enact or to get others to recognize and how the speaker is positioning others in what is said (Gee 2011, p.106). The Social Languages tool asks how words and grammatical structures are being used to signal and enact a given social language, for example the type of language doctors use when speaking to each other (Gee 2011, p.161). Gee also describes a Figured Worlds tool, which asks what Figured Worlds are being assumed and what participants, activities, ways of interacting and values are in these Figured Worlds (Gee 2011, p.171). These tools and others are useful means to consider the utterances of participants in order to understand how they make meaning of themselves.

Skinner's (2001) exemplar of a Figured Worlds and Bakhtinian oriented analysis was a further sensitising influence, demonstrating;

'the conjunction of theory and method in discerning how individuals orchestrate the voices from their cultural and social worlds to create distinctive images of self and to envision their (future) social positions.'
(Skinner et al. 2001).

2.7.2 A social constructionist approach to methodology

TD and I conducted the analyses presented in Chapters 4-7 together. A third researcher, YS, contributed to data analysis in the study described in Chapter 4. Consistent with a social constructionist perspective, the process involved our co-construction of an interpretation of participants' interpretations of themselves, their career possibilities and choices (their reflections/ interviews/ audio-diaries). The integrity of participants' accounts has been preserved and lengthy quotes are presented to allow readers to see both the interpretations of participants and our co-construction of an interpretation and meta-interpretation.

The researchers read the reflections (DB, TD & YS), and listened to and read the transcripts of all interviews and audio-diaries (DB & TD) several times. We met on multiple occasions to discuss our interpretations and recorded these meetings to keep an audit trail. I reflexively chose sections of text which seemed pertinent to the research questions and offered an interpretation of those sections using

Figured Worlds as the main analytical lens and Gee's tools as a sensitising influence. I annotated the text in Word (Microsoft Corporation 2014), rather than using qualitative analysis software. This enabled me to keep each individual's interview / audiodiary as a whole, while closely analysing relevant sections. TD and I then jointly constructed an agreed interpretation. Where disagreement occurred we referred back to Figured Worlds theory and to Gee. We undertook a process of constant comparison. Sections of text were compared with the totality of the text from each individual, and also across individuals. A thick description evolved and we moved back and forth between the text and the thick description throughout the analysis, comparing, contrasting and adding richness to the interpretation and synthesis.

2.7.3 Reflexivity

Reflexivity is an important element of social constructionist research (Burr 2003; Mauthner & Doucet 2003). It has been defined as;

> *'finding strategies to question our own attitudes, thought processes, values, assumptions, prejudices and habitual actions, to strive to understand our complex roles in relations to others'* (Bolton 2010)

Reflexivity in the research process has been described as involving; consideration of the interpersonal and institutional context for the research, recognition of the ontological and epistemological assumption embedded in the methods used, acknowledgement of the theoretical perspective taken, the social location of the

researcher, her emotional response to study participants and the scrupulous documentation of the research process (Mauthner & Doucet 2003). Verdonk (2015) has commented that understanding our complex roles in relation to others means understanding how we are involved in structures of power. My discussion of the material presented up to this point in the current chapter, therefore, has been part of the reflexive process. I will now consider some of the other elements of reflexivity, not yet addressed, and will provide a comprehensive account of my position in this research.

The utterances of the study participants were directed at me, the interviewer, and were crafted specifically for me. I addressed the interviewees, in a Bakhtinian sense, in ways that extended beyond the verbal content of my questions. My gender, age and status, amongst other aspects, addressed them and shaped their self-authoring. Interviewees may also have been responding to others, beyond myself, who they perceived might read their comments. Likewise, participants addressed me as I interviewed them, possibly shaping the way in which I asked questions. Therefore, the data produced is situated in that context. The self-authoring of participants might be different if addressed to another interviewer, or indeed if the interview took place on a different day. It is important to acknowledge this as it has implications for the meaning of my study results which I will explore later in the thesis.

I have kept a reflexive diary during this programme of research in which I have reflected on the interviews and audio-diaries provided by participants and, in each case, how I might have shaped the self-authoring of the participant. My participants included men and women, medical students, senior doctors and those on trajectories in between. The way in which each interviewee perceived me is likely to have been varied as, to some I represent a senior doctor, to others a peer, and to one a junior colleague. There was a steep power differential between me and the medical students interviewed, which may have shaped their accounts of themselves. I did not interview any students from my own classes; however, I was known to student participants as a faculty member. While I encouraged them to speak candidly when interviewed, they may, nonetheless, have wished to present themselves in a light that would garner approval. In relation to the trainee doctors interviewed I am a more senior doctor and although I did not hold any formal position of power in respect of them, it is possible that this shaped their narratives. To the senior doctors interviewed I am a peer, with the exception of one who would probably see me as a junior colleague.

My 'insider' status, by virtue of being a medical doctor, was helpful in building rapport with interviewees. In advance of the interviews, I had provided some brief information about myself, as part of the information about the study; therefore, participants who did not already know me were aware of my background. I have followed a medical career path and therefore have shared many of the experiences being discussed during interviews. While I did not discuss my own experiences with

participants, or make evaluative comments about their stories, my familiarity with the worlds of medicine and medical careers created a degree of inter-subjectivity which I felt supported the process. While in some ways I am an insider, I am also an outsider. I am a medical doctor, but I no longer practice medicine. I felt that this allowed interviewees to be critical of the systems in which they worked, of doctors and even specialties, because I was not part of those worlds. The one exception to this was in interviews where the participant was aware than I had been a General Practitioner in the past. On a number of occasions I felt that care was being taken not to portray GP negatively, possibly on account of that fact.

I remained conscious of my own experience of medical careers and career choice throughout the research process, including data analysis. In some cases participants provided accounts which resonated with my own, in some cases their accounts were very different to mine. These were issues which were borne in mind as I reflexively chose passages for close analysis and as I constructed an interpretation. TD supported my reflexivity through this process and vice versa.

The wider context for this research is also worthy of reflection. As described in Chapter 1, my choice of topic for this thesis was stimulated initially by the debate in Ireland about the career choices of our graduates and how these were impacting on our health service. The Royal College of Physicians of Ireland (RCPI), an Irish postgraduate training body, has funded my programme of research, with a view to

gaining a better understanding of the issues at hand. Receiving funding from a postgraduate training body shaped my research questions, to the extent that my work needed to be immediately useful to the RCPI and to provide answers about current trainees, their career plans and their perceptions of the quality of their training environments. Hence, in Chapter 3 I present descriptive material in relation to these areas, which provides some context for the remainder of the thesis. The findings presented in Chapter 3 could be seen as focussing on local quality improvement, rather than answering research questions of interest outside the Irish context. I will make the argument, however, that this work had significant impact within the system in which it was conducted. It also allowed me to secure funding for the qualitative studies in this thesis as part of the same package. This might have been difficult to achieve without a willingness to address areas which were a priority for the funder. The analysis and interpretation of the findings were not shaped by the source of funding. I did not feel any pressure to find results which were favourable to the RCPI. This work was undertaken in the context of a push to develop and improve postgraduate training under the RCPI, and critical review of their activities was perceived by the organisation as a useful exercise.

2.7.4 Trustworthiness

Finally, I turn to the justification of the claims I make for the findings presented in this thesis. While positivist research uses the concepts of reliability and validity to justify its generalizability, I do not make claims to generalizability and will rely on a number of other concepts for justification. I have described a systematic

methodology, which is aligned with my epistemological stance; the social constructionist perspective. I have described and linked together my theoretical lens and other sensitising influences and tracked how these elements have shaped my methods. Reflexivity has been a major emphasis throughout the study, from the development of the research questions through to analysis and presentation of a meta-interpretation. I have co-constructed my interpretations with TD, a researcher who is not part of the context in which this study was conducted. He has supported my reflexivity as an insider researcher throughout the process. All of these aspects support the trustworthiness of my findings. However, as part of the social constructionist perspective, the possibility of alternative interpretations must be allowed. In each empirical chapter I will make clear the limitations on my findings and in Chapter 8, *Discussion*, I will turn to the question of 'usefulness' or impact of the research within those limitations.

Chapter 3

Medical careers in Ireland: Pathways, plans and environment

'Strike out boldly for the prizes that are available to you'

(Sir Thomas Myles, President of the Royal College of Surgeons of Ireland

addressing medical graduates in 1901)

When medical students and doctors choose not to work in the geographical areas where they are needed, patients do not get the care they need and medical career choice becomes a contentious political issue (Jordan 2010; McCann 2012). Choosing a location in which to train and to practice is, therefore, an important aspect of medical career choice. Mal-distribution of doctors is a problem all over the world (Crisp & Chen 2014), from Canada (Lu et al. 2008) to Australia (Devine et al. 2013) to Sub-Saharan Africa (Burch et al. 2011). The career paths of graduates of Irish medical schools have been at the forefront of national debate in Ireland in recent years, with discussion linking an 'exodus' of graduates of Irish medical schools to negative aspects of postgraduate medical education and training (PGMET) in Ireland (McCann 2012; Bruce-Brand et al. 2012). In this chapter I present research which aims to inform this debate and to provide context for the work presented later in the thesis.

A deficit in demographic data on those applying for, entering and progressing through PGMET was highlighted almost ten years ago (Buttimer 2006). This failure

to track graduates and trainees was identified as a barrier to effective policy responses to challenging issues. Since then, some progress has been made in relation to data on PGMET (Medical Council of Ireland 2013); nonetheless, there remain areas in which data is lacking, such that current debate has often been characterised by anecdote and opinion, with supporting evidence drawn from studies with low response rates, taken at single points in time (HSE-MET 2012; Burke 2012; Bruce-Brand et al. 2012). Through the work presented here I have aimed to provide data to better inform debate and policy making in PGMET.

There are two distinct but related strands in the discourse about PGMET in Ireland which I address in this chapter. One focuses on an apparent failure to retain graduates, whilst the other focuses on the quality of training and working conditions in the Irish healthcare system, which might affect their intention to stay within it (Burke 2012; Bruce-Brand et al. 2012). These studies were conducted during 2012-13 and subsequently published as two papers in the Irish Journal of Medical Science (Bennett et al. 2014a; Bennett et al. 2014b) (see Appendix B). This chapter is therefore structured in two main parts, sections 3.2 and 3.3, each linked to a published paper. The findings of these studies are then discussed together in the concluding section 3.4.

3.1 Postgraduate medical training in Ireland: Structures & pathways

The Medical Council of Ireland, the Health Service Executive and thirteen Postgraduate Training bodies have legislative responsibilities for the delivery of PGMET. The National Doctors Training and Planning Unit (NDTP), formerly HSE-MET, oversees the organisation, structure, management, coordination and funding of medical education and training in Ireland. The Postgraduate Training Bodies are responsible to NDTP, for the provision of postgraduate training and to the Medical Council of Ireland, as their accrediting body, which assures the quality of training provided. The Royal College of Physicians of Ireland (RCPI) is the largest of the accredited Postgraduate Training bodies. The RCPI and its Faculties of Paediatrics, Obstetrics and Gynaecology, Pathology, Public Health and Occupational Health, oversaw the training of 44% of postgraduate trainees in Ireland in 2011-2012 (Bury 2011). The studies described here were undertaken within the training programmes of the RCPI.

A typical postgraduate training pathway is shown in Figure 3.1. After graduation from medical school, a year spent as an intern is required to achieve full registration with the Medical Council. On completion of internship, trainees can apply for Basic Specialist Training under the RCPI, in General Internal Medicine, Paediatrics, Obstetrics and Gynaecology or Pathology or, under one of the other training bodies, in General Practice, Psychiatry etc. Individual training bodies determine whether a trainee has met the requirements for basic training and award the trainee with a certificate on completion. Typically BST takes 2-3 years; four

years in the case of General Practice. Those training in specialties are then eligible to apply for Higher Specialist Training (HST). In the intervening period between BST and HST, trainees may take Registrar posts. These are intermediate level posts, some of which were part of RTP, the Registrar Training Programme, when these studies were conducted. This was not a competitive programme but one where the trainee simply registered themselves as a trainee. Time spent in an RTP post was retrospectively recognised for training if the trainee progressed to HST. RTP was phased out after completion of this study. Surgery and Anaesthetics have recently introduced 6 year run through programmes which combine BST and HST, with the rationale that this provides greater certainty and a clearer pathway for trainees. On completion of HST, trainees are theoretically ready to take up a consultant post; however, in practice, many will spend a year or two abroad undertaking a sub-specialty fellowship. During the course of HST, trainees are encouraged to undertake research and they often take two or three years out of their training programme to complete an MD or PhD degree.
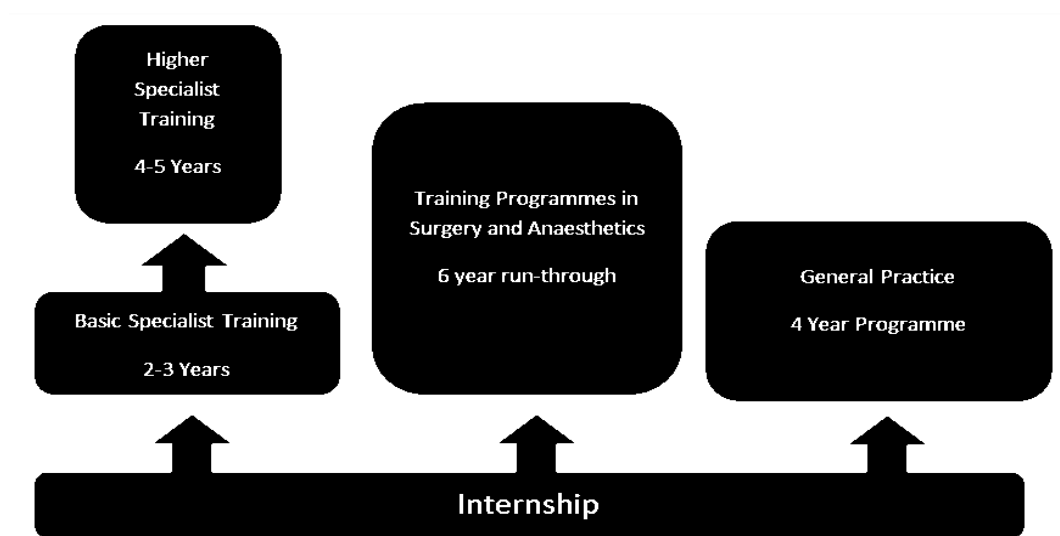
Figure 3.1 Training Pathways in PGMET in Ireland

3.2 Exodus? The training pathways and plans of trainee doctors in Ireland

There is evidence to support the idea that graduate retention is a problem in the Irish healthcare system. Surveys of graduates have suggested that the majority intended to pursue at least part of their training outside Ireland (Finucane & O'Dowd 2004). In 2004, 93% of interns expressed this intention. More recently the Health Service Executive –Medical Education and Training (HSE-MET) Intern Survey 2011 (HSE-MET 2012) showed that 66% intended to leave Ireland at the end of the intern year. Subsequent tracking showed that 45% were not working within the Irish health system 3 months after completion of internship (HSE-MET 2012). In 2012, 6.4% of 25-29 year old graduates of Irish medical schools exited the Medical Council register. There has been a long tradition of graduates of Irish schools undertaking part or all of their training in the UK or US (Kearns 2007). Many of those doctors did not return. A study of the 1978 graduating cohort from Irish Medical Schools found that 25% were in practice abroad twenty six years after graduation (Finucane et al. 2005). A manpower crisis arose in 2010/2011, which left hundreds of Non-Consultant Hospital Doctor (NCHD) posts in Ireland unfilled (Jordan 2010). This led to concerns that the numbers of doctors leaving Ireland might have increased significantly; however, in the absence of a tracking system for graduates, there is no way to know how many graduates are being lost from the Irish medical workforce permanently. Data relating to rates of return to Ireland after time abroad are needed to interpret the significance of these studies.

In 2008 (Kearns 2007), 45% of 3016 non-consultant hospital doctor (NCHD) posts were held by graduates of Irish medical schools. Seventy-three per cent of BST trainees nationally were graduates of Irish medical schools. An 'exodus' of graduates of Irish schools might be expected to result in a rise in the proportion of foreign medical graduates holding training posts; however, this does not appear to be the case. Data from the Medical Workforce Intelligence Report (Medical Council of Ireland 2013) showed that the overall proportion of foreign trained doctors in Ireland and, more specifically, in training posts, has not increased over the past 5 years.

Undergraduate medical education in Ireland is largely State funded, with most students paying only an annual registration fee during their medical school course. Graduate entry and mature students originating from the within the EU pay a government subsidised fee. Non EU students' fees are not subsidised. Failure to retain graduates, represents a significant loss of human and financial capital. Since the creation of formal Higher Specialist Training schemes in Ireland in the mid-1990s, the stated intention has been to match projected future needs for consultants to training posts (Behan et al. 2009; Bury 2011) The apparent rationale is that EU graduates of Irish Medical Schools pursuing specialty careers would, on the whole, stay in Ireland for specialist training, perhaps spending a year or two abroad before taking up consultant posts here. Current policy, therefore, is based on a proposed training trajectory which may be at odds with the career intentions of many graduates. It is essential that we explore the career plans of trainees, what

influences their training choices, and their perceptions of the options available to them, so that workforce planning is not based on erroneous assumptions.

It is well documented that the Irish healthcare system is over reliant on foreign trained doctors. The OECD counsels against this level of dependence on medical migration, which is not a long term solution to doctor shortages (OECD 2010). In recent years, Ireland has become a less attractive training destination for these doctors. The vulnerability of the health service workforce to the international doctor labour market was clearly illustrated by the manpower crisis which arose in 2010/2011, when unfilled NCHD posts triggered a controversial overseas recruitment campaign (Seanad Eireann Debate 2012). Expansion of undergraduate training capacity and domestic graduate retention are amongst the approaches suggested by the OECD to address this issue (OECD 2010). In Ireland, undergraduate places for EU students have increased significantly and attention now turns to graduate retention. Effective measures to improve retention can only emerge if there is a detailed understanding of when and why our graduates choose to leave Ireland.

The aim of this study was to address the question;

What are the career pathways and plans of trainee doctors in Ireland?

Specific objectives, in light of the gaps highlighted above, were:

i. To collate existing, but fragmented data:

      i. To identify demographic features of doctors, who applied and were appointed to training programmes at 3 points along the Irish PGMET trajectory

      ii. To describe competitiveness of training programmes and to track those who were not appointed

      iii. To examine evidence of trainees returning to Ireland after time spent abroad

ii. To conduct a survey of trainees entering BST, to examine the career plans of trainees currently entering Basic Specialist Training (BST) and influences on their choice of career path.

3.2.1 Method

Data in this study came from a number of sources.

1. Data from the paper based application forms of a total of 870 applicants to BST, RTP and HST programmes under the Royal College of Physicians of Ireland (RCPI) were entered into an Excel spreadsheet in anonymised format. Items recorded included graduating medical school, degree class, years since graduation, postgraduate examinations, audit, publications and employment history.

2. Data from databases within the RCPI relating to which applicants were appointed and to which programmes and schemes were also entered into a spreadsheet.

3. The HSE-MET NCHD Database was used to track those who applied, but were not appointed, to RCPI Training programmes. This is a database of NCHD posts and includes some data relating to current post-holders.

4. Successful candidates for the BST programme were sent a 'career plans and influences' questionnaire by post, with some official documentation which required completion. The questionnaire consisted of 44 statements relating to reasons for training in Ireland, five and ten year career plans, reasons for choosing a specialty, attitudes to working in Ireland and abroad and sources of information on training (see Appendix B). Items were informed by the career choice literature. Responses were Likert scaled 1-6 to indicate level of agreement with the statements, which ranged from strong disagreement to strong agreement. A cover letter was included in the pack explaining the nature of the study and my independence from the training body.

Medical Council number and RCPI ID numbers were used to link data between these sources and to compile integrated databases for each group of trainees. The identifiers were then removed and a study ID number used. Descriptive analysis of these datasets and responses to the trainee questionnaire were entered into an analysed in SPSS version 19 (IBM Corporation 2010). The Likert scaled responses were treated as ordinal data and Kruskal-Wallace non-parametric testing was used to examine differences in responses between graduates of Irish, other EU and non EU medical schools.

Ethical approval was granted by the Clinical Research Ethics Committee of the Cork Regional Hospitals, as this study is part of a UCC PhD (Appendix C). Ethical approval was not sought within the RCPI as, at the time of commencement of the study, a formal ethics process and committee was not in place. Return of the careers questionnaire was not compulsory and confidentiality was emphasised. Questionnaire responses did not include trainee names and were linked to demographic data by RCPI ID number. The integrated data sets were held by me in password protected files. All data reported to the RCPI was in aggregate format so that no trainee was identifiable. The RCPI did not have access to the datasets.

3.2.2 Results

Full results for this study are presented in '*Exodus? The training plans and pathways of postgraduate medical trainees under the Royal College of Physicians of Ireland'* (Bennett et al. 2014a) in Appendix A. I have reflexively selected material to present within this chapter based on its relevance to the wider points on career choice addressed in the section 3.4 Conclusions.

Graduates of Irish Medical schools were the largest group applying to programmes at all levels; however, significant numbers of graduates of schools located in other EU countries, Africa (predominantly Sudan and Nigeria) and Asia (India and Pakistan) also applied. The proportions varied, with 'other EU' constituting the largest non-Irish group at BST level, but declining at HST level.

BST Applicants N=549

5% 2%
8%
16%
69%

HST Applicants N=242

4%
12%
15%
5%
64%

■ Ireland ■ Other EU ■ Africa ■ Asia ■ Other
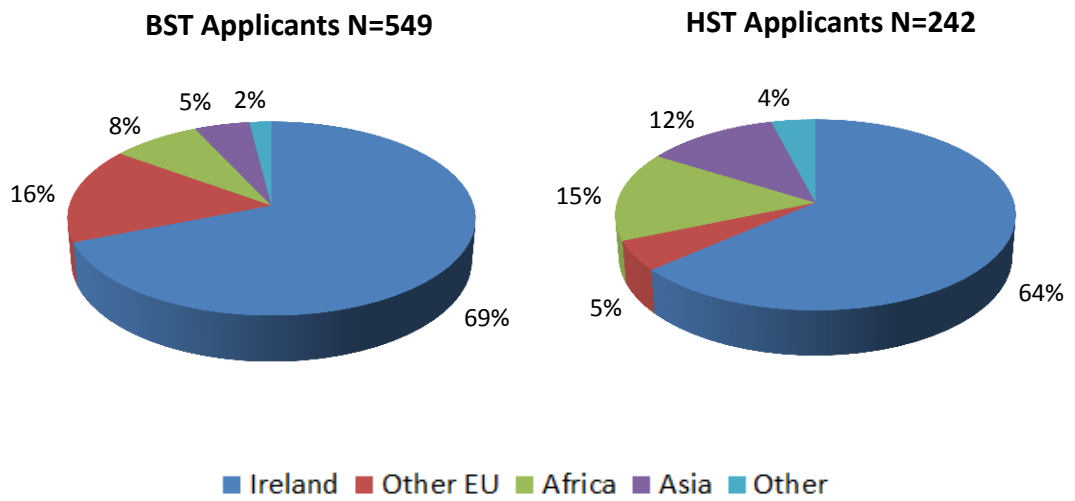
Figure 3.2 Pie charts showing applicants at each level by location of qualifying medical school

The pattern for appointees is slightly different. Graduates of Irish medical schools and other EU schools are the two largest groups of post holders at BST and HST level.

BST Appointees N=333

5% 0%
8%
17%
70%

HST Appointees N=95

4% 5% 1%
9%
81%

■ Ireland ■ Other EU ■ Africa ■ Asia ■ Other
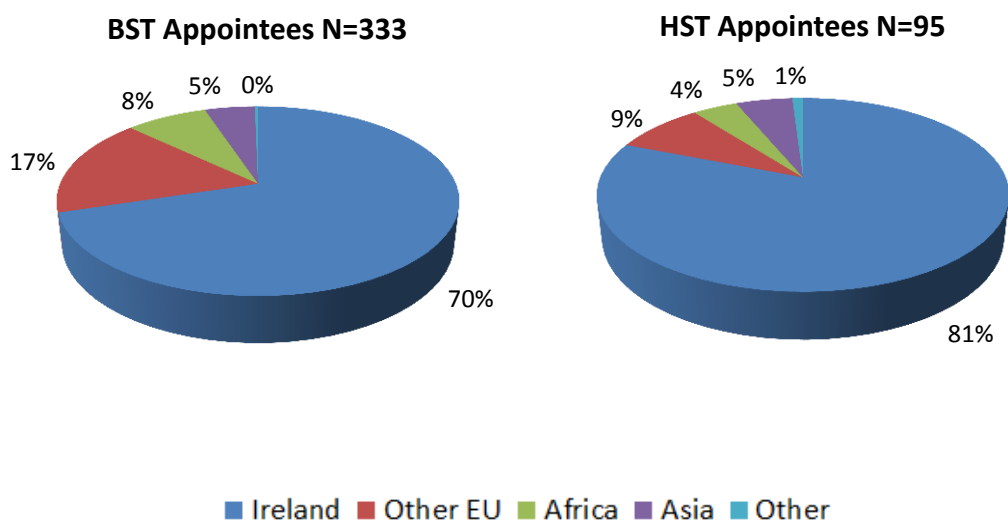
Figure 3.3 Appointees to BST and HST by location of qualifying medical school

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3.2.2.1 Basic Specialist Training

There were 555 interns in the 2011-2012 cohort, of whom 519 were graduates of Irish medical schools. 51.6% of interns within that group applied for a BST position in RCPI programmes. A total of 54.6% (300) of those applying to BST were within one year of qualification. General Internal Medicine was most frequently applied for, followed by Paediatrics, Obstetrics and Gynaecology and Histopathology. A considerable number of applicants applied for more than one programme. Histopathology was the most competitive programme in 2012, with 3.25 applicants per post. General Internal Medicine was the least competitive; 56.5% of applicants were appointed within that programme.

3.2.2.2 Higher Specialist Training

At HST level, the RCPI oversees training programmes in Medical Specialties, Pathology, Obstetrics and Gynaecology, Paediatrics, Public Health and Occupational Medicine. Numbers of posts available in a given year vary, determined by the number of available approved clinical training posts and affected by numbers completing training and numbers of existing trainees taking or returning from out of programme experience. Therefore it is likely that competitiveness varies year on year. Overall, in 2012, Public Health was the most competitive programme, with 4.75 applicants per post. Within the medical specialties, Cardiology and Gastroenterology had the most applicants: 18.3% and 11% of total applicants

respectively. Dermatology, however, was the most medical competitive specialty, with 6.5 applicants for each post.

3.2.2.3 Tracking of candidates who were not appointed to BST & HST

BST applicants who were not appointed may not have been offered a post, or may have rejected an offer or withdrawn from the process. In the 2012 cohort, at least 80% of graduates of Irish schools who were not appointed were in the latter two categories. The table below shows outcomes for those who were not appointed using data taken from the HSE – MET NCHD Database for the year from July 2012.

N=208*	Other training programme in Ireland	Non training post in Ireland	Not in the Irish system
Graduates of Irish Medical Schools (n=137)	47%	8%	45%
Graduates of Non Irish Medical Schools (n=71)	14%	26%	60%

*data missing on 8 candidates

Table 3.1 Outcomes for those who were not appointed to BST

Of those who were not appointed to HST (n=147), 55.4% were graduates of Irish schools. Of these, 36% stayed in Ireland and took up Registrar (RTP) posts. A further 17% took up registrar posts in Ireland but did not register for RTP. 6% entered alternative training. 13% are no longer registered with the medical council and 27%,

although registered with the medical council, are neither registered with a training body or recorded as holding a post in Ireland and are therefore unlikely to be working here. Therefore, 40% of graduates of Irish medical schools, who were not appointed to HST, appear to have left the country.

3.2.2.4 History of working abroad

The employment histories of all applicants who were graduates of Irish Medical Schools were examined for a history of working outside Ireland.

	Worked Outside Ireland	Location	Duration
BST Applicants	47 (12.4%)	Australia / NZ	Up to 2.5 years
RTP Applicants	8 (22%)	All Australia / NZ	Up to 1 year
HST Applicants	51 (28%)	Australia / NZ UK, Canada & Africa	Up to 18 months

Table 3.2 Frequency of previous working abroad in applicants for BST, RTP & HST

3.2.2.5 Career plans and influences of BST trainees

The response rate to the BST questionnaire was 77% (n=259). Of these, 74% were graduates of Irish Medical Schools, 14% of other EU schools and 11% from schools

outside the EU; therefore, the sample was representative of the whole group, in that regard. Of note, graduates of Irish medical schools were a younger cohort, with mean age 26.5 years, compared with other EU graduates, mean age 28.6 years, and non EU graduates, mean age 30.8 years. Trainees were asked to indicate their agreement with a series of statements, relating to training and careers, on a Likert scale of 1-6, where 1 indicated strong disagreement and 6 indicated strong agreement (Appendix B).

Overall, 87% of BST trainees agreed that the high quality of training in Ireland was a factor in their decision to undertake training here. For 64.5%, friends and wider family were a factor in staying in Ireland, while for 32% having a spouse/ partner or children influenced the decision. 57.2% agreed that income is reasonable for trainees in Ireland but fewer (45%) agreed that working conditions were acceptable. Graduates of Irish Medical Schools were significantly less positive about income and working conditions in Ireland compared with others ($p<0.005$ and $p<0.02$ respectively).

88% hoped to be on a HST programme in 5 years time and 86% to be consultants in Ireland in 10 years time. Graduates of Irish medical schools were significantly less positive in their agreement with these aspirations than their EU and non EU counterparts ($p<0.02$). General practice in Ireland was the primary objective of 14% of the group. Graduates of other EU schools were the group most likely to agree

that GP was a career goal. Overall, BST trainees expressed confidence about achieving their goals with 94% confident of the 5 year goal and 86% confident of the 10 year goal. 81% felt they had a good understanding of what it means to be a consultant in Ireland. 87% ultimately would like to work in Ireland. 74% felt that training in Ireland would give them a better chance of a consultant post in Ireland. 52.5% agreed that training abroad was of a higher standard than in Ireland. 92.5% stated they would like to spend time outside Ireland in the future. 57.4% attributed this to life experience rather than training. Graduates of Irish Medical schools were significantly more likely to be unsure of what they would be doing in the future and to be less confident of achieving their 10 year goal. They were less likely to have identified a subspecialty of interest and less likely to feel that they had a good understanding of what it meant to be a consultant; however, they were the group most likely to want to ultimately work in the Irish healthcare system. Controllable working hours were significantly more important to Irish and other EU graduates.

In response to questions about the sources of information on which they based their career plans, over 90% agreed that their own experiences, talking to peers and talking to trainees working a few years ahead of them in the Irish system were important sources. Talking to consultants and trainees working abroad were less important but still significant sources, used by over 70% of trainees. Only 22% were influenced by what they read and heard in national media; however, the medical press appeared more influential and was considered a source by 37% of trainees.

3.2.3 Discussion

This study has provided useful data on trainees and training programmes at different points along the training trajectory during a time of controversy and change in the Irish healthcare system. Monitoring trends in applications to PGMET, in terms of graduating medical school and competition for training posts, and understanding the career aspirations of trainees will support the development of evidence based policy in this area.

This study has shown that, in 2012, the majority of trainees at all levels were graduates of Irish medical schools, which is consistent with recently published Medical Council figures (Medical Council of Ireland 2013). Therefore, the impact of any 'exodus' was not being seen in an increase in foreign trained doctors in training programmes. Furthermore, as they progressed along the training trajectory, an increasing proportion of graduates of Irish medical schools had spent some time working abroad, particularly in Australia and New Zealand; up to 28% at HST level, and for varying periods up to 2.5 years. This provided a context for the findings of the intern tracking study, which showed that 45% of interns were not working in the Irish healthcare system 3 months after completion of internship (HSE-MET 2012). It is evident that a proportion of those who leave Ireland subsequently return to continue training here. Confirmation of this trajectory was also seen in the career plans and influences questionnaire. It is clear that spending some time working abroad is now part of the career plan of the vast majority of trainee doctors and that this is often a lifestyle choice. This is a factor which is beyond the

influence of stakeholders in PGMET but one which needs to be planned for, in terms of the doctor shortages which may occur as a result, but also in relation to ensuring that the quality of PGMET in Ireland will attract graduates back to train and work in Ireland.

It is encouraging to see that, for many, the quality of training was a positive factor in deciding to train in Ireland. However, working conditions were viewed negatively, particularly amongst graduates of Irish schools. The impact of implementation of the European Working Time Directive on this perspective will require further investigation. Trainees were more likely to be influenced by talking to peers and more senior trainees than consultants, which raises questions as to why consultants do not play a greater role in providing career guidance.

Current HST-MET policy is to expand training posts, to counter the 'exodus' of medical graduates. My findings suggest that this plan needs critical examination. Graduates of Irish medical schools, who were not appointed to BST either withdrew from the process or rejected the post offered in at least 80% of cases. This may be because they have been appointed to a training post under another training body, or because they have decided to work outside the Irish healthcare system. Forty-seven per cent of this group took posts with other training bodies, suggesting that BST under the RCPI was not their primary aim. A further forty-five per cent left Ireland, most likely for lifestyle reasons (HSE-MET 2012). Only 8% (n=16) of

graduates of Irish schools, not appointed to BST, took non-training posts in Ireland, which suggests that, at BST level, there is little evidence of graduates of Irish schools being unable to avail of training in Ireland should they wish to do so. Increasing numbers of training posts in BST is unlikely to improve retention at this level.

At HST level, the picture is more complex. Eighty eight per cent of those entering BST hoped to continue to HST in Ireland, yet the numbers of graduates of Irish schools applying for HST following completion of their BST were lower than would be expected if this early intention had been maintained over the two years of the BST programme. We know little about what happens to trainees after completion of BST and the factors that affect progression to HST. Despite this level of attrition, HST is much more competitive than BST, for applicants in general, and for graduates of Irish schools. Follow up data on those who were not appointed to HST reveals that 40%, of those who were graduates of Irish schools, left the country. This would suggest that a significant number of trainees are lost, at least in the short term, at this transition point due to a shortage of HST posts. With the cessation of RTP in 2014, the lack of a recognised training option for those failing to be appointed to HST could exacerbate numbers leaving Ireland. Expansion of HST posts would ameliorate this situation and plans to do so are in progress; however, this policy needs to be tempered by consideration of the likely availability of consultant posts on completion of training.

Strengths of this study include the high response rate to the career intentions questionnaire and the use of multiple sources of data to address research questions. However, I was unable to report on some important aspects e.g. trainee gender or reasons for refusal of posts, as that information had not been recorded. Whilst this is a limitation, it also highlights the inadequacy of existing data systems relating to PGMET. The context for PGMET in Ireland is changing week to week. The career plans and influences questionnaire was administered before some of the more recent changes in relation to consultant pay and conditions (Bohan 2012) and therefore does not capture trainee responses to those changes.

This study provides a context for the discussion of Postgraduate Medical Education and Training in Ireland, as it currently exists and into the future. It addresses the issue of inadequate availability of demographic data raised by the Buttimer report (2006) and others. The issue of the trainee 'exodus' is more complex than is often portrayed. Our graduates want to experience life and work abroad and their medical degree affords them the opportunity to do so. For many, this is a 'gap year' phenomenon after which they return to Ireland. It is also true, however, that the attrition rate for trainees between BST and HST is high and related to the bottleneck at HST, sending trainees abroad in pursuit of training programmes. Selective expansion of HST posts is a potential solution, but quality of BST is also an area that requires attention. Despite the negativity of the public discourse, many graduates of Irish medical schools continue to choose to pursue PGMET in Ireland,

where they believe the training to be of high quality and where they ultimately see themselves working as consultants.

3.3 Postgraduate Training in Ireland: Expectations and Experience

In 2006, the Irish government and key stakeholders agreed on a vision for Postgraduate Medical Education and Training in Ireland;

> *'that the postgraduate education and training environment will be attractive to all medical graduates and deliver high quality schemes that will result in a sufficient number of fully trained, competent doctors to deliver a patient centred health service in this country'* (Buttimer 2006)

Almost 10 years later, the quality of Postgraduate Medical Education and Training (PGMET) continues to be compared unfavourably with training abroad and blamed for the 'exodus' of graduates of Irish medical schools from the Irish healthcare system (Bruce-Brand et al. 2012; Burke 2012).

Evidence to support this position is derived from trainee surveys which focus on satisfaction with current training. In 2004, 63% of interns agreed with the statement that training abroad was better than that available in Ireland (Finucane & O'Dowd 2004). This was supported in the Career Tracking Survey 2005, looking at the 1994 & 1999 graduating cohorts who identified better training facilities, further

training and better career prospects as advantages of training outside Ireland (McEntee et al. 2005). More recently, in 2012, a survey of Non-Consultant Hospital Doctors (NCHDs) (Bruce-Brand et al. 2012) (response rate not provided) reported 50% (n=190) of respondents currently working fulltime in Irish hospitals were dissatisfied with their current post, in terms of the general nature of the job and the quality of training they were receiving (Bruce-Brand et al. 2012) . A study examining satisfaction amongst surgical trainees (response rate 30%) found that only 51% of junior trainees would undertake training in surgery in Ireland again (O'Sullivan et al. 2013) . In contrast, the National Survey of GP trainees 2012 (Kelly et al. 2012), (response rate 55%) showed much higher levels (>80%) of satisfaction, with both hospital and GP registrar posts. In the middle ground, the intern survey in 2011 (response rate 44%) showed 65% rated their experience of the intern year, including training aspects, as excellent or good (HSE-MET 2012). Both the Buttimer Report (Buttimer 2006) and the Health Service Executive (HSE) Strategy for Medical Education, Training and Research 2007 (Fitzgerald 2007) emphasise the need for quality assurance of training posts. However, the available data in relation to satisfaction of trainees across PGMET in Ireland is patchy and based on studies with low or moderate response rates.

While trainee satisfaction with training, as explored by the studies quoted above, is an important measure, the evaluation of training environments should go beyond what trainees like and examine the conditions for learning afforded by the clinical settings in which they work. Learning environment can be defined as;

'The material and social context wherein learners 'learn', which influences learners' behaviour, emotions, and practical competences. Learning should be understood here as 'acquiring knowledge' as well as 'participating in practice'' (Isba & Boor 2011)

What constitutes a good learning environment, and how to measure its elements, as part of quality assurance, has been the focus of much published research in the medical education literature (Roff & McAleer 2001; Teunissen et al. 2007; van der Zwet et al. 2011; Dornan et al. 2012). Tools have been developed and validated for this purpose in both undergraduate and postgraduate settings. These tools are quantitative questionnaires which are based on theories of workplace learning (Dornan et al. 2012) or derived from expert consensus using the Delphi technique (Roff 2005). Confirmation of construct validity of a quantitative tool means that it has been shown to measure the 'constructs' or elements that it aims to assess. Use of pre-existing validated tools allows benchmarking between clinical sites and international training systems.

Tools for the postgraduate setting include the Postgraduate Hospital Education Environment Measure (PHEEM) (Roff et al. 2005) which looks at role autonomy, support and supervision. The construct validity of PHEEM is under question, however, and the Dutch Residency Educational Climate Tool (DRECT) (Boor et al. 2011), which is used in this study, is a more recently proposed alternative. DRECT is a 50 item tool which measures supervision, coaching and assessment, feedback,

teamwork, peer collaboration, role of consultants, matching of work to level of trainee, formal education, role of trainer and learning from handover. Its items are derived from studies of positive features of learning environments. At the time that this study was undertaken there was no published data in the Irish PGMET setting using such a validated tool to examine learning environment. This study aimed to address this deficit by examining trainee expectations and experience of training environment.

The aim of this study was to address the research question;

What are the expectations and experiences of training amongst trainees in Ireland?

The objectives were;

1. To examine the expectations of trainees entering BST, RTP and HST under the auspices of the RCPI in July 2012

2. To examine the trainees' experiences of training across programs under the RCPI in 2013

3. To compare expectations with the realities of the training experience

3.3.1 Method

3.3.1.1 Expectations of training

Trainees entering BST, RTP and HST in July 2012 (n=527) were sent the Dutch Residency Educational Climate Tool (DRECT) questionnaire to evaluate their expectations of the training programmes. DRECT is a 50 item validated questionnaire for the measurement of learning environment in the postgraduate setting. Trainees indicated their agreement with 50 statements on a Likert scale from 1-5, where 1 is strongly disagree and 5 is strongly agree, with 3 indicating neither agree nor disagree. For this study, the wording of DRECT was altered to reflect expectations rather than experiences of training and for the Irish context. Other minor changes were made to reflect local terminology for grades of trainee, trainers and the handover process (Appendix D).

3.3.1.2 Experiences of training

In March 2013 all RCPI trainees, the cohort commencing training in July 2012 and also those who were already part way through the programme at that time (n=1282), were sent the DRECT questionnaire by post, requesting that they complete it in relation to experiences of training in the post held on March 1ST 2013. The 'Experiences' questionnaire featured the same items as the

'Expectations' version, with appropriate grammatical alterations (Appendix D). Follow up reminder questionnaires were sent by email with a link to an online version of the questionnaire. The survey was not anonymous, as the data needed to be linked to the post in question and the training program. The surveys were returned directly to the researcher and were confidential.

Questionnaire data were entered into an EXCEL spreadsheet (Microsoft Corporation 2007) and analysed in SPSS Version 19 (IBM Corporation 2010). Descriptive statistics, Mann-Whitney U testing and Kruskal-Wallace testing were performed to compare expectations and experience of training, by mean total DRECT score and mean score for individual items, between programs, specialty training groups and geographic areas. Multiple comparisons were allowed for by setting p at <0.0001. Data relating to opening the reminder email, accessing and completion of the questionnaire, provided by Newsweaver, a communications software provider, were examined. Ethical approval was granted by the Clinical Research Ethics Committee of the Cork Teaching Hospitals (Appendix C).

3.3.2 Results

3.3.2.1 Response rates

Expectations of Training: New entrants to RCPI programs at BST, RTP and HST level (n=527) were sent DRECT questionnaires before the commencement of their first

post and asked to return the form with their training agreement. Four hundred and twenty five (80.6%) forms were returned in total. Details of responses across programs are outlined in Table 3.3

	BST	RTP	HST	Program not recorded	Total
Sent	333	99	95		527
Returned	224	38	76	87	425
Response rate	67.2%	38.3%	80%		80.6%

Table 3.3 Responses to Expectations of Training DRECT

Experience of Training: Experience of training questionnaires were sent by post and email to 1282 trainees, 587 in BST, 129 in RTP and 566 in HST. A number of HST Trainees contacted were currently out of program, in research posts or clinical posts abroad and were ineligible to complete the survey, reducing the HST group to 530 and the total to 1246.

	BST	RTP	HST	Total
Sent	587	129	566	1246
Returned	210	32	165	407
Response rate	35.7%	24.8%	29.0%	32.6%

Table 3.4. Responses to Experience of Training DRECT

Fifty seven per cent of responses to the DRECT experience of training questionnaire were returned via post and 43% via the online system. The initial email, sent 2 weeks after the postal version, to all trainees, was opened by 48% and the survey within the email opened by only 8%. A reminder email, led to 33% of trainees opening the survey. A range of 67-78% of trainees opened the email on a mobile

device rather than a PC on each occasion. Non responder analysis was conducted and is detailed in *'Quality of Postgraduate Medical Training in Ireland: Expectations and Experience'*(Bennett et al. 2014b) in Appendix A.

3.3.2.2 Mean total DRECT scores: Expectations and Experience

Having excluded RTP and some specialty groups, we believe this data is likely to be representative of the population in terms of gender, qualifying medical school, training level and specialty. Further analysis relates only to BST & HST, in Medicine, Obstetrics and Gynaecology, and Paediatrics. Scores are discussed below in terms of mean total score and mean score for individual items. The maximum possible DRECT score is 250. Across the trainee group as a whole, there was a gap between expectations and actual experience of training. This gap narrowed with progression through training, due to an improvement in the training experience, rather than a decline in expectations, which were similar for all trainees. Total mean DRECT scores at each training level are shown in Table 3. Mean score for BST experience was significantly lower than that at HST level (187) (p< 0.0001).

	Expectations Mean total DRECT (SD)	Expectations N	Experience Mean total DRECT (SD)	Experience n	Gap	p value Mann Whitney U
BST Year 1	190 (34)	230	162 (32)	108	28	P<0.0001
BST Year 2			164 (31)	95		
HST	194 (29)	61	187 (31)	146	7	NS
Total	192 (33)	351*	173 (33)	349	18	P<0.0001

*includes those whose training level was not indicated on the questionnaire

Table 3.5 Mean DRECT Scores for Expectations and Experience of Training by trainee group

3.2.2.3 Paired analysis of total DRECT scores

One hundred and twenty three trainees responded to both Expectations and Experiences questionnaires, which allowed sub-analysis of paired questionnaires, using Wilcoxon signed ranks testing. This confirmed the picture in the overall group.

	Expectations Mean total DRECT (SD)	Expectations N	Experience Mean total DRECT (SD)	Gap	p value Wilcoxon Signed Ranks
BST Year 1	189 (35)	84	164(33)	25	P<0.0001
HST	197(32)	17	193(32)	4	NS
Total	191 (35)	123	170 (35)	21	P<0.0001

Table 3.6: Mean DRECT Scores for Expectations and Experience of Training by trainee group- paired responses only

3.3.2.4 Individual item scores: Expectations and experience

Table 3.7 shows the 50 items of the DRECT tool, with mean score for each item, in relation to expectations and experience of training. The range of possible scores for individual items is 1-5. A score of 3 indicates ambivalence, 1-2 disagreement and 4-5 agreement.   Items for which there was a statistically significant difference (p<0.0001) between expectation and experience are marked with an asterisk. Thirteen questionnaire items had mean item scores of 4 and above, pointing to strengths of the training environment. These were predominantly in the subscales of teamwork, peer collaboration and consultants' role. Trainees generally worked well with each other and with other healthcare professionals. A less positive aspect of peer collaboration was seen in relation to being able to find a peer to swap on-call, which was most marked amongst BST trainees in Medicine (mean item score 2.9). Consultant willingness and availability to discuss patients emerged as positive aspects, as well as their respectful treatment of trainees. On the whole these items met expectations, and in the case of consultant availability, actually exceeded expectation.

	Subscale: Supervision	Expectations Mean item score (SD)	Experience Mean item score (SD)
1	The guidelines clearly outline when to request input from a supervisor	3.8 (1.0)	3.1(1.2)*
2	The amount of supervision I receive is appropriate for my level of experience	4.0 (0.9)	3.8 (1.1)
3	It is clear which consultant supervises me	4.3 (0.9)	4.0 (1.2)
	Subscale: Coaching and Assessment		
4	I am asked on a regular basis to provide a rationale for my management decisions and actions	4.0 (0.8)	3.5 (1.2)*
5	My consultants coach me on how to communicate with difficult patients	3.6 (1.1)	3.0 (1.2)*
6	My consultants take the initiative to explain their actions	3.7 (1.0)	3.6 (1.1)
7	My consultants take the initiative to evaluate my performance	3.8 (1.0)	3.1 (1.2)*
8	My consultants take the initiative to evaluate difficult situations I have been involved in	3.7 (1.0)	3.1 (1.1)*
9	My consultants evaluate whether my performance in patient care is commensurate with my level of training	3.9 (0.9)	3.2 (1.1)*
10	My consultants occasionally observe me taking a history	2.8(1.2)	2.2 (1.1)*
11	My consultants assess not only my medical expertise but also other skills such as teamwork, organization or professional behaviour	4.0 (0.9)	3.3(1.2)*
	Subscale: Feedback		
12	My consultants give regular feedback on my strengths and weaknesses	3.6 (1.1)	2.8 (1.2)*
13	Observation forms (i.e., Mini-CEX) are used to structure feedback	3.4 (1.1)	2.2 (1.1)*
14	Observation forms (i.e., Mini-CEX) are used periodically to monitor my progress	3.3 (1.1)	2.1 (1.1)*
	Subscale: Teamwork		
15	Consultants, nursing staff, other allied health professionals and residents work together as a team	4.3 (0.8)	4.1 (0.9)
16	Nursing staff and other allied health professionals make a positive contribution to my training	4.0 (0.9)	3.7 (1.1)
17	Nursing staff and other allied health professionals are willing to reflect with me on the delivery of patient care	3.9 (1.0)	3.7 (1.1)
18	Teamwork is an integral part of my training	4.5 (0.7)	4.3 (0.9)
	Subscale: Peer Collaboration		
19	Residents work well together	4.3 (0.7)	4.2 (0.9)
20	Residents, as a group, make sure the day's work gets done	4.2 (0.8)	4.1 (0.9)
21	Within our group of residents it is easy to find someone to cover or exchange a call	3.8 (0.9)	3.2(1.2)*
	Subscale: Professional Relations between Consultants		
22	Continuity of care is not affected by differences of opinion between consultants	3.8 (1.0)	3.3 (1.2)*
23	Differences of opinion between consultants about patient management are discussed in such a manner that is instructive to others present	3.9 (0.9)	3.4 (1.1)*
24	Differences of opinion are not such that they have a negative impact on the work climate	3.7 (1.0)	3.6 (1.0)

	Subscale: Work is adapted to residents' competence		
25	The work am doing is commensurate with my level of experience	3.8 (0.9)	3.7 (1.0)
26	The work I am doing suits my learning objectives at this stage of my training	4.0 (0.9)	3.6 (1.1)*
27	It is possible to do follow up with patients	3.9 (0.9)	3.8 (1.0)
28	There is enough time in the schedule for me to learn new skills	3.8 (1.0)	2.9 (1.2)*
	Subscale: Consultants' role		
29	My consultants take time to explain things when asked for advice	4.1 (0.8)	4.1 (0.8)
30	My consultants are happy to discuss patient care	4.2 (0.7)	4.2 (0.8)
31	There are NO consultants(s) who have a negative impact on the educational climate	3.2 (1.3)	3.3 (1.4)
32	My consultants treat me as an individual	4.0 (0.8)	4.1 (0.9)
33	My consultants treat me with respect	4.1 (0.8)	4.2 (0.8)
34	My consultants are all in their own way positive role models	3.9 (0.9)	3.9 (1.0)
35	When I need a consultant, I can always contact one	3.8 (1.0)	4.1 (1.0)*
36	When I need to consult a consultant, they are readily available	3.7 (1.1)	4.0 (1.0)
	Subscale: Formal education		
37	Trainees will generally be able to attend scheduled educational activities	3.7 (1.1)	3.4 (1.3)
38	Educational activities will take place as scheduled	3.7(1.0)	3.7 (1.0)
39	Consultants will contribute actively to the delivery of high-quality formal education	3.9 (0.9)	3.4 (1.2)*
40	Formal education and training activities will be appropriate to my needs	3.9 (0.9)	3.2 (1.3)*
	Subscale: Role of the trainer		
41	My trainer monitors the progress of my training	3.9 (0.9)	3.1 (1.2)*
42	My trainer provides guidance to other consultants when needed	3.7 (0.9)	3.3 (1.2)*
43	My trainer is actively involved in improving the quality of education and training	3.8(0.9)	3.4 (1.2)*
44	In this rotation evaluations are useful discussions about my performance	3.9 (0.8)	3.2 (1.1)*
45	My plans for the future are part of the discussion	4.0 (0.9)	3.6 (1.2)*
46	During evaluations, input from several consultants are considered	3.8 (0.9)	2.9 (1.2)*
	Subscale: Patient handover		
47	When there is criticism of a management plan I have developed in consultation with my consultant, I know the consultant will back me up	3.7 (1.0)	3.7 (1.0)
48	Handover takes place in a safe climate	3.8 (1.0)	3.5 (1.1)
49	Handover is used as a teaching opportunity	3.8 (1.0)	3.2 (1.2)*
50	Consultants encourage trainees to join in the discussion during patient handover	3.9 (0.9)	3.4 (1.1)*

*significant at p<0.0001

Table 3.7 Mean scores for Expectations and Experience of training by individual

item

Subscales relating to more active participation of consultants in training showed more mixed results. The coaching and assessment subscale showed all but one item falling short of expectation, with mean scores ranging from 2.2 to 3.6. The feedback subscale was the weakest, with trainees reporting they do not receive regular feedback on performance and that structured formats of evaluation and feedback are not generally in place. For trainees in Internal Medicine, there was a rise in the likelihood of getting feedback as one progresses through training, with HST trainees responding to Q12 with a mean item score of 3.3 as compared with a mean item score 2.4 for first year BST medical trainees.

Subscales for formal education and trainer role showed most items falling short of expectations. This was most marked in relation to trainers monitoring progress and evaluations being useful. For BST trainees in Medicine, the mean item score for trainers monitoring progress was lowest of all trainee groups (mean item score 2.5). A further area of weakness identified was that of sufficient time to learn new skills. Again in Medicine, scores for this item rose with increasing seniority from mean item score 2.5 (BST 1) to 3.3 (HST).

3.3.3 Discussion

This study has demonstrated how measurement of learning environment at a national level using a quantitative tool can provide useful information in relation to

strengths and weaknesses present systematically. Benchmarking training in Ireland against that delivered elsewhere provides a context for discussion of quality of training. We found that total mean DRECT scores for trainees in Ireland (173) were lower than those reported for Dutch trainees (188) (Boor et al. 2011). The Dutch study looked at trainees across all specialties nationally up to six years post qualification, a comparable group to those examined in our study. Although there are differences between the Irish and Dutch health systems, the fundamental elements of workplace learning (Billett 2006; Yardley et al. 2012) addressed in the DRECT questionnaire are as applicable in Ireland as in the Netherlands and this difference in score should not be dismissed.

We have identified positive aspects of the training experience in Ireland. Trainees on the whole are treated well by their consultants and work well with other healthcare professionals and each other. Consultants are generally available when needed and happy to discuss patients with trainees. However, we also identified specific elements of training which are weak throughout the system. These are core training items – provision of feedback, monitoring of progress by supervisor, usefulness of supervisor meetings and adequate time to learn new skills. Amongst trainees in General Internal Medicine these items improved as training progressed suggesting that consultants and trainers focus their efforts on senior trainees, making time for their learning and taking a greater interest in their progress. Consultant attitudes towards training and trainees, particularly at BST level, require further investigation. Trainee characteristics such as greater seniority, enthusiasm

and interest have been shown to enhance consultant interest in clinical teaching (Peadon et al. 2010). HST trainees, working in their specialty of choice, may be likely to meet these criteria.

We have shown that the weakest area of postgraduate training under RCPI is at BST level and that training at this level falls far short of the expectations of trainees entering training. Disappointment with training amongst the BST cohort inevitably filters down to those at intern and senior student level, with clear implications for graduate retention.

The response rate for the Experience questionnaire (32.6%) is a weakness of this study; however, it is in keeping with response rates for similar studies (Boor et al. 2011; Vieira 2008; Aspegren et al. 2007). A meta-analysis of response rates to questionnaires in organisational and healthcare studies has shown an average 52% (SD 21.1) (Baruch & Holtom 2008). A response rate within one standard deviation of this mean has been proposed as acceptable for such studies, placing our study at the lower end of the acceptable range. In an attempt to mitigate for non-response bias, under-represented subgroups within the responses were excluded. Responses included in the study were representative in terms of gender, location of qualifying medical school, training levels specialties and geographic areas.

Online questionnaires sent by the RCPI to its trainees tend to have low response rates. We attempted to improve on this by sending both postal and online versions. The key role of trainee feedback in quality improvement was emphasised in the accompanying cover letter, and when reminders were sent out trainees were made aware of the low response rate and appealed to for their responses. The network of trainee representatives were advised of the study and asked to encourage participation at grassroots level. None the less, we were unable to achieve a good response rate. Data for the online questionnaire reveals that fewer than 50% of trainees even opened the email requesting their feedback, and only 8% clicked on the survey to open it. There are many potential explanations for this, including frequent emails from the training body, frequent requests to complete questionnaires, concerns re confidentiality or even disillusionment with the training body. Survey length and suitability for completion on mobile devices may also be an issue. Establishment of an on-going monitoring process for training quality will require the effective engagement of trainees in a quality improvement partnership. How best to collect data on training environments and ways to engage trainees in that process require further investigation.

This study has provided, for the first time, data which elucidate the question of quality of postgraduate medical education and training in Ireland. It has demonstrated that there are features of Irish training environments which are working well in challenging times. It has shed some light on the frequent claims made of poor training quality contributing to doctor emigration from Ireland. By

highlighting specific areas of weakness this work forms the basis for quality improvement and informs future initiatives.

3.4 Conclusion

The results of the studies presented in Sections 3.2 and 3.3 of this chapter illustrate the complexity of doctors' career choices and the challenge for stakeholders in interpreting fragmented data. Piecing together the findings of these studies, a partial picture of career paths and plans in the Irish context begins in emerge. Trainees leave Ireland at different points on the training trajectory and for different reasons. Spending time working abroad was part of the career plan of over ninety per cent of junior trainees surveyed. The dominant driver for this ambition was lifestyle rather than quality of training; however, quality of training was also a consideration. A significant number of doctors return to Ireland to resume training after a few years, which supports the idea of a 'gap year' phenomenon post internship. The notion that Ireland's failure to retain its graduates is all about lifestyle and the allure of better weather, however, was not borne out by the stark finding that forty per cent of graduates of Irish medical schools, who applied unsuccessfully to HST, left Ireland immediately afterwards. The bottleneck between stages of training was shown to be forcing trainees to leave the country. Career paths are not simply a matter of choice; structures can constrain career choice and force changes in direction, temporarily or permanently.

Trainees commencing BST viewed quality of training in Ireland positively and had high expectations of it. At the outset of training these doctors saw their long term futures in Ireland. I have shown that expectations of training quality were not matched by their BST training experience. While I cannot claim to have demonstrated a causal link, the numbers of trainees who commenced BST expressing an interest in continuing on to HST in Ireland, was not reflected in the numbers applying to HST. Changes of mind in relation to career intention are known to be a feature of the early postgraduate years in the British / Irish system (Goldacre & Lambert 2000) and it has been suggested that such changes are often associated with negative experiences (Durning et al. 2011; Lambert et al. 2003). Disappointment with training experience could be a contributor to attrition between BST and HST, however, a longitudinal study would be needed to clarify this link. In Chapter 7, I will explore the way in which negative experiences in day to day practice relate to a figured, or imagined, future self as a doctor, and how this can shape career choice.

Trainee engagement with learning environment surveys was a real challenge in this study. The reasons for this need further exploration if trainee perspectives are to contribute to the design of training and career pathways. The relationship between the national discourse in relation to medical training, the narratives of training circulating amongst trainee doctors and the career choices they make, is an area I will also explore in Chapter 7.

My findings in these studies confirm the complexity of career choice and point again to the need for an integrated theoretical approach. In any individual case, such as that of Ireland outlined here, there are specific local elements shaping career choices. Many studies in the career choice literature focus on the description of these local elements rather than on the processes through which their influence is mediated. The impact of such work is likely to be limited to the specific context in which it was conducted. Identification of a theory which can explain how local elements relate to and interact with each other would make a contribution applicable across the field of career choice.

Chapter 4

Figuring Doctor Identities

'Did sea define the land or land the sea?

Each drew new meaning from the waves' collision.

Sea broke on land to full identity.'

(Heaney 1966)

Medicine is a social practice, which is a product of the social and cultural context in which it occurs. The focus of this chapter is the theorization of the identities that develop amongst medical students and doctors as they participate in the practice of medicine, in social and cultural settings. I will show how a socio-cultural perspective – Figured Worlds (Holland et al. 1998) – can be used to explore doctor identity and I will demonstrate the affordances offered by such an approach to exploring the link between professional identity and career choice.

According to Figured Worlds theory, we make meaning of ourselves within cultural settings by self-authoring, using the words of other people, their discourses. Medical students' identities, therefore, are constructed from the ways others talk about what it means to be a doctor. I begin this chapter with a review of some of the discourses of doctor identity which medical students encounter and I then

examine how two students self-author professional identities within these discourses. Finally, I will make a link between making meaning of oneself as a doctor, in general, and the choice to become a particular type of doctor.

4.1 Discourses of doctor identity

There is considerable heterogeneity in the use of the terms discourse and discourse analysis/studies, and the approaches described in their use, in the social sciences literature (Van Dijk 1997) as I have outlined in Chapter 2 (see page 56). A common thread, however, is the idea that the ways we speak and our underlying assumptions about how things are in the world construct the world, whilst the world, in turn, shapes our language and how we speak (Dornan 2014; Gee 1999). This is exemplified by the concept of 'a good doctor'. The way we speak about being one contains subtexts which shape the way we teach students and practice medicine. The Foucauldian approach to discourse (Hodges et al. 2014), probably the method most commonly applied in medical education, is *critical* in that it is concerned with social justice and a questioning of the distribution of power in society at an institutional level. To a Foucauldian, a discourse is a set of ideas or beliefs, which distribute power. Foucauldian analysis does not pay close attention to the structure of language in use. Other approaches, such as those of Bakhtin (Holquist 1990) and Gee (1999), place greater emphasis on linguistic structure while still focussing on the social context in which language is used. While Figured Worlds

is a Bakhtinian discourse theory, I also refer to studies below which have used a Foucauldian approach.

Discussion of medical students' identity formation is underpinned by the assumption that there is an ideal 'good doctor' identity which must be inculcated into medical students and trainees (Frank 2005) and into which they must grow. In her Foucauldian discourse analysis of the concept of the 'good doctor' in medicine over the past century, Whitehead (2011) plotted how the dominant discourse of the 'good doctor' changed from Flexner's concept of the scientist physician, who was also a man of character, to the dissection of a holistic character into desirable 'characteristics' during the 1950s. This discursive shift depicted the student as depersonalised, to be manipulated and moulded by educators, rather than as an individual undertaking a journey of professional discovery (Whitehead 2011).

During the 1970s, the current discourse of competence as role performance came to the fore and the personhood of the good doctor receded even further. The doctor became a collection of competences produced by medical education in a 'manufacturing model' of medical training. The discourse of competence, Whitehead comments, continues the de-emphasis on time, person and personal journey (Whitehead 2011), contributing to the assumption of a standardised 'good doctor' with implications for how the development of professional identity is

understood. It assumes an endpoint for professional identity formation and a trajectory along which all doctors will travel. This narrowing of focus does not acknowledge the possibility of diverse trajectories and variations in interpretations amongst doctors of how they will practice medicine. It suggests therefore that students are passively socialised into roles during training, thereby denying any individual agency or choice in how to be a good doctor.

In fact, medical students and residents experience many overlapping and contradictory discourses in relation to how they should be as doctors (Apker & Eggly 2004; Frost & Regehr 2013; MacLeod 2011). In addition to the discourse of the standardised 'good doctor' outlined above, they also encounter the discourse of diversity, which puts forward the notion that diversity amongst entrants to medical school is a good thing for the profession and for patient care (Frost & Regehr 2013) because a more diverse student population leads to doctors who better reflect, and understand, the populations they serve. Using a social constructionist approach, Frost and Regehr (2013) highlighted the tension between these competing discourses of standardisation and diversity, describing how students negotiate these contradictions to construct their professional identities.

MacLeod (2011), using Foucauldian discourse analysis, describes the ways in which students develop and advertise professional identities through their take-up of the discourses of Competence and Caring. We can see the discourse of Competence,

with its emphasis on knowledge and technical skill, as closely linked to the discourse of Standardisation. Caring, on the other hand, is generally a less privileged discourse in medical education and is linked to the psycho-social and emotional aspects of patient interaction (MacLeod 2011). The discourses of Caring and Diversity become intertwined in the notion that diversity enhances empathic care and cultural competence, and might ultimately reduce health inequality (Frost & Regehr 2013). Students in MacLeod's study displayed identities of confidence, capability and suitability as products of the discourse of Competence. These identities related to knowing what to do and how to do it, as well as aligning oneself to these values. Students also displayed identities of benevolence and humility in relation to Caring, through showing understanding and a concern for others, putting them above themselves. However, discourses of Caring and Competence are in tension when students are confronted with the uncertain, unpredictable nature of psycho-social issues. Indeed, some students in MacLeod's study expressed a desire for training in standardised methods of Caring, which would provide certainty and confidence (Competence) in practice (MacLeod 2011).

MacLeod's work illustrates the complexity of developing doctor identities and underlines Frost and Regehr's suggestion that further exploration of the dynamics and nuances of professional identity formation should involve a focus on the different doctor identities students construct (Frost & Regehr 2013). It also indicates the potential impact on identity formation of the privileging of different discourses within different areas of medical practice. One of the most important

outcomes of students' identity development is their career choice. It is easy to see how person-centred or procedure-focussed discourses of a good doctor could influence their choice of, for example, psychiatry or surgery as a career direction. I will return to this point in the discussion section.

4.2 Figured Worlds and doctor identity

Figured Worlds (Holland et al. 1998) theory is important because it captures many of the issues discussed thus far – personal journeys, the passage of time, the idea that identities are never 'completed' and the recognition of diverse accounts of self. Figured Worlds brings alternative concepts and starting points that can cast valuable light on topics that are very important in everyday medical education practice . In what follows, I demonstrate how Figured Worlds theory can help to explore and explain how individual students make meaning of themselves as developing professionals in very different ways. The concept of a Figured World emphasises the diversity of ways of becoming within existing community values and practices. In doing so, it emphasises the agency of the individual in choosing how to make meaning of the world whilst recognising the social structures and fields of power within which such choices are made.

Figured Worlds allows for aspects of identity to be durable, but highlights the fluid, always changing nature of identity, a 'becoming' which continues throughout

(professional) life. In this chapter, I use Figured Worlds as a theoretical lens for understanding the developing identities of two medical students, Adam and Sarah, as they reflect on their first clinical placements. I show how it illuminates the different ways in which they frame themselves as becoming practitioners, thus challenging the dominant discourse of a standardised professional identity. I then consider how this diversity in framing might shape Adam and Sarah's career choices in the future.

Figured Worlds theory, proposed by Holland et al (1998), has been useful in understanding teacher and student identity in second and third level education contexts (Solomon 2012; Urrieta 2007; Urrieta et al. 2011; Vågan 2011). The theory is more fully explained in Chapter 2, but I will recap some of the key tenets here. The foundations of the theory lie in the work of early 20th century Russian psychologist, Vygotsky (Holland & Lachicotte 2007), and fellow Russian, Bahktin (Holquist 1990), a philosopher and literary critic. Stemming from a Marxist context, which gave priority to the social context of development, the work of these two theorists has proved complementary in exploring interconnections between individuals and their socio-cultural contexts, and the meaning-making that these interconnections afford. A key element of Vygotsky's (1978) work was that all meaning-making is mediated by available cultural tools. These physical and psychological tools allow individuals to organise their thoughts and emotions, including how they think and feel about themselves, and provide a means for them to direct their own behaviour.

There are many cultural tools associated with the practice of medicine, including medical language, for example. For many medical students, the white coat is a powerful cultural tool, evident in the widespread white coat ceremonies held in North America. Donning the white coat allows a student to see themselves in a new light; they feel like a doctor, which in turn allows for self-direction to behave like a doctor. Other cultural tools used by medical students might include cultural models of what it means to be a doctor, derived from documents such as Tomorrow's Doctors (General Medical Council 2009) or doctors as portrayed for example in film and television (Glasser et al. 2001). However, the tool on which Vygotsky focused primarily was language, and language in use, as discourse, plays a major role in a Figured Worlds account of identity, most evident in its use of Bakhtin's account of *voice.*

Bakhtin's contribution to Figured Worlds is his theory of dialogism and of the self. Dialogism (Holquist 1990) is based on the notion of addressivity, which refers to the way in which we are continually addressed by the world, through language, discourses, and cultural beliefs and, equally importantly, how we answer this addressing, by self-authoring an on-going narrative of our place in the world and its meaning (Holquist 1990, p.47). The narrative draws on multiple 'voices', recycling and adapting the multiplicity of discourses or ways of speaking which populate our cultural world: the genres, motifs and registers which carry values and assumptions

in relation to how the world is. In self-authoring, we attempt to 'orchestrate'(Holland et al. 1998, p.178) these different perspectives on the social world, drawing on the words of others and imbuing them with our own intentions.

While some discourses thus become 'internally persuasive' (Holland et al. 1998, p.182), tensions and contradictions between discourses mean that constant orchestration may be difficult to achieve and, in some situations, 'multi-voicedness' may be the norm. Furthermore, some discourses – normative texts, or rule books, for example - carry more authority than others; as 'authoritative discourses' (Holland et al. 1998, p.272) they are absorbed into our authoring of self but may be less persuasive than others in the sense that we may lack conviction in these areas. Medical students are addressed by discourses of the good doctor, standardisation, diversity, competence, caring and many others. There is a multiplicity of ways in which students can make meaning of themselves and their actions using 'borrowed' elements of these discourses. As students author themselves, they make these elements their own, intertwining them with their own words to produce a unique response to the world: a stance.

The theories of Vygotsky and Bakhtin alone do not account sufficiently for the ways in which power and social structure both constrain and enable self-authoring. For this element of Figured Worlds theory, Holland et al draw on the French sociologist, anthropologist and philosopher Bourdieu (1977), building on his concern with the

relationship between hierarchies in social structures and the ability of the individual to act freely. While Bourdieu focussed primarily on institutional power and the structuring effect of social class, Figured Worlds is concerned with how power is played out locally, on the ground in relations with others (Holland et al. 1998, p.59), in families, groups and neighbourhoods. However, the role of positions of power and deference within these local social structures does not determine individual identities. Building on Vygotsky's emphasis on the role of imagination in play to achieve new ends (Holland et al. 1998, p.64), Holland et al describe how we can use existing cultural resources to envisage new worlds and hence take some control. Agency is therefore a key element of Figured Worlds theory (Holland et al. 1998, p.275).

In the remainder of this chapter, I illustrate the use of Figured Worlds as a lens to understand the nature of developing doctor identities and as a means to consider the link between professional identity development and career choice. My methodological approach is fully explained in Chapter 2 (see page 58). To recap, adopting a social constructionist perspective, I aim to bring Figured Worlds theory into direct transaction with the text, de-constructing it by identifying instances of figuring, positioning, world making and specific discourses, in the self-authoring of participants. Gee's meso-linguistic discourse analysis (Gee 2011) is a sensitising influence to my approach, in keeping with the Bakhtinian foundations of Figured Worlds theory.

The research questions are;

How does Figured Worlds theory explain professional identity formation in medical students?

How can career choice be understood as an aspect of professional identity formation?

4.3 Method

4.3.1 Context

I present an interpretation of reflections written by Graduate Entry medical students following their first experiences in hospital settings as an exemplar of the use of Figured Worlds theory to explore professional identity formation. The four year graduate programme on which the students were enrolled offers an integrated curriculum founded on principles of small group learning and early patient contact. Students on the programme come from North American and Irish backgrounds in approximately equal proportions. In their second year, students initially spend one day per week on clinical placements, as observers, in hospital settings. They typically attend ward rounds and outpatient clinics, and take histories and examine patients individually or in pairs. They do not play a role in patient care. As part of their portfolio of assessment of their clinical placements, students were asked to reflect on something which had arisen during their attachments, but which would not belong in the traditional clinical record, following the 'parallel charting' approach described by Clandinin and Cave (2008). Their reflections were not

graded, but submission was a requirement to pass the module. The two student pieces presented here were chosen reflexively, based on the opportunities they presented for illustrating how Figured Worlds theory can explain the diversity of professional identity formation in medical students.

These reflections were written as part of course work and were therefore directed at a particular audience, medical school faculty. The self-authoring contained within them is specific to that context and is shaped by it. I am a faculty member at the medical school in question which might influence my interpretation of the reflections. Two other researchers co-constructed interpretations of the reflections with me. TD is a medical doctor and medical education scholar. YS is a feminist scholar and Figured Worlds expert with a background in mathematics education. We supported each other's reflexivity throughout the interpretative process. All three researchers read both reflections. I developed an initial interpretation in light of Figured Worlds theory, Gee's discourse analysis and the research questions. We then debated this interpretation and through discussion developed what is presented here.

Both students, now doctors, consented to the use of their work for this chapter. Ethical approval was granted by the Clinical Research Ethics Committee of the Cork Regional Hospitals (Appendix C). Student names have been changed and identifying content removed to ensure confidentiality.

4.4 Results

4.4.1 Sarah

Sarah's narrative revolved around her account of the behaviour of a particular doctor towards students and patients and her response to this. Our analysis focuses on how she talked about this behaviour in terms of her own projected identity as future doctor. She told her story against the backdrop of the Figured World of Medicine, its practices, dominant values, significant characters and power positions. Within this world, there are typical narratives of how things play out in practice, and certain actions and outcomes are valued more than others. The discourse of Caring (MacLeod 2011), for example, portrays the 'good doctor' as kind and empathic. The dominant narratives of Medicine value this approach, but there are other, conflicting, narratives in circulation, for example of successful consultants who are legitimately brisk with students and patients as part of 'getting the job done'. There are also 'specialty specific' worlds within the Figured World of Medicine; for example, General Practice and Surgery, across which the value attached to different actions and outcomes varies. Therefore, the Figured World of Medicine is not homogenous. It is characterised by competing values and discourses.

Sarah was moving and acting within and between these worlds, and 'figured' her identity within the narratives of these worlds both contemporaneously, as a

student, and in the future as she imagined herself to be a doctor (Holland et al. 1998, p.125). While a socialisation perspective might suggest that Sarah would develop a professional identity in a relatively   passive process of absorption (Simmons & Mortimer 1978), simply through being present in the world of Medicine, Figured Worlds theory emphasises her choices in making sense of herself in that world. This was illustrated in Sarah's description of a typical scenario in the Figured World of medicine: a consultant leading his team and students on a ward round. The behaviour of the consultant, at odds with how Sarah believed things should be, brought the discourses of the Figured World of medicine to the surface and to conscious recognition, triggering a reflective response from Sarah:

> *'Two other students and I were on a ward round with this consultant and his team. He didn't introduce himself or ask for our name and, bar an off colour joke about females gaining weight with age, didn't interact with us at all. He didn't make any reference to our presence when he talked to patients ...'*

This narrative illustrated patterns of positional identity in the world of medicine, and the relative positioning that arises from day to day experiences of power (Holland et al. 1998, p.127). Sarah and her fellow students were strongly positioned by the consultant at the bottom of the hierarchy. They were not acknowledged apart from a gendering insult. They were not worth mentioning to patients. This positioning of students by a senior figure in the role they aspired to was very powerful. Sarah didn't need to explain the power differential between consultant

and students, or account for why she allowed his behaviour to pass without challenge. This story took place in the Figured World of medicine and she assumed the reader would have an understanding of how things are in that world. Theoretically, Sarah had a choice or agency, in terms of how she responded to the consultant, but in this instance social structure and power constrained her response and she was silenced (or, rather, silenced herself). But, as Holland et al suggest, incidents which cause us to become explicitly aware of positional power and thus 'rupture' the taken-for-granted can lead to resistance (Holland et al. 1998, p.141), and Sarah demonstrated some resistance in writing this reflective piece, which she knew would be read by a faculty member.

> *'More importantly however, I was quite taken aback at the manner in which this doctor addressed his patients........She (a patient) put her questions to the consultant, who was clearly not open to answering or interacting with her enquiries. He was fidgeting and demonstrating obviously that he was rushed for time. He didn't introduce himself to her mother who was sitting beside her and often failed to make eye contact with both her and the patient..... While this consultant never actually spoke directly to me, he inadvertently taught me many things. I saw, first- hand how not to behave towards patients.'*

As she recounted this consultant's shortcomings, Sarah took a stance on how doctors 'should be' with patients, positioning herself as a 'good doctor' aligned with the dominant caring values of the Figured World. Sarah used his behaviour to frame her own future practice by distancing herself from it and dis-identifying herself with him. She knew that this was not how she wanted to be as a doctor.

> *'I believe that common courtesy and manners should never be disregarded. Simple introductions, taking an extra minute to really listen to patients' questions and addressing any concerns sensitively, directly and with empathy should be what all clinicians strive for.'*

In making sense of how doctors 'should be' Sarah drew on the cultural resources available to her. She adopted a formal tone and professional language in the excerpt above and authored herself as a caring doctor, using terms she had heard and read from her clinical teachers and other sources.

> *'I understand that at times delivering ideal patient care and suitable communication will prove to be difficult. I, for my part, will try to not allow personal feelings to interfere with how I interact with patients and will endeavour to always treat patients with patience, respect and consideration.'*

In this passage Sarah authored herself as a doctor who puts her patients first. Sarah had internalised the discourse of Caring and has made it her own, by intertwining the language of Caring with her own speech in an internally persuasive discourse (Holland et al. 1998, p.182).

As Sarah developed a Figured identity of a Caring doctor, she elected to attend to and value Caring as an aspect of medical practice (Holland & Lave 2009). Sarah's emotional response to the consultant's behaviour demonstrated her stance. She responded with irritation and disappointment to finding these values being disregarded. She was uncomfortable and embarrassed also. As the next quote suggests, she felt that her presence in the consultant's 'team' positioned her as condoning his behaviour in the eyes of the patient. Her figured identity, as a caring doctor, was compromised in this position;

> *'Following my encounters with this consultant I felt uncomfortable, irritated, embarrassed and disappointed. I felt that he had let down the medical profession with his rude behaviour.'*

However, projecting into the future and her imagined self, she was able to conclude with a strong figuring of herself as a future caring practitioner, with a clear expression of agency in her choice of what sort of doctor she would be:

> *'I can decide for myself not to allow myself to develop such traits. I am in control of my own behaviour and can endeavour not to practice negative attitudes or an ill-mannered approach.'*

4.4.2 Adam

Adam's reflection on his experience concerned a situation in which he and a fellow student were taking a history from a patient who began to cry. He narrated his personal and professional response to this – which had shown, in his view, a failure to act appropriately. Our analysis focuses on Adam's struggle to orchestrate multiple voices in this situation, as he self-authored as a good doctor, who values both Caring and Competence.

Adam began by drawing on his previous history, positioning himself at the outset as a healthcare professional with some experience; central to this position was a figured identity of being good at communicating with patients:

> *'...patient rapport was one of my strong points during my years as a pharmacy student and consequently a pharmacist.'*

Now, Adam was in a different Figured World. His figuring of himself as a good communicator with patients had not played out as expected. Like Sarah, he drew on the discourses/narratives of the Figured World of medicine in order to tell his story, to make sense of the situation and to locate himself within it. Adam also wanted to be a 'good doctor', but he activated these discourses in ways that are different to Sarah. In the following excerpt, he wrote about his perceived failure to be empathic, from within a competency discourse (MacLeod 2011):

'I saw my inability to address it (patient crying) in an empathetic manner as a gross failing on my part. Taken aback, I was unsure of how to deal with the situation, and only managed to attempt to comfort her with 'it's alright, take your time'. My classmate on the other hand, offered to get her some tissue paper … As she comforted the patient, she put one hand on her arm.'

Adam's own analysis of his (failed) performance was couched in terms of lack of Competence. Encapsulated in the behaviour of his classmate, the competent doctor is one who is confident and capable in interactions with patients, who demonstrates 'know how' when dealing with them (MacLeod 2011). Adam evaluated his own performance against this marker and found himself lacking; his classmate calmly took action while he was 'taken aback' and 'unsure'. She had responded effectively to the patient's distress and had demonstrated confidence and capability. She was a 'competent' caring professional. Adam's feelings of discomfort and uncertainty positioned him as 'incompetent' and 'ineffective' in the Figured World of medicine, where confidence and capability are valued:

'It was around this point that my own sense of shame and guilt began to arise, as I clearly was unable to effectively soothe the patient.'

Adam's strong emotional response to his perceived failure to be an effective doctor was rooted in his valuing of Competence; for him, Caring was a matter of technical competency. This was evident as he considered the 'methods' used by his

classmate and measures his own performance against them. He followed up with a textbook-type account of their importance:

> 'These types of physical contact help to reassure, instil confidence, and display empathy; although one wouldn't think so much of the act, subconsciously the physical proximity triggers these types of responses.

> The intentions of my response to the patient's crying were on par with what is expected from a healthcare professional: empathy and assurance. The method and extent of my response however were lacking. Consoling the patient is a simple enough concept and is necessary in daily practice. To be proficient at it however, requires more finesse and skill than one would imagine.'

Taking the discourse of Competence to its logical extension, Adam projected his future identity as a good doctor on the basis of the belief that Caring can be executed through an algorithmic process of the right moves at the right time.

> 'I fully intend on employing similar techniques to those that my classmate use. In these scenarios, words alone are sometimes insufficient.'

Later in his reflection, Adam authored himself as a logical person who is uncomfortable with emotion in his relations with family and friends. Although, to

some extent he appeared to be self-critical in the excerpt below, logic, rationality and deduction are strong elements of the discourse of Competence, and therefore confirmed his suitability as a future doctor (MacLeod 2011).

> *'Recalling this event with a housemate confirmed my suspicions: I lacked common sense. On a personal level, I find that I am often unable to deal with friends and family crying adeptly as well. I attempt to rationalise, and logically deduce a solution to the initial problem. It goes without saying that at that point consolation is key, regardless of whether their crying is sensible or not.'*

Adam's narrative was multi-voiced. He wrote with a formal tone about Caring, and what it means in medical practice, and he was thus 'ventriloquated' by the authoritative discourse of official documents such as Tomorrow's Doctors, which spoke through him, rather than being appropriated and reinterpreted by him. In the following excerpt, his writing was in the mode of authority:

> *'As society has expectations of their physicians, the inability of one to tactfully console their patients is seen as a gross impediment to their function.'*

Adam's references to 'proficiency' and 'skill' and his evaluation of the 'method and extent' of his own performance came from the discourse of Competence. Although the voices of his roommate, with whom he had reflected on this event, and the

family and friends he had failed to console in the past, were not heard directly, Adam drew on them to make meaning of himself in this narrative as someone who was highly rational, and who therefore lacked the ability to truly console and comfort, despite his somewhat contradictory figuring of himself as a pharmacist who was good at dealing with patients.

Adam did not clearly author himself as a 'caring' doctor, but he did position himself as having particular qualities which also constituted aspects of the good doctor, advertising that he was cognisant of the importance of caring, and rational and logical as he reflected on his own performance. There were tensions within his narrative of self as he, on the one hand appraised a failure, but on the other gave voice to other discourses in the Figured World of medicine, positioning himself as informed, reflective and on the way to being a good doctor.

4.5 Discussion

My use of Figured Worlds has shown how Adam and Sarah both authored Caring as a valued aspect of their future doctor identities. However, they each understood the notion of Caring in medical practice, and hence themselves as caring professionals, in very different ways. They activated their common cultural resources, the discourses of the Figured World of medicine, in different ways. Sarah authored herself as a caring doctor, now and in the future. She took a clear stance

on the discourse of Caring and had made it her own. Adam did not author himself as a caring professional in the same way. His framing of caring as a technical competence echoed MacLeod's work, where students sought curricular interventions to deal with or 'cure' the unpredictability of the psycho-social aspects of care (MacLeod 2011). None the less, Adam knew that Caring is important, and wanted to be a Caring doctor as much as Sarah did, but took a different stance on what that meant as he attempted to orchestrate the 'voices' of caring and competence in his self-authoring as doctor.

Figured Worlds theory provides a perspective on identity development in medical education that troubles the dominant discourse of standardization. According to Bakhtin, the self is a site from which perspective is taken (Holquist 1990, p.21). No two people can occupy the same site; we are each addressed differently and we use the borrowed elements available to us to make meaning in diverse ways. Therefore we have seen two students following the same curriculum, but interpreting a core element of their professional identity very differently. Much of what medical schools do, and regulators enforce, is predicated on the unspoken assumption that we are working towards the production of a standardized 'good doctor' and that the right curricular ingredients will result in the desired outcome. Figured Worlds shows that this emphasis on standardization is misplaced, with wide ranging implications for medical education.

4.5.1 Figured worlds as a context for medical career choice

A perennial challenge for medical education is to educate students who have important attributes in common ('professionalism'), and yet will make the range of career choices appropriate to society's needs. Despite the discourse of standardization in medical education, most would acknowledge that medicine is practised in ways which are both individual and specialty specific. The Figured World of medicine is not homogenous, but consists of many overlapping worlds, where valued outcomes and actions vary. Reading Adam's and Sarah's different interpretations of themselves as doctors we might ask: what kind of doctors will they become? Figured Worlds theory offers a means to consider this question. In Sarah and Adam's reflections we hear their internally persuasive discourse, in respect of themselves as doctors, made into external speech. Holland et al (1998) have described the space of authoring as a special kind of zone of proximal development, where available discourses act as a scaffold for identity development. It is here that internally persuasive discourse is extended, becoming intertwined with newly encountered discourses. When Adam and Sarah encounter specific specialty worlds, and their associated values, they will attempt to orchestrate those worlds with their understandings of themselves as doctors. The way in which they each combine these elements will shape their career choices.

Is Sarah more likely to be drawn to specialties where Caring is explicitly valued? As she moves through different rotations, Figured Worlds theory would suggest that

she will find Worlds which foreground Caring, such as general practice or palliative care medicine, salient to her, and be more likely to figure herself as a doctor within them. Orchestration of the values of such a World with her existing internally persuasive discourse would be easy. By contrast, where other discourses are privileged, Sarah may dis-identify with figures and be positioned by them as not belonging, because of the values she holds (Oser et al. 2014). Adam's valuing of technical competence, and his discomfort with uncertainty, may lead him towards more procedure- based practice. However, Figured Worlds (Holland et al. 1998) also allows us to see how Adam and Sarah exercise agency, improvising and figuring themselves in new ways, so that Sarah might figure herself in the world of Surgery, which is dominated by discourses of technical competence, as a different type of surgeon, one who authors herself as a caring doctor, first and foremost. The emphasis on continual forming and on agency in Figured Worlds means that predicting, with any certainty, the specialties and types of practice that Adam and Sarah will pursue, is impossible. Figured Worlds does, however, illuminate the way in which diverse possibilities for professional identity can lead to a range of career choices.

Figured Worlds theory helps us to consider how specialty-specific professional identities are formed by focussing on how discourses relating to doctor identity are produced on the ground in different areas of medical practice, and how students author themselves as a result. It provides a lens to explore the ways in which students are positioned and position themselves as they rotate through different

specialties. It brings focus back to the individual developmental journey of the student and the habitual responses they bring with them on this journey. Figured Worlds also offers a starting point from which to shape and support students' career choices as part of their wider professional identity development. With a focus on the individual, mentorship and reflection are areas to consider, as well as a wider acknowledgement of the diversity that exists in medical practice.

4.6 Conclusion

Figured Worlds theory is a useful lens for understanding professional identity formation in medical education, which is only beginning to be cited in the medical education literature. It provides a theoretical basis to link career choice and identity. In the chapters that follow, I will explore how discourses are enacted day to day in different areas of medical practice and how students and doctors come to understand themselves as doctors and to make career choices within the cultural worlds of Medicine.

Chapter 5

Self-Authoring in Specialty Cultural Worlds

'People have the propensity to be drawn to, recruited for and formed in these worlds, and to become active in and passionate about them. People's identities and agency are formed dialectically and dialogically in these 'as if' worlds.'

(Holland et al. 1998, p.49)

Figured Worlds theory (Holland et al. 1998) moves us forward in understanding the development of doctor identities. It offers a means to recognise the diversity of ways in which medicine is practiced, and the agency of individuals in negotiating their professional identities within that diversity. In this chapter, I focus on how medical students and doctors appropriate the specialty specific cultural worlds of Medicine, how they evaluate those worlds and themselves within them, and how the desire to realise future selves within these worlds can motivate career choice.

This chapter is underpinned by Holland et al's (1998) account of the formation of new identities in cultural worlds. They provide a comprehensive account of this process, combining the work of Spiro (1997) and Dreyfus (2004; 2004), with Vygotsky's theory of semiotic mediation (Vygotsky 1978). Examining the self-authoring of medical students and doctors, I will apply this theory to illuminate the process of career choice in Medicine.

5.1 Self-authoring in cultural worlds

5.1.1 Appropriation, identification and dis-identification

In Chapter 2, I have outlined Holland et al's (1998) account of different ways in which individuals make meaning of themselves through four contexts for identity; Figured Identity, Positional Identity, Space of Authoring and Making Worlds (see page 49). I will now explore in greater depth their ideas about the developmental process leading to the appropriation of a Figured World, which then becomes a context for figured identity and a source contributing to self- authoring.

From a Vygotskian perspective, a Figured World is a frame for meaning making; a way to understand the world, and ourselves within it. Vygotsky proposed that such mediating tools were used first inter-personally, or for others, before they are 'internalised' and used in relation to ourselves (Vygotsky 1978). A similar developmental process is reflected in the work of Spiro, an American cultural anthropologist who studied the internalisation of cultural symbols or systems (Spiro 1997). He proposed that the process of appropriation begins with the acquisition of some knowledge of the particular cultural symbol or world. He described a growing salience, or degree to which a cultural world is noticeable and important to an individual; the degree to which it is present in their thoughts. The cultural system or world does not carry personal meaning for the individual at this early stage. They are learning the practices of that world; they are 'going through the motions' but they are not emotionally connected to what they are doing. This corresponds to

Vygotsky's phase of interpersonal use of mediating tools. Exposure to, or experience of, a particular cultural world may never progress further than this level and Spiro referred to this as knowing a world as 'a cliché'(Spiro 1997).

Over time, and through social practice within a cultural world, individuals learn to attend to the valued actions and outcomes of that world (Holland & Lave 2009) and come to evaluate themselves within its cultural framing, using it to organise their thoughts. The cultural world has been appropriated and it has become cognitively and emotionally salient to the individual (Spiro 1997). This is the point at which Holland et al (1998) posit that identification with a cultural world occurs. In Holland et al's model, knowledge or expertise within a cultural world co-develops with salience, towards identification (Holland et al. 1998, p.120). Dreyfus' theory of skill acquisition (Dreyfus 2004) underpins this idea of expertise or competence development in the use of that world as a mediating device, to interpret self and to guide action. Dreyfus describes a series of stages from novice to expert, where the individual moves from strict rule following to intuitive action and from emotional detachment from activity to emotional engagement (Dreyfus 2004). The parallels with Spiro (1997) and Vygotsky's (1981) accounts of internalisation of cultural symbols and appropriation of psychological tools are clear. Holland et al draw these accounts together to describe identification as the point where

> *'The figured world in which one has been acting according to the directions*
> *of others, becomes a world that one uses to understand and organize*

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aspects of one's self and at least some of one's own feelings and thoughts.'

(Holland et al. 1998, p.121)

The emphasis on individual agency in Figured Worlds theory also allows for the rejection of a figured or cultural world or the idea of oneself within it, a process of dis-identification. This could be on the basis of contesting the valued actions and outcomes of that world, or a sense of discrepancy between oneself and the figures and narratives of that world. When we move in figured worlds, there comes a point when we have sufficient knowledge or expertise to figure a future self within that world. That self can be one we choose to realise or to reject (Holland et al. 1998, p.120).

Figured Worlds motivate individuals, or as Holland et al describe it, Figured Worlds 'become desire', as part of the process of identification (Holland et al. 1998, p.98). We use cultural means to control and direct our actions in a process which they describe as 'bootstrapping' (Holland et al. 1998, p.38) . Choosing to pursue a particular specialty career in Medicine might therefore be expected to be part of a process of identification within the cultural world of that specialty.

5.1.2 History- in- person

How do we combine the new identities gained through participating in cultural worlds with our existing understandings of ourselves? The individual does not enter

the cultural world of medicine as a *tabula rasa* (Spiro 1997). Each brings their prior subjectivities with them. Holland et al refer to history-in-person as;

> *'the sediment from past experiences upon which one improvises, using the cultural resources available, in response to the subject positions afforded one in the present.'* (Holland et al. 1998, p.18)

History in person includes existing authorial stances, where the individual has repeatedly orchestrated the discourses and other cultural means that have addressed them in particular contexts. They have taken a stance or perspective on the voices that address them, and have developed their own voice in response. This voice may have become a habituated response over time, a more durable aspect of identity. It forms part of the 'internally persuasive discourse' of the individual, the inner speech with which new voices encountered must be orchestrated.

5.1.3 Self-authoring

Whatever stances a student has taken, s/he will bring those perspectives with them as they enter the world of medicine. As medical students progress through medical education and training, the Figured World of Medicine, and specialty specific worlds therein, address them. Other elements, such as the ways in which they are positioned by others in medical worlds add to the heteroglossia. Each individual must orchestrate a response, which includes their history-in-person. This will happen with varying degrees of ease and success.

'In the everyday rounds of our consciousness, the internally persuasive word is half-ours and half someone else's. ….It is not so much interpreted by us as it is further, that is, freely developed, applied to new material, new conditions; it enters into inter animating relationships with new contexts. '

(Bakhtin 1981, pp.345–6)

Figured Worlds theory, therefore, offers a rich and comprehensive account of the development of new identities through participation in cultural worlds. The objective of this study is to use this theoretical approach to explain the process through which medical students and doctors come to choose particular specialties. I aim to address the question;

How do medical students and doctors author their career possibilities and choices?

5.2 Methodology

My epistemological position and methodological approach are covered in greater detail in Chapter 2 (see page 58). This study is oriented towards social constructionism which has guided my methodological choices. I aim to bring Figured Worlds theory into direct transaction with the text, de-constructing it by identifying instances of figuring, positioning, world making and specific discourses, in the self-authoring of participants. To this end, I have conducted a theory led analysis with TD. Skinner et al's (2001) exemplar of a Figured Worlds / Bakhtinian analysis was a sensitising influence. Interviews were read, listened to and

interpreted in light of Figured Worlds theory and the research question. We independently annotated the interview transcripts, reflexively highlighting passages of relevance to the research question. The constructionist stance was enacted by reading and re-reading, interacting together, and constant comparison of the evolving interpretation and the original, whole narratives. I maintained an audit trail throughout the process. I conducted the analysis in Microsoft Word (Microsoft Corporation 2014); thus, the integrity of each transcript was maintained and the meaning of the parts was not separated from the whole.

Bakhtin (Holquist 1990), whose work underpins Figured Worlds theory (Holland et al. 1998), proposed that we make meaning of ourselves through the discourses available to us. Examining how participants use language when talking about themselves and their career choices can provide insights into the development of professional identity and career choice. Gee's meso-linguistic approach to discourse analysis (Gee 2011; Gee 1999) was a sensitising influence in our inductive process of interpretation. This is in keeping with a social constructionist approach, which emphasises the importance of discourse. It also aligns with the use of Figured Worlds theory, which has influenced Gee's work. Gee describes twenty seven different 'tools' or ways to examine textual data to look at 'language in use' or discourse. These include tools through which the researcher considers the situated meaning of what is being said, the Figured Worlds indexed, the use of intertextuality and social languages, the expression of identity, the relative positioning of self and others, and the building of significance, connections and

relationships. Gee's tools informed our approach to transacting Figured Worlds theory with the textual data. In line with the orientation towards discourse, I use respondents' narratives to illustrate my findings, which also allows readers to evaluate my interpretations.

5.3 Method

5.3.1 Sampling

Participants were undergraduate medical students and doctors as outlined in Table 5.1. I sampled purposively for maximum variation. My objective was to recruit a gender balanced group of participants, representative of a range of career stages and practicing in a range of specialty and geographic areas. Informative cases were selected with the research question in mind. These included participants who had entered medicine as graduates and those were known to have changed career direction. I considered the scope of the study, and the nature of the data collected in projecting an approximate sample size (Morse 2000). The study was broad in scope and I anticipated that the data collected, interviews with articulate individuals, would be very rich. I initially anticipated conducting 20 interviews.

5.3.2 Recruitment

Recruitment was iterative. I identified the initial four interviewees through the Royal College of Physicians of Ireland (RCPI) and the School of Medicine, University

College Cork, on the basis of gender and stage and location of training. After I had

reflexively reviewed these interviews, I recruited further participants at trainee

level with maximum variation in mind. For instance, I selected a female surgical

trainee following interviews with female doctors who felt excluded from surgery. I

recruited several graduate entry participants following an initial interview which

suggested that graduate entrants took a different view of choices available to them.

In the case of the senior doctors, the first three interviewed had similar career

paths and perspectives. I therefore purposively recruited some participants who

had had more varied careers and individuals who had had significant changes in

direction over the course of their careers. Some participants were already known

to me. Others were identified through the RCPI and through colleagues in other

centres. I sent an email to each participant, including information on the study and

a request for an interview. One person declined to provide an interview and

another did not respond to the email. Participants were recruited over a period of

18 months and recruitment ceased when sufficiency of data had been achieved.

5.3.3 Data Collection

I chose individual interviews as the most appropriate method of data collection to

capture participants' self-authoring. I developed a semi-structured interview guide

at the outset of the study to stimulate self-authoring in relation to career

possibilities and choices (see Appendix E, page 368). I conducted all of the

participant interviews myself. This allowed me to bring the experience of

interviewing participants from one interview to the next, and to the analysis of the

interviews. I asked participants to tell the story of their careers in medicine, their perceptions and experiences of different specialities or types of practice, and the choices they had made during their careers, beginning with the decision to study medicine. The guide was adjusted slightly in accordance with the career stage of each interviewee and, as the study progressed, I made changes to maintain focus on the research question. For more senior doctors, I initially included questions relating to their experiences of training others and acting as role models for students and more junior doctors; however, I later dropped them as they did not prove informative.

I undertook interviews in person in a range of settings. Interviewees chose the time and date of the interview and I offered a choice of meeting rooms; at the local medical school, postgraduate training organisation, a hotel or another location of their choice. Interviews were recorded and professionally transcribed. Voice files and transcriptions were held in password protected files. TD and I shared files through a secure shared Dropbox (Dropbox Incorporated 2015) folder.

5.3.4 Reflexivity

I have discussed my position in this research in greater depth in Chapter 2 (see page 62); however, to recapitulate, I am a medical doctor and hold an academic post at an Irish medical school. I trained in hospital medicine, public health and general practice before pursuing a career in medical education.

From a Bakhtinian perspective, utterances are shaped by the audience to whom we are directing them.

> ' ..his orientation toward the listener is an orientation toward a specific conceptual horizon, toward the specific world of the listener; it introduces totally new elements into his discourse' (Bakhtin 1981, p.282)

There are many ways in which I, as an interviewer, have contributed to what participants had said. My age, gender, professional status, the questions I asked and the way in which I asked them partially shaped the responses of participants. I am an insider researcher, to the extent that I, like the study participants, have gone through medical training and pursued a career trajectory within medicine. I am familiar with the medical world, the choices they are making and the context and structures within which those choices are made. I am also, however, an outsider, no longer in clinical practice and external to the context of their daily work and choices.

My position in relation to the study participants varied; to medical students and trainees who know me through my academic role, I am a senior doctor in a powerful position. To trainees from other parts of Ireland, I am an older and more established doctor, but the power differential is less. To the senior doctors who participated in the study I am a peer, with the exception of the most senior, to whom I am a junior colleague.

It is impossible to eliminate the effect that I have had on research which I have designed, data I have collected and my interpretation of those data; however, awareness and full description of my position within the research has allowed me to conduct the work reflexively, and will allow others to evaluate the trustworthiness of my findings. I have kept a reflexive diary throughout the project, in which I have considered the issues referred to above in respect of my interaction with each individual participant and the way in which my own experiences of a medical career path might have influenced my interpretation of their stories. My individual reflexivity has also been supported by discussion with TD over the course of the project.

5.3.5 Ethics

Ethical approval for the study was granted by the Clinical Research Ethics Committee of the Cork Regional Hospitals (Appendix D). I did not approach students from my own classes to participate in the study and I took care to emphasise to all participants that there were no negative consequences to declining to be involved. I provided information about the objectives of the study, my own role in the study and that of RCPI and UCC, as well as the areas to be covered in the interview and procedures for confidential handling of the interview data to all of those who were approached to participate (see Appendix E, page 364). I informed participants that they could withdraw from the study at any time. I removed names from the

transcripts prior to analysis. The individual nature of the career trajectories described by the participants, however, meant that some individuals could still be identified. I carefully selected quotes for inclusion in the thesis to avoid identifying participants and, where necessary, made minor edits to ensure anonymity. For example, I substituted a sub-specialty for a broader specialty or removed specific locations.

5.3.6 Data Analysis

TD and I met on three separate occasions in an iterative process of discussing the transcripts and evolving interpretation and analysis. I recorded these discussions to support later review and reflection. I reflexively selected passages relevant to the research question and offered an initial interpretation. We then discussed this interpretation in relation to Figured Worlds theory and Gee's tools, the wider context of the whole transcript and the other transcripts analysed to date. Where there was disagreement in relation to interpretation, we debated the matter and sought supporting evidence from Holland's original text as well as applying Gee's tools in a more detailed way for clarification. This methodological approach did not require that individuals' authoring always fit into the categories of figuring, positioning, self-authoring and world making. We 'do' many things with language which do not directly relate to identity and which were not the focus of this study. We wrote a thick description as an evolving document throughout the analysis. As each transcript was analysed, I considered its contribution and integrated it into the thick description. I noted any instances where Figured Worlds theory did not

adequately explain the synthesis of the data. I maintained an audit trail throughout the process.

5.4 Results

I conducted 18 interviews. Table 5.1 shows participants and sampling strategy in the order in which participants were recruited. Names have been changed.

ID	Career Stage	Specialty	Gender	Years post-qualification	Sampling Strategy
Linda	Basic Specialist Trainee	Medicine	F	2	Gender/ Stage of Training/ Location
Brendan	Basic Specialist Trainee	Medicine	M	2	Gender/ Stage of Training/ Location
Kelly	Year 2 Student		F		Gender/ Stage of Training/ Location
Margaret	Registrar	Obs & Gynae	F	4	Gender/ Stage of Training/ Location
Michelle	Registrar	Surgery	F	6	Female Surgical Trainee
Cian	Basic Specialist Trainee	Medicine	M	2	Male interested in GP
Conor	Year 4 Student		M	-	Interested Pathology
Valerie	Intern		F	1	Female Graduate Entrant interested in GP
John	Final Year Student		M	-	Graduate Entrant
Cathy	Higher Specialist Trainee	Palliative Care	F	13	Senior Trainee
Una	Consultant	Paediatrics	F	22	Stage of Training/ Location
Anna	Consultant	Medicine	F	25	Stage of Training/ Location
Elizabeth	Consultant	Medicine	F	37	Senior female
Peter	GP	General Practice	M	34	Established male GP
Lorraine	GP / Medical Education	General Practice	F	30	Late career change/Portfolio career
Gillian	GP	General Practice	F	27	Part-time working with family
Paula	Consultant	Obs & Gynae	F	20	Female in a surgical specialty
Thomas	Consultant	Radiologist	M	27	Late career change

Table 5.1 Study participants

Participants were at different points on the career trajectory. Therefore, at times their self-authoring was retrospective; they made meaning of their experiences, thoughts and choices during an earlier period. At other times, authoring was contemporaneous, relating to their current career stage. Holland et al (1998), following Bahktin, describe how self- authoring takes place continually, moment to moment, in response to the address of the world. Elements of that response may be habitual, or even fossilised and, therefore, have a degree of consistency over time. Others are changeable and vary over time and context. The way in which a participant retrospectively authored their choices, when interviewed by me, might not be how they would have authored them at the time when those choices were made. The objective here is to describe how participants authored their choices on a particular day and for a specific audience.

As they talked about their careers and career choices, participants figured, positioned and authored themselves and others. Participants instanced multiple Figured Worlds in their career stories. These related to specific kinds of medical practice and to medical careers trajectories. They also related to aspects of life beyond medicine: relationships, marriage, family and friendship. Participants authored themselves in relation to these Figured Worlds, identifying and dis-identifying with them to varying degrees, figuring themselves within the narratives of these worlds, or rejecting them. Participants' self- authoring is synthesised here to create a narrative of specialty specific identity development over the course of a medical career, using Figured Worlds theory.

5.4.1 Recruitment for the Figured World of Medicine

Participants authored their choice of medicine as a career in diverse ways, with different voices contributing to different degrees in different individuals. Prior to choosing to study medicine, most participants authored their impressions of medical practice as having been informed by medical TV dramas and books, and glimpses of medical practice gained as patients, or patient family members. Some had more significant experiences of doctors and illness, or came from medical families. Imagination played an important part in allowing them to figure themselves in a world to which they had limited access. Various discourses of being a doctor were seen in participants' authoring of their decision to become doctors; the exciting, high stakes nature of medical practice was foregrounded by some participants, while others emphasised aspects such as caring, helping, working with people or scientific discovery.

> *'I think I liked the whole idea that you would always be with other people and you would always be on a team and you would always be busy and there is a buzz around hospitals. I used to be in hospital for various reasons when I was small; I used to love the buzz of it all.'* (Kelly – 2nd year student)

> *'I remember St Elsewhere (medical TV drama)… I remember sitting and it used to be on quite late at night and yeah I do remember watching that and liking it. People always seemed to be grappling with these really important decisions..'* (Cathy – senior palliative care trainee)

For Conor, being a doctor had been about science and he had been drawn to that aspect of the Figured World of medicine. Although there was a fleeting reference to working with patients, Conor had figured himself in the laboratory.

'In my mind, I suppose when I pictured medical practice I saw myself doing a lot of lab work. That's the image I had myself. That is what I was going to aim for; a lot of lab work and a bit of clinical work as well, working with patients, but I was always focused more and interested in the research medical science kind of areas.' (Conor – fourth year medical student)

Some participants had chosen to return to study medicine as mature students, having completed another degree and spent time working. This group authored having figured themselves clearly in the Figured World of Medicine, and often within specific specialties, even before they had started the course.

'It was as I got older then, more in college and working I realised that my personality type.... I loved talking to people and I love developing relationships and that side of things, which is why I think my personality, as I got older, I thought would be more suited to G.P. anyway than hospital.'
(Valerie – intern)

Imaginative figuring of themselves as future doctors was a less prominent part of the story for some participants. They authored entry to medicine as having been motivated by a different Figured World, with which they had strongly identified at

that time. The Figured World of the academically successful student was commonly evoked by participants describing why they had chosen to study medicine. This was a world in which they had already achieved mastery and one which was very motivating for them. The typical narrative of the successful secondary school student in Ireland is that they enter courses that are competitive and prestigious, such as Medicine. Getting into Medicine is highly valued as an achievement in itself, in that world. This is not connected with the values of the Figured World of Medicine so much as with the academic work required to achieve it. Here participants talked about the way in which students are selected for Medicine in Ireland. Admission to all university courses is based on points scored in the Leaving Certificate, an exam taken at the end of secondary school (high school). Admission to medicine requires the highest points of all courses.

> *'I was going to go for what was the highest points, so I mightn't have necessarily, been interested in medicine. But I was very friendly with a girl and the two of us were constantly in competition with each other, to who could outdo each other, and I think I went for it because I it was the highest points*
>
> *Interviewer: And do you remember thinking at all about what it might actually be like to work in medicine?*
>
> *Ah, no, that didn't enter the equation at all, I was going for it because it was the highest points and I loved biology..'*   (Gillian – GP)

> *'If I could do the holy grail of medicine and if I had gotten a very good Leaving Cert... well I was going to aim for the top without very much consideration or knowledge of what it entailed.....If you were lucky enough to get the marks you know it was almost a God given signal.'* (Lorraine – GP)

Some participants authored themselves as having been positioned as 'wrong' for medicine, and having resisted this positioning.

> *'In our school there wasn't an ethos of studying medicine…. at one stage the school principal said, 'Look, chemistry is a very good subject (for you). There is a Pharmacy Assistant post going down town - would you think of it?' …… Not do my Leaving Cert! ….That's when I decided 'I am not going to listen to these people.' '* (Lorraine – GP)

In this quote Lorraine juxtaposed her own voice with that of her school principal, to emphasise the conflict between her figuring of future self and the vision her teacher had for her. This is a feature of discourse called inter-textuality, which brings different voices into direct conflict with each other. It also lent immediacy to her account of something which had happened over thirty years previously. She authored strong dis-identification with her teacher's perspective which she used to motivate herself to future action. She used direct speech to emphasise her resistance *'I'm not going to listen to these people'*.

Kelly had most recently made the decision to enter medicine. Kelly described cross cutting values which she saw in the Figured World of Medicine, making it salient to her. Being successful, good at your job, knowing what to do, the bustle and excitement, being competent, being in charge, these are generic elements but they are what drew her in. Kelly had learned to attend to and value achievement and efficiency as a successful student at school.

> *'When I think of it, I think of a hospital setting, I wouldn't automatically think of a GP. Whenever you're in a hospital I like the busy atmosphere; you always feel like it is a very charged place and there is always something to be done. You feel like the doctors around you know what they have to do, and they always have a job to do and it is there to be done, and they get it done in an efficient manner…..And I like the idea of knowing what to do, it's appealing to me, like, to know how to help somebody or if you were to give a list of symptoms you would know the disease processes and what treatment is available and things like that…..I suppose just being high up in your career and knowing the things that you should know it is just appealing to me.'*
> (Kelly- second year student)

While there were commonalities in participants' authoring of their decision to become doctors, there was also diversity in their authoring of what that had meant to them at the time. They brought this diversity of perspectives with them as they entered the Figured World of Medicine. Participants brought subsequent

experiences in that world into contact with these perspectives in the space of authoring, as they made meaning of themselves as becoming doctors.

5.4.2 Identification and dis-identification in Figured Worlds of Medical Specialties

As they progressed through medical school, participants authored their immersion in the social practice of medicine and participation in practice to varying degrees. They moved within the Figured World of medicine. They recounted how, over time, they developed a sense of 'the game' in new specialty specific Figured Worlds, or how medicine was practiced within those worlds. In order to envision themselves as actors within a world, students needed to be able to objectify themselves in relation to its narratives and its valued actions and outcomes. They needed to develop a perspective on the Figured World itself and on themselves as actors within it. Below are quotes from two female participants in which they authored Surgery as a specialty and career possibility in very different ways. First we hear from Linda, a junior trainee in General Internal Medicine;

> *'A lot of the lads in my year would have gone to surgery just based ... on the male camaraderie and, you know, men fixing things and 'you don't have to worry about blood pressure, I am just going to get the job done'.*
>
> *I think it is a brave female that faces into it ....I worked with a female surgical registrar and everybody was like 'oh she is crazy' you know she was 32 and there is still that kind of association that 'oh she is mad, she should be at home now...' She was engaged. 'She should be at home planning her*

wedding, instead look at her in here in the middle of the night', I think it is very much male dominated and all the male consultant surgeons have these fraternities and things and they all meet up and go places and I think Ms. X has penetrated that but you know she is one of the few obviously.

And I wouldn't have much interest; even some of the boys from my class now who are going into surgery some of them are pretty impressive egos and I wouldn't necessarily like to work with them so that is another factor I suppose....Some of the surgical SHO's are boring because they talk non- stop about surgery and I wouldn't have that gung ho craziness so obviously that is a factor and if they are as dedicated as all that there is no room for someone who (laughs) wouldn't have that.'

And now we hear from Michelle, a junior trainee in Surgery;

'I did a surgical attachment in third year and …. what I really enjoyed about it I suppose was the activeness of the surgeons fixing stuff. So, while it didn't turn me into wanting to be a Urologist, I did suddenly realise I had an interest in surgery and I loved being in the Operating Theatre … it was my first time to theatre exposure ever. I really enjoyed it and I left third year thinking maybe I will do surgery.

It was funny, actually, one of my friends said to me, and he was half joking half serious, that surgery wasn't right for a woman which interestingly

immediately got me on the defensive, and I said, 'That is what I am going to

do so.'

A clear picture of the Figured World of surgery emerges in these quotes, a distillate of day to day experiences on the ground. Participants made meaning of the possibility of themselves as surgeons using this cultural model. They evaluated themselves as they figured themselves as social actors within that cultural world. They took a stance or perspective on the Figured World of surgery itself and authored themselves in relation to it, using the discourses available to them. These are wider discourses of gender and work-life balance and more medical ones, about the nature of medical practice.

Linda authored her dis-identification with the world of surgery contemporaneously. For her, that world was strongly tied to the figures who populated it; the '*boys*' with the big egos. She was scathing about the value and focus surgeons place on being '*men fixing things*', which evoked a discourse of machismo. She juxtaposed this comment with inter-textual speech; '*You don't have to worry about blood pressure. I am just going to get the job done*', emphasising the practical 'hands on' approach of surgeons and their lack of interest in the more 'medical' (possibly more cerebral), aspects of care. This was not how she believed medicine should be practiced.

Linda saw surgery as a difficult world for a woman and she provided a narrative of what she had witnessed of what it means to be a woman in surgery. Again she used inter-textuality to emphasise the attitudes of others towards a female surgical trainee. Discourses of gender and work-life balance were referred to through the comments of others. Her description of male surgeons meeting up to '*go places together*' serves to emphasise that surgery is exclusive and that exclusion can happen in social as well as work spaces, while also authoring surgeons as faintly ridiculous.

She concluded that there was '*no room'* for someone like her in the Figured World of surgery. She had taken a stance against the nature of surgical practice in itself, but also against the '*types*' who do surgery and the activities that are part of being a surgeon. She figured the path of a woman in surgery as one of exclusion and 'otherness'.

Michelle took a different stance towards surgery. Earlier in her interview, she had described how she viewed the world of medicine when she entered medical school.

> '*I suppose there certainly was an E.R. influence there, because of the drama and the action. I like fast turn over and I probably didn't see myself then even becoming a GP. I wouldn't have entered medicine with a plan to become a GP, it was always hospital medicine. I think I probably just thought*

you were going to see more acute stuff in hospitals and that is why I would

have been drawn to, I was kind of very interested in making them better '

Michelle, like Linda, entered the Figured World of Surgery with stances on the practice of Medicine already in place. She authored her attraction to fast turnover and making people better in acute settings and the influence of TV shows focussing on Emergency Medicine. Her excitement at being in theatre in 'real life' was palpable, even as she told the story seven years later. She used the same words as Linda to capture surgical practice; '*fixing things*', but for her this was a positive aspect of surgery, an aspect of medicine which had attracted her in the first place, linked to being effective. She could imagine a future self as a surgeon. This was not unproblematic, however, as a male friend had positioned her as 'not right for surgery' as a female. Michelle authored her strong rejection of this positioning and her use of it to motivate herself to action. She used inter-textual speech to emphasise the force of her intent to become a surgeon, *'I said, 'That is what I'm going to do so''*.

Despite the contrast between Linda and Michelle's stances toward Surgery, the process by which they authored their stances was similar. In each case it was the Figured World, its values and associated types, wider discourses and the literal voices of others, that were used to make meaning of oneself in that world or not.

5.4.3 Positioning in Figured Worlds of Medical Specialties

They ways in which participants were positioned by others in specialty specific Figured Worlds were authored as having provided a powerful means to allow students to figure themselves therein. The following quote is from Anna, who had not figured the world of medicine very clearly on entering medical school. She described a third year placement;

> *'You slept in the hospital for months, which was fantastic ...you were completely immersed....you were with the team on call all the time, at weekends and everything, it was fantastic. (the consultant gastroenterologist) was a very charismatic person and made it really interesting and exciting and himself and (another consultant) worked extremely well together. The team was fun, it was dynamic, they always had brilliant registrars and SHOs. There was a lot of academic discussion but it was done in a fun way.... often terrifying when you were the student, because they all started at the bottom and worked their way up. I did a month with that team and from that point on I was going to be a gastroenterologist. I never wavered. It was just a great team, you were encouraged to see patients all the time, you had to present all the time, you see you were part of the team.'*

Anna authored having been included and having felt valued by this clinical team as a student. She authored a vivid description, full of superlatives of her time with them. She repeatedly emphasised the fun and excitement she experienced. She did express, elsewhere in her interview, an intellectual interest in this particular

medical specialty, but she authored her positioning as 'part of the team' as being very powerful in itself. She authored this clinical placement as having moved her on from not having any vision of herself in medical practice to figuring herself clearly in a particular figured world in the future *'from that point on I was going to be a gastroenterologist'*. She used this figuring to motivate herself to realise that self as she progressed through her training; *'I never wavered'*.

Participants recounted how being positioned by others led them to re-evaluate themselves in relation to the world of Medicine, and shaped their ideas of themselves as future doctors. Margaret's academic performance in medical school had positioned her in a way which ran counter to her previous identity as a successful student.

> *'I was used to being one of the smartest in my class, and then you suddenly go into medicine and everybody is smart and suddenly there are people much smarter than you are..... I barely scraped through the first few years. ....That was all a bit of a shock because I thought 'this will fine I will be good at this' and I really wasn't. So when I got out into the hospitals I was reassured then that 'this is better than I thought'. When I did Obs & Gynae rotation and I really loved it and I thought this is probably what I want to do ......I liked kind of being able to do stuff with your hands. With physicians it is all about thinking and coming up with different ways of doing things and it is quite higher intelligence whereas I just like using my hands and getting in*

there and that really attracted me actually as well, there is a little bit of

thinking if you do Obstetric medicine but it's predominantly procedures.'

Margaret authored being drawn to the Figured World of Obstetrics & Gynaecology because it is a 'craft' specialty, 'hands on' in nature. She had figured herself in that world at least in part because she was not excluded from it by her positioning as 'less academically able' during her early years in medical school. She authored a contrast between Obstetrics & Gynaecology and the Figured Worlds of medical specialties, with the latter requiring more 'thinking', and it seemed that she had taken a stance that such specialties would not be right for her.

Some participants did not author strong identification with the world of medicine or its subspecialty worlds when they were medical students. This was a feature of the self-authoring of more senior doctors, who often authored having progressed through medical school without any clear figuring of future selves as doctors.

'Students these days know…. not only do they know what they are doing

next year, but they have a career plan. It was so the opposite (laughs)…. It

was just like rocking on from year to year not really knowing what I would be

doing you know.' (Lorraine – GP)

5.4.4 Deepening Identification in Figured Worlds of Medical Specialties

Following qualification and as they became more involved in the practice of medicine, participants authored deepening identification within the Figured Worlds of medical specialties. This was evident in their authoring of a growing sense of responsibility for their actions within that Figured World. They had learned to value and attend to the actions and outcomes of that cultural world. Brendan described this change in the passage below, speaking contemporaneously;

> *'I think the fact that there is more responsibility on me means the onus is more on me and I am probably more aware that it is on me ……..the buck stops with me…. especially in A & E or the Medical Assessment Unit. When you are on call and you are admitting patients and these are patients that are going to be coming under your team care and your care, you better make sure that you have everything worked up in the morning for presenting. You don't want to be sloppy, you are presenting to your team so, I mean, you know, you want to get the right tests and you want to make the right patient decisions; you want to make sure that it is a genuine medical and not surgical that God forbid we would admit someone who should have gone somewhere else'*

Brendan had internalised the values of the medical world and they guided his action. He emphasised the importance of these values by changing the subject of his sentences from I to you. *'you better make sure…', 'you don't want to be sloppy'.* These are the voices that motivate him in practice. To someone outside this world, admitting a patient under the wrong specialty team might not seem to be such an

egregious error, but as an actor within this world Brendan views it as such, using the phrase 'God forbid that we should....' to impress this on the interviewer.

For those who had made a choice to train in a particular specialty, there was strong identification with that specialty. Cathy, a senior trainee in palliative medicine who had worked in both hospital medicine and general practice, talked about the nature of medicine, as practiced in palliative care.

> *'The hospice environment was particularly attractive, you had lots of time to spend with the patients, you were working with colleagues who were very committed and very motivated and who wanted to do everything possible for their patients. You know, it was kind of almost like an ideal world of medicine that you probably wouldn't necessarily have been able to achieve within the confines of a busy hospital or a busy G.P. practice.*

Her description of her specialty as 'an ideal world of medicine' showed how she had internalised this world and made it her own – her stance was that this the best way to practice medicine.

5.4.5 Shifting stances

As other participants graduated and moved through training, their perspectives on cultural worlds and themselves within them were subject to shifts. These related to changes in the nature of their role and practice within that world and also to

cultural identities beyond the realms of medicine. In theoretical terms, participants were addressed differently by the world as they moved to occupy new spaces within it.

Lorraine had been drawn to Paediatrics as a career. Although she had not figured herself very clearly as a Paediatrician, she had enjoyed encounters with children as patients and had considered pursuing that option. She described below how another cultural world, within which she strongly figured herself at that time, addressed her more potently than any professional world and moved her towards a career in General Practice.

> *'At the end of the year intern I met my future husband. The following year we got engaged. And then that changed all my career plans, my career path was that I was going to live on a farm in rural Ireland. The Dublin training schemes were gone out the window… I was going to do general practice then….It was almost a given … I mean the option should have been there…. well why not continue? ….that shouldn't have stopped hospital medicine but you know …It just seemed the GP and staying close to home…… in retrospect probably not the best decision in the world but …'* Lorraine

Lorraine authored her decision to enter general practice as not having been based on valuing of the ways that family medicine is practiced, but to other aspects of that cultural world being orchestrated with her figuring of herself beyond Medicine. She described going into GP as *'a given'*, referring to fact that GP was seen as a

natural choice for married female doctors, as a flexible 'family friendly' career. Her figuring of herself as a farmer's wife had precluded progressing further in hospital training, but she had been able figure herself as a particular 'type' in GP.

A further example of a shift in stance is seen in Thomas's account of his training in surgery. He had been attracted to surgery from early in his undergraduate career and had found surgeons impressive rather than intimidating characters. He had been drawn to the idea of surgery as an area where things could be fixed: *'I wanted to do something where we could be successful'*. Thomas spent three years training in surgery but in the course of practicing surgery he authored a shift in his evaluation of himself as a future surgeon.

> *'I found that to my disappointment that the operating side.. when it went well was fantastic. But if you had a complication or more if you had a fear that you were going to develop a complication on a patient, that to me was tough. I have to say I used to find when I would operate on a Friday that my weekend could be consumed by hoping that the patient was o.k. over the weekend. And that wasn't good for me, or good for you know anybody near me either, so that began to change my opinion of surgery. …..In surgery you tend to remember the bad cases more than the good cases. And I think that for you to do that job well you need to be convinced that you are better than anybody else doing that procedure, because if there is any inkling or doubt in your mind that somebody else could do that procedure better than you, you should not do the case. Because the consequences, for the patient, if it goes*

wrong, are incredible… and that became something…. That became a problem for me because I suppose I did doubt my abilities as an operator and then if that is the case then you shouldn't be doing it.

(Consultant Surgeon) said he thought I would make a very good surgeon. He said I just hadn't given it enough time but he said 'if you are thinking this way ……… technically I think you will be very good as a surgeon but it is just psychologically if you are worrying that much about your job that's not good.'

Thomas had been addressed differently as a junior surgeon, than he had been as an intern or student. Like Brendan, he authored the development of a greater sense of responsibility than previously, and the value he placed on getting the best outcome for the patient. He authored a discrepancy between himself and what he had felt a surgeon needed to be *'you need to be convinced you are better than anyone else'*. The consultant surgeon, while positioning him as technically capable, seemed to have confirmed that *'worrying about your job'* is not something surgeons do. He very clearly authored the decision that he was not right for surgery *'if that's the case you shouldn't be doing it'*.

He went on to describe the decision to change career direction.

'That was a very tough decision that I made. I was married then and my wife, thought the same that it would probably be a good thing for me to change. So I changed and straight away within a few months I knew I had made the right decision.'

The end of formal training did not mark the end of shifting understandings of themselves within particular specialties for participants. Peter had lacked confidence as a student and young doctor. Though interested in Paediatrics he had been unable to figure himself taking postgraduate exams and pursuing hospital training. He described being 'lost for a year or two' after graduation, before entering GP training in the UK. Below he talked about how he felt about himself as a GP having returned to Ireland to practice.

> *'Coming back to the Irish System one felt one wasn't valued by the system, by the Department of Health or the Health Boards. And I felt a failure when I came back. I felt an absolute failure, whereas in the NHS you were part of a seamless system, you felt you were part of a team, here you didn't. And I tried to get groups of them out there to join together and when they wouldn't come together I moved…. I got involved in the University and in teaching and that gave me a sense of wellbeing and purpose as well. So it was better. I must say I enjoyed coming to a bigger town where people were into helping and co-operating and that. I began to feel a bit better about primary care, but it took me until I was nearly, I'd say it was late 30s/early 40s before I felt good about primary care.'*

On returning to Ireland, Peter had felt negatively positioned. He authored his role as not having been valued and the way in which general practice played out day to day did not attend to the values of teamwork he had acquired in the UK. He had evaluated himself as a failure in accordance with the values of the world of Irish

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healthcare at that time. Moving to a different environment, and also figuring himself in different ways, for example as a clinical teacher, he authored a shift in this stance towards himself, but it took many years for him to develop a positive stance towards general practice and himself within it.

5.5 Discussion

In this section, I will synthesise the principle findings of this study and discuss its strengths and limitations. I will address the relationship of the findings to existing published research and its implications for theory, for future research and for practice in Chapter 8.

5.5.1 Principal findings

This study has shown how participants came to figure themselves as possible future practitioners within specific specialties and to reject other future selves. When they entered medical school, participants came with individual histories-in-person. Part of this, more durable aspect of their identities was their authorial stance towards medical practice; their response, in effect, to the question 'what is a doctor?' Each participant had authored an internally persuasive discourse in respect of the world of medical practice; however, the elements within that discourse, and the relative contributions of each element to the whole, were diverse.

In Kelly's story, the buzz and excitement of hospital medicine, combined with attraction to values of competence and success dominated. For Valerie, a graduate entry student, helping, caring and communicating had been fore-grounded. The way in which Michelle authored her figuring of Medicine at the outset of medical school, as having been about excitement, fixing things and getting quick results, linked clearly to her later experience of a surgical placement when she figured herself as a future surgeon. It is these initial internally persuasive discourses which students seek to orchestrate and re-word as they encounter new discourses and cultural models of medical practice during their training. History-in-person is not immutable and may be accessible to reflection and change; however, it is central to construction of career possibilities.

As participants recounted their progress through training they authored their passage across landscapes of medical practice. Medical specialties constitute overlapping cultural or Figured Worlds, each with distinctive ways of doing things, ways of interacting, typical types and narratives and valued actions and outcomes. Participants authored their experiences as a medical student in specialty worlds, as having played an important role in allowing them to figure themselves in future practice. The warmth with which participants were received on clinical placements and the way in which they were positioned by more senior figures were authored as important in enabling them to figure themselves in those cultural worlds. Anna authored her inclusion as part of the team, which positioned her as belonging in that world, as a powerful experience which had shaped her career choice. Yet, as I

have shown with quotes from two female students talking about surgery, the manner in which individuals authored their construction of the cultural worlds they encountered and their own positions within them was also highly personal.

Participants authored clinical placements as having provided an opportunity to gain knowledge of specialty specific cultural worlds, to become involved in them and to develop expertise within them. This process had the potential to eventually lead to identification but often did not. Participants recounted many positive experiences on placements which did not lead to career aspirations. This highlighted again the importance of history-in-person and personal agency in career choice. Exposure to different specialties therefore, was authored as having served to allow participants to identify or dis-identify with speciality cultural worlds.

Identification and expertise within Figured Worlds co-developed as participants became more deeply involved in those worlds as working doctors. Margaret, Brendan and Cathy's language, as they talked contemporaneously about their work, demonstrated that they had internalised the discourse of their specialty worlds and made them their own. Participants authored the experience of working as having allowed them to develop competence with the way in which medicine is practiced within cultural worlds. As identification had taken place, they had held themselves increasingly responsible within that world and had become emotionally connected to its values. It had motivated them to action. These findings are in keeping with

Holland et al's (1998) proposition that salience, involvement and expertise co-develop towards identification in contexts of social practice. This process, however, was sometimes problematic. Thomas had appropriated the Figured World of surgery and identified with it; however, it was in the day to day practice of surgery that he re-evaluated himself as 'not right' for surgery. He authored a discrepancy between himself and the type of person you need to be in surgery, which had led to him being unable to figure a future self in that world at that point. Peter also authored a shift in the ways in which he understood himself within his specialty. Whether the outcome was identification or dis-identification within a Figured World, it was in day to day practice that participants authored the emergence of their career identities.

For several of our participants, being a doctor was not the dominant way in which they authored themselves in the world. In discussion of doctor identity development there is often an assumption that the world of medicine is equally and highly salient to all medical students and doctors. Some participants had progressed through medical school enjoying their placements, liking 'a bit of everything', but had not figured themselves clearly as doctors. They authored their primary focus as having been on life beyond medicine. Cultural worlds of friendship and romance/marriage had sometimes been more important than medicine and had motivated individuals to career decisions which had not been related to professional identity. Figured Worlds theory posits that we pass through many different cultural worlds. There are hierarchies amongst those worlds and our figured identities in them.

Holland et al do not provide a detailed account of the relationship between these multiple figured identities. When a non-medical cultural world, such as for instance the world of marriage and relationships, is one which motivates career choice, the choice is a qualitatively different one compared with a choice based on identification within a medical specialty. None the less, it is possible that having made such a choice that identification would occur over time spent practicing medicine in that world. How professional identity, motivation and action are mediated within a Figured World with which one does not strongly identify is unclear. The participants who authored their undergraduate career in this way were all, at the time of interview, senior doctors. It is possible that younger participants might have felt inhibited from expressing similar views by my relative seniority.

Role models are often cited as being very influential in medical students' and trainees' career choices. Career role models, in the sense of specific individuals who inspired a career choice, were not a feature of our participants' accounts of their career trajectories. While they did author encounters with doctors who they felt exemplified certain aspects of practice, they were not necessarily drawn to the specialties in which those doctors worked. In some cases, once a choice had been made, individuals developed relationships with one or more senior doctors in that field, which would probably be more accurately described as mentorship rather than role modelling.

5.5.2 Strengths

Rigour in qualitative research demands consistency between the research paradigm, question, methodology and methods (Carter & Little 2007). In this study, the consistency between the constructionist paradigm, Figured Worlds theory, Bakhtinian discourse and the sensitising influence of Gee's tools for meso-linguistic discourse analysis, supports the trustworthiness of the findings. Bakhtinian discourse theory holds that people's stories have validity in light of their identities. In telling their stories, participants externalise inner speech for the listener. Using both Gee's tools and Figured Worlds theory to analyse participants' stories has allowed me to describe and demonstrate the way in which individuals used the discourses and Figured Worlds available to author the world and their position in it, as a certain type of doctor. This strongly theorised approach is a further strength of the study. Reflexivity has been at the core of my approach throughout the study and allows others to evaluate my interpretation of participants' voices.

5.5.3 Limitations

Within the social constructionist paradigm all knowledge is contingent and partial; therefore, my findings are contextually bound and I do not claim that they represent a single 'truth' about processes of career choice. This does not mean that my findings do not have significance beyond this study; however, caution must be exercised in making claims of applicability to other settings. In Ireland, undergraduate medical education and the structure of postgraduate training are broadly similar to those in the United Kingdom; however, there are significant

differences between the Irish and North American systems, most notably the fact that entrants to medical school in North America have already completed a college degree and are therefore older than their Irish counterparts. This may limit transferability of some of my findings, as greater maturity and life experience may mean that North American medical school entrants figure themselves more clearly in specialty worlds.

This study was conducted at a single point in time and participants authored their perceptions, experiences, career possibilities and choices retrospectively in most cases. The ways in which individuals author events years later is not likely to reflect the ways they would have authored those events contemporaneously. Authoring in real time would provide a different perspective and bring us closer to the decision making process. To address this limitation I have undertaken a longitudinal study to capture authoring of career choice in real time in Chapter 6.

5.6 Conclusion

Figured Worlds theory offers a unifying theoretical lens to explain how 'individual' and 'experiential' factors come together to shape career choice in medicine. This study addresses the gap in the existing literature by applying socio-cultural identity theory to the question of how and why 'choosers chose'.

Chapter 6

Self-authoring Career Identity Over Time

'The phenomenology of the self is, in Bakhtin's terms, characterized by 'open endedness'. Because the self is the nexus of a continuing flow of activity and is participating in that activity, it cannot be finalized. It cannot step outside of activity as 'itself'; the self as it reflects upon its activity is different to the self that acts. In Bakhtin's view, the self process must be dialogic.' (Holland et al. 1998, p.173)

What happens to career intentions and choices over time? This question has been a focus of several papers, which have described the stability of career choice (Goldacre et al. 2010; Goldacre & Lambert 2000), and explored reasons for changing specialty (Durning et al. 2011). In this chapter, I extend the study described in Chapter 5 and explore the authoring of career possibilities and choices in real time. In doing so, I draw on Figured Worlds theory (Holland et al. 1998), with particular emphasis on Bakhtin's conceptualisation of self and self-authoring (Bakhtin 1981; Cresswell 2011; Holquist 1990), which underpins it.

6.1 A theory of open ended identity

Bakhtin, a Russian literary theorist of the early twentieth century, generated ideas which have, in recent decades, begun to be adopted across a range of fields

(Holquist 1990). His epistemological theory of dialogism is one which proposes that meaning, and in fact existence, are dialogic in nature. Consciousness is in the relation between the self and the other and meaning can only be made when there is dialogue between the two (Holquist 1990). These ideas apply to situations where individuals are in dialogue with each other, through external speech, and also within individuals, in internal speech.

Bakhtin described existence as an event, where an individual occupies a position in space and time. The individual is 'addressed' by the world, in their unique position. This address is constituted by many different voices, speaking social languages which carry the motivations and beliefs of those who have uttered them. It is described by Bakhtin as 'heteroglossia' or multivoicedness (Bakhtin 1981, p.263). The individual must respond to the address of the world by making meaning of it. This is the core of what Bakhtin called 'addressivity' (Holquist 1990, p.30). Existence is a never ceasing process of simultaneously being addressed and responding to that address, from birth to death.

The response or answer produced by an individual is, in Bakhtin's vision, crafted from the heteroglossic address of the world. The social languages by which the individual is addressed, therefore, are the mediating tools by which meaning is made. This creates both constraints and possibilities for authoring. Holland et al

extend this element of Bakhtin's work to describe an intra-mental 'space of authoring';

> *'We conceive a space of authoring then, as a broad venue, where social languages meet, generically and accentually, semantically and indexically, freighted with the valences of power, position and privilege.'* (Holland et al. 1998, p.191)

They also extend Bakhtin's focus on social languages, to include broader range of 'voices' heard within the space of authoring. These are other cultural resources such as social practices and their related Figured Worlds. Thus responses to the world include certain ways of acting as well as speaking (Holland et al. 1998, p.235).

Inner speech is constituted by an 'internally persuasive discourse' (Bakhtin 1981, p.242), in which individuals intertwine the words of others with their own words, appropriating the words of others and the intentions and motivations carried by those words, melding them with their own motivations and intentions. This happens over time, through a process of orchestration of the heteroglossic address of the world in the space of authoring. It is not a smooth process. Individuals may simply ventriloquate authoritative discourses, rather than appropriating them or they may have an internal discourse which is contradictory and heteroglossic. When a relatively stable response is achieved the individual has developed a perspective, or what Bakhtin termed an 'authorial stance'. The internal persuasive discourse of

the individual is always open ended; a site of contest and struggle as it encounters new voices to which it must respond.

Bakhtin provided an account of the self as open ended, whose existence is defined by continual addressivity. He described how individuals perceive others as a whole, 'finished', or amenable to categorisation while they themselves cannot step outside the flow of being to view themselves in the same way. The other, that which is not the self, is always categorised in ways that are socially and historically derived. Bakhtin conceived the self as a triad, a centre (I-for-itself), a non-centre (not-I-in-me) and the relation between them. The I-for-itself is the open-ended self and it is invisible to itself for that reason, it cannot be finalised or categorised, it cannot stop to allow evaluation. It is through the Not-I-in me, the appropriated languages, cultural resources, and categories of others, that the individual can make a subject of the self.

According to Bakhtin, making meaning, or authoring, always occurs from a particular position or perspective and at a particular time, an idea called the 'law of placement'. It follows therefore that authoring is shaped by the position of the author, and that authoring is unique, in that no two individuals can occupy the same position at the same time. As time moves forward and we move across social and cultural landscapes, the way in which we make meaning of ourselves, therefore, may change. These changes are the focus of the current chapter.

My objective was to address the research question;

How does medical students' and doctors' authoring of career possibilities and choices change over time?

6.2 Methodology

The conceptual orientation of this work is outlined in greater detail in Chapter 2 (see page 58). This study was conducted within a social constructionist paradigm (Burr 2003) and, in keeping with that orientation, TD and I read, listened to and re-read texts independently before co-constructing an interpretation. Our analytical approach was oriented towards Bakhtinian discourse (Skinner et al. 2001), as explained in section 6.1; in particular, the concepts of dialogism, heteroglossia, sites of the self and self-authoring. Figured Worlds theory (Holland et al. 1998) provided theoretical insights and Gee's tools for discourse analysis (Gee 2011; Gee 1999) provided a further sensitising influence during the analysis. Reflexivity (Mauthner & Doucet 2003; Verdonk 2015) was a central element throughout the process, in keeping with Bakhtinian and social constructivist approaches.

6.3 Method

6.3.1 Sampling

To gain a greater understanding of how self-authoring changes over time, I conducted a longitudinal study with six of the original participants in the study described in Chapter 5. These individuals were selected because they were senior medical students or junior trainee doctors, a phase during which the literature suggests that major career decisions are made (Goldacre & Lambert 2000; Durning et al. 2011). These individuals had been approached for the first study (see page 142) with a view to maximising variation and recruiting cases of relevance to the research questions. They had varying career intentions and included graduate entrants to Medicine as well as those who had entered medical school directly from secondary or high school.

6.3.2 Recruitment

Participants were sent information regarding the longitudinal study via email approximately six months after their initial interviews. In addition to that baseline interview, participants were then asked to provide audio-diary recordings and to undertake a second interview.

6.3.3 Data Collection

Audio-diaries (Monrouxe 2009) are used to capture day to day experience. I chose to use them in this study as they have the advantage of capturing subjects' reflections close to events of interest. I provided participants with instructions asking them to leave a message of at least 10 minutes duration, providing an update on their thinking about their career and talking about any recent experiences which had impacted how they viewed themselves practising in the future (Appendix F). A Freephone line was set up with a welcome message which reminded participants of the focus of the diary entry. Participants were prompted by text message to leave a diary entry at two monthly intervals over a 6 month period.

Procedures for the initial round of participant interviews have been described in Chapter 5 (see page 143). I conducted a second semi-structured interview with participants following completion of the audio-diary phase of the study. I developed an interview guide in light of the research question. The second interview was informed by the first interview and subsequent audio-diary entries. Longitudinal data - the initial interview, then audio-diaries and a second interview - were collected over a total period of 20 months as shown in Table 6.1. Audio-diaries and interviews were professionally transcribed. Files were stored in password protected files and participant names were removed.

6.3.4 Data Analysis

The focus of this study was self-authoring over time. The approach taken to data analysis was similar to that described in Chapter 5 (see page 147). The analysis was theory led. Figured Worlds theory (Holland et al. 1998) and Bakhtinian discourse theory (Holquist 1990; Bakhtin 1981; Cresswell 2011) were transacted with the text. We followed Skinner et al's methodological exemplar (Skinner et al. 2001).

Data were analysed longitudinally, by individual, and then across cases. I reflexively selected sections of text which were relevant to the research question and offered an interpretation of these, informed by Gee's discourse analysis tools (Gee 2011). I specifically looked for instances of figuring, positioning, world making and specific discourses within the self-authoring of participants. TD and I debated my initial interpretations and refined them. A thick description was created for each individual. We conducted a process of constant comparison within and between participants to synthesise our findings.

6.3.5 Reflexivity

Reflexivity was integral to this programme of research, so I continued to maintain a reflexive diary during the course of this longitudinal study. I built rapport with participants during the course of the first interview which meant that their audio-diary entries and second interviews were addressed to me as a familiar person with whom a degree of inter-subjectivity had been established. This supported the

process, in the sense that the longitudinal data built on the baseline interviews. I remained aware of my role in the research process as the audience for participants' self-authoring and during data analysis.

The use of audio-diaries as a method of data collection stimulated me to reflect further on my relationship with the study participants and what I was asking of them. I was a senior doctor, in a position of power relative to this group of participants. Over the course of the six month audio-diary period, engagement with the audio-diary process was less than I had hoped. I felt constrained, however, in issuing reminders or chasing participants because I did not want them to feel coerced. At the follow up interviews, it emerged that several participants had found the audio-diary an unnatural way in which to communicate their thoughts. For some, it induced self-consciousness, in one case to the point of not being able to leave any entries. I had not anticipated this difficulty and regretted that some participants had felt uncomfortable with the process but had not felt able to voice their discomfort to me. It was apparent that, despite building rapport with participants, paying due diligence to the provision of information and gaining informed consent to participate, my relative position of power shaped my relationship with participants and the way in which they participated in the project.

6.3.6 Ethics

Ethical approval was granted by the Clinical Research Ethics Committee of the Cork Regional Hospitals (Appendix C). Participants were provided with information regarding the study and the confidentiality of the data. All data was stored in password protected files and participant names were removed. TD and I shared the voice and transcribed files in a secure Dropbox file (Dropbox Incorporated 2015).

6.4 Results

Eight of the original study participants were approached via email and two did not respond to the request to take part. One participant did not provide any audio-diary entries, while another did not provide a second interview.

	First Interview	Audio-diaries October 2013- March 2014	Second Interview	Time Period Covered
Michelle	12/2012	2 entries	05/2014	18 months
John	6/2013	None	06/2014	12 months
Conor	6/2013	2 entries	06/2014	12 months
Valerie	9/2013	3 entries	06/2014	9 months
Cian	5/2013	2 entries	05/2014	12 months
Brendan	11/2012	2 entries	-	16 months

Table 6.1 Study participants

Participants fell into two broad categories in terms of career identity over the course of the study: those who authored deepening identification within a particular specialty specific world and those who began to dis-identify with previously chosen worlds, as they began to identify with other worlds. I present

here the accounts of individual participants' self-authoring over the duration of the study.

6.4.1 Deepening identification

Michelle, Conor and Valerie had each made a career choice at the time of their first interview. Michelle had commenced training within Surgery, while Valerie was working as an intern and had decided on General Practice. Finally, Conor was drawn to Pathology and to research, but was as yet a medical student, completing his penultimate year of medical school.

6.4.1.1 Michelle

In her first interview, Michelle had developed strong identification with the Figured World of Surgery. She had made many of the values of that world her own. Speaking about surgeons, in her first interview, she aligned herself with their values.

> *'They have their way of doing things, and things have to be done their way …*
> *particularly in the operating theatre, you know? I mean things need to be*
> *set up right, trays need to be right, drapes need to be right, you know,*
> *positioning needs to be perfect. Understandably, because it carries through*
> *to an operation; it is not something that you kind of do this way today and*
> *this way tomorrow. I think it just sets you up for everything being done*
> *exactly in the right kind of way, to get it done properly'*

She shifted from talking about the way 'they' (surgeons) like the theatre to be set up, listing off the requirements using 'their' voice, in the earlier part of this paragraph, to making these standards her own in the latter section. She authored the importance of these procedures in doing surgery 'the right kind of way'. This appropriation of the ways of the surgical world was an important part of becoming a surgeon.

Surgery was a motivating world for Michelle. She actively sought experience within that world and had decided to ensure that she progressed within it by meeting that which was expected of a successful trainee surgeon. She talked in her first interview about entering surgical training;

> *'I wasn't even thinking, you know, about kind of life, as such, outside of work and for the first year a good few of my very close friends had gone to New Zealand/Australia. So I was very much submerged in surgery and it was all about surgery and I wanted to get my exams as quickly as possible and I needed to get started on research and there was so much to do.'*

There was a strong sense of forward momentum in Michelle's account of her desire to progress within surgery. She positioned herself as different to many of her peers who were taking a gap year in New Zealand or Australia. Speaking of the impact of theatre closures, Michelle's focus on gaining operative experience was clear;

> *'And you now had four trainees in one theatre and it was a disaster for operating. You would be fighting amongst each other, who was to take off a*

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mole? (Laughs) You know, or a toe nail, it was achievement if you got to do

the toe nail on the list.'

Michelle's evaluation of herself as a future surgeon largely focused on the issue of technical operative skill.

'I was never really worried that I couldn't examine a patient or that I couldn't

make a diagnosis or that I couldn't talk to patients. But I was always worried

that I wouldn't be technically good enough to be a surgeon. I definitely think

getting some feedback that they felt that I would be able to progress helped

me to continue. So I think if I hadn't gotten that then maybe I would have re-

evaluated my direction and it is still probably a thing that weighs on my

mind at times ...'

While she had received some positive feedback in that regard, positioning her as 'right' for surgery, her lack of operative experience, at the beginning of this study had not allowed her to frame herself fully as a surgeon. Technical skill is at the core of being a surgeon and Michelle authored it as an inherent ability, rather than something she could learn. Her emotional investment in her future as a surgeon was demonstrated by the worry that she may not turn out to have these skills, which would exclude her from that world.

Over the following 18 months, Michelle was appointed to the Higher Specialist Training Scheme in Surgery. She took up a post at a new hospital in a different part

of Ireland. Michelle's audiodiaries revealed an ongoing dialogic process of identity development within the Figured World of Surgery. Her experiences day to day, on the ground, in surgical practice, positioned her as a future surgeon. She was positioned both positively and negatively and the multi-voicedness she experienced, in respect of herself as a surgeon, was evident in her account.

As a more senior trainee she now had greater access to the practice of surgery and was recognized by senior surgeons as legitimate and worthy of investment of time and effort.

'I think people treat you a little bit differently. They expect you to manage things yourself but also they expect that they are there to teach you.'

Performance in the operating theatre remained a focus for Michelle and sometimes caused her to doubt her future in Surgery. On one occasion the senior surgeon took over from her during an operation.

'I think he just got a little bit frustrated about how slow I was and took over the procedure. Which was a bit disappointing really because then you are going 'Oh God, I have been doing this now for months and I still can't actually do the procedure on my own.' I did feel a bit disheartened, you know, coming out of theatre. I was wondering was I ever going to reach the point where I would be able to do basic surgical procedures on my own?'

In this episode, Michelle was positioned as being incapable of doing the operation in the required timeframe. The surgeon's decision to step in and take over was a powerful message to her that she was not performing to the standard required in Surgery. Her distress was evident in her inter-textual use of direct speech and the exclamation 'Oh God'.

Other people encountered during her day to day work positioned Michelle. In this case she talked about feedback she had received from an intern, during the period when she had been having difficulties in theatre;

> *'My new intern turned to me and said 'Oh you are really nice to the patients and you have a really good way of explaining things to them, which is really unusual for a surgeon.' It was really nice to hear and I think on a week where I had started to doubt my capabilities it was nice to get an outside perspective that I have a good way with the patients at least ...so going forward I just need to work on the surgical side of things which is I suppose the whole point on being on surgical training.'*

Michelle authored being pleased to hear that she had good communication skills, although her use of the qualifier 'at least' suggested that this was subordinate to technical skill in the hierarchy of valued skills in surgery. She authored the acceptability of not having perfect technical skills because she was still learning, but her use of 'I suppose' meant that she did not sound entirely convinced by this idea.

She concluded her account of that week by saying;

'I felt a bit mixed about the whole thing and there are definitely days when things don't go well that you really do wonder is it a good career choice but overall it is.'

Her overall stance towards Surgery, therefore, was unchanged but she continued to orchestrate a multiplicity of voices in authoring that stance. The voice of the surgeon telling her that she was too slow, of the intern telling her that she was good with patients, voices about being a surgical trainee worthy of the time and attention of senior surgeons and also about being a learner, who can't be expected to know everything; these are the voices Michelle has orchestrated to author the utterance 'overall it is', confirming herself as a future surgeon.

During her first interview, Michelle talked about the demands of Surgery as a career, in terms of working hours and work-life balance. She was becoming aware that this was something that needed attention.

'You can't spend your whole life in hospital because you are not going to wake up on your 70th birthday and go 'Oh I am so glad that I spent my whole life in the hospital'

In an audio-diary entry she described a situation where she felt conflicted about staying on at work when she was scheduled to leave. A patient had deteriorated

and needed to go to theatre. Michelle had been on call overnight and had to travel to Dublin for a training review. She arranged for a more junior colleague to assist the consultant in the operation and went home.

> *'It is terrible you know, I just felt guilty all evening and for about a week afterwards, you know, that I should have stayed and that I really should have just put all of my own things aside for the operation. You know it really wouldn't have made a difference. He really just needed an assistant. It didn't have to be me but I remember thinking 'God, you know, am I going to spend my whole life either staying late at work, or sometimes if I chose not to stay at work, thinking about it?' It was one of those moments where you kind of look at yourself and go well you know 'I do have to look after all the other things that are going on in my life but that is not always going to be possible with a career in surgery.''*

Michelle tried to orchestrate the multiple voices that addressed her in relation to this episode. She felt guilty but it was 'terrible' that she felt so. It really hadn't made any difference that she didn't stay on, yet she had felt bad that she hadn't. She evaluated her decision within the frame of the Figured World of Surgery in which long hours and putting work above all else were highly valued. She authored her frustration with the situation as she asked herself if this was what lay ahead for her, but she finished with the conclusion that taking up a career in Surgery meant that other aspects of life would suffer. The multi-voicedness of this account suggests that Michelle had not yet developed an authorial stance on this topic.

By the time of the final interview, Michelle's operative skills had developed and she could figure herself more completely as a future surgeon. Speaking about breast reconstruction:

> *'At the start of the year it was a scary operation...whereas now it's just another operation and it gets done, so I do feel that I would be able to transfer those skills now to different parts of the body so I think that has definitely helped a lot. I think surgery is confidence building because you have to go in and believe that you are going to be able to do it. So I am not there yet, but I certainly think now that I might get there.'*

She had been working in a breast surgery post and authored it as a sub-specialty she might choose. She figured it as a potential solution to the conflict between surgery and work-life balance.

> *'And from the point of view of lifestyle, as lifestyle goes and surgery, I mean you very rarely get called back in the middle of the night with a post-op patient...whereas vascular and colo-rectal patients can get very sick 24 hours a day, so it is more of a commitment.'*

She also authored a firmer stance on the issue of working hours and work-life balance.

> *'It's not actually normal to work 100 hours a week every week. You can do it every now and again, absolutely, and it has to be done but you couldn't sustain it you know. Absolutely not, I think you do have to look after yourself because if you don't look after yourself then your work will be impacted by it.*

I know myself if I am really tired and I have had a real bad week by Friday

you know I am probably not as caring.'

Michelle opened this quote with a strong statement of 'fact', drawing on the wider discourse of work-life balance. However, she authored the perspective of the Figured World of Surgery in the second sentence: long hours can be worked and must be so on occasions. None the less, she took a firm stance that it was not sustainable to do so long term. It is notable that Michelle authored a link between work-life balance and quality of patient care. This may be a perspective which was easier to orchestrate with the values of the Figured World of Surgery, than the perspective that work-life balance is a good thing in itself for the individual doctor.

6.4.1.2 Conor

Conor's case was a further example of consolidation of career identity over time. When first interviewed, Conor had completed clinical placements in all of the major specialties and was at the end of his penultimate year in medical school. He had made a decision to pursue a career in Pathology and already had a strong identification with that Figured World, while authoring ambivalence towards clinical specialties.

'I enjoy patient contact. I always get on very well with them.... it just seems

personally the more time I spend with them.... I do enjoy it, but it is not

something I would enjoy doing for the rest of my life.'

Conor emphasised how much he enjoyed talking to patients while at the same time figuring himself in an area of medicine that did not involve patients directly. In undergraduate medical education, great weight is placed on doctor-patient interaction. As a student immersed in that world, it may have been difficult for Conor to author a lack of interest in that aspect of medical practice. In the quote below he described what drew him to Pathology as a career possibility.

'Doing basic pathology in second and third year I found that fascinating I found it really very interesting to me, that was medicine. ....Pathology is what the essence of medicine is ....'

In his audio-diary entries it was apparent that Conor's difficulty identifying with clinical specialties had been problematic for him, making it difficult for him to figure himself as a doctor and causing him to question whether medicine is the right career for him.

'I wasn't sure if medicine was the right place for me, even all during the Summer I was almost considering leaving and probably switching to a course that might suit me better.. I do enjoy the patient care aspect of the medicine but it is not the kind of thing that I had envisaged myself doing for the rest of my life. Hospital medicine doesn't stimulate me intellectually, not in the way that I find interesting.'

In the absence of any undergraduate exposure to the working world of Pathology in the curriculum, Conor decided to undertake two Summer electives in the US to explore Pathology as an option. He authored these experiences as very positive.

'It was a combination of the environment and the way that everyone just got on so well with each other and everyone seemed to be enjoying their work and really happy with their work. Which to be honest is not something that I have come across a lot in hospital medicine. A lot of people..they say they enjoy the work but they are always complaining about either the wages are too low or the hours are too long or you know they just don't get a chance to enjoy life.....I came away at the end of it thinking, you know 'Wouldn't it be fabulous to do this as a career? I can really do this'

Conor authored his attraction to the nature of the work on his Pathology elective, but meeting and working with people who had a positive outlook on their work and good relationships with each other presented him with possibilities which he had not identified in hospital medicine. His excitement at the end of this quote, and his clear figuring of himself in this world, are evident.

At the time of the second interview, Conor had graduated and was about to start work as an intern. Pathology was still his number one choice for a future career, but he authored time spent on the wards over the previous year as having altered his perspective on hospital medicine.

'I moved from a point where it was just like medical student sitting in the corner trying to keep up and trying to understand and not having a clue what the actual doctors were saying, to the point where I know what they are saying and I know why they are saying it and I know that if I was in the same situation I should say very similar things. I feel a lot more comfortable and I feel I can actually act as a clinical doctor now.'

When he had first entered the clinical environment, Conor had found a discrepancy between himself and the role he was expected to play. He had been unable to figure himself in the narratives of that world. His description of sitting in the corner evokes a feeling of peripherality, which had been resolved, a year later, by his increasing competence within that world. This was not simply a case of gaining more medical content knowledge, it was about how medicine is practiced culturally and socially. It was about the appropriation of that world. Conor authored the development of a degree of emotional resonance with the values of that world.

'The main thing is the patient interaction, the actual act of taking care of someone and seeing them get better, over the long term or over the short term as well. I kind of really, this year, started to appreciate that, that is what we can actually do. I really found that to be personally rewarding when I saw it happen'

These changes in perception of other specialties did not change Conor's career choice to enter Pathology. His stance remained stable; however, again there was an

ongoing dialogical process as he made meaning of himself as a future pathologist moving through the Figured Worlds of Medicine.

6.4.1.3 Valerie

Valerie was first interviewed a few months into her intern year. She had intended to pursue a career as a GP from the outset of medical school and at that point was working in her first post as an intern in GP. Valerie was a graduate entry student and she had authored her choice of GP initially as linked to its flexibility around family life.

'I suppose I have always liked GP and the hospital equally. But again then it would be more the considerations of my age, the length of the training, and wanting to have a family that would be pushing me towards GP.'

However, she also valued the nature of medical practice in the community and had evaluated herself as suited to that world.

'It was as I got older I realised that my personality type, I loved talking to people and I love developing relationships and that side of things .. I thought would be more suited to GP anyway than hospital.'

Having spent some time working in GP as an intern, her identification with that Figured World continued. She described a recent consultation, where she dealt

effectively with a patient. The successful outcome of this case allowed her to figure herself as a GP in the future.

> *'After chatting with her, I realised she was suffering from depression and that was one of my favourite consultations, that somebody I looked after in GP. I arranged for her to get counselling and she started putting on weight and we started her on anti-depressants and got her to see a dietician and I really enjoyed that.'*

Valerie's audio-diaries covered a period during which she started to work for the first time in a hospital environment. In her first job, she authored herself as feeling ill prepared and unsupported.

> *'I don't feel that I was given proper time or teaching on this. It was all…having to interrupt people and ask people would they be able to help me do this. I feel that the registrars there are very busy and could have been a bit more helpful …Nobody really cares other than that it's up to me to try to work through my tasks and just manage my time myself……When you compare it to the two months I had in GP. GP was like a holiday compared to how tired I am.'*

She was spending a lot of time on clerical tasks and little time with patients. She authored a sense of abandonment, having been dropped into an environment to perform a role for which she lacked the requisite skills, with no one interested in helping her or checking how she was coping. Despite encountering some positive

role models and being positively positioned by patients, this initial experience of working in hospital medicine was a powerful one which led to a dis-identification with that world.

For Valerie, the world of hospital medicine served as a counterpoint to the Figured World of General Practice. She compared and contrasted aspects of those worlds to confirm her alignment with GP. As she moved through subsequent hospital jobs, Valerie gained greater knowledge of the world of hospital medicine. Working in Haematological Oncology, she authored her valuing of the longer term relationships developed with patients. However, she continued to author work life balance as a problem.

> 'Work life balance is pretty bad .... it is just the call... once you do your call and your post call you end up so tired and you have nothing done at home and you are working weekends as well ... it just meant you had very little time to see my family or friends ..I am not seeing people not getting to the cinema not getting to do any exercise and that's all quite stressful in itself.'

During this time Valerie arranged to spend some time shadowing GPs during her holidays. These experiences served to deepen her identification with GP. In the quote below, she authored the contrast between her experiences of hospital and GP.

> *'I thoroughly enjoyed my time there and again I just get on really well with doctors and GPs and they always seem to have a lot more time to talk to you and teach you then they do in the hospitals. And there is a great sense of what would you call it… I don't know they take you in under their wing and they just care they are quite caring towards you I suppose. '*

The nurturing aspect of GP was attractive to Valerie, who had experienced hospital as somewhere where 'nobody cares' about trainees. As she approached the end of her internship, Valerie had dis-identified with hospital medicine and was clear in her choice.

> *'As the year goes on now I have less interest in hospital medicine as a career I think just the call would turn me off and it is definitely when I compare the GP experiences I have had with the hospital I just love the GP'*

By the time of her second interview, Valerie had successfully secured a place as a GP trainee and was due to take that up. She was now figuring a future in General Practice and planning to start a family in the next few years. For the first time, she talked about her student loan. Valerie had not anticipated having a large student loan at the outset of her undergraduate training, but unforeseen circumstances, linked to the recession, had left her with a debt of over €100,000, on which she was only able to service the interest. She authored doubts about whether doing Medicine was worth finding herself in this position.

> *'The loan is a big thing. …. Financially, medicine like, if you could go back in time would I have done it you know?'*

Although she had no desire to leave Ireland to work, she envisaged that she might be forced to do so for a few years to earn enough to pay back the capital.

> *'So for the next year I am not going to have any money, so, it's not devastating but it is a mess, like there is no way I would have done that. .. I really will have to properly consider how can I pay it off…I will probably have to go somewhere if the pay is better in other countries. It's really bad and there is no way I would have done it'*

Despite having made her choice to train as a GP, Valerie was still unable to clearly figure her future practice because of her uncertainty in relation to her debt.

All three of these participants, Michelle, Conor and Valerie, ultimately maintained their stances towards their original career choices; however, their self-authoring revealed an on-going dialogic process as they negotiated their career identities within specialty specific Figured Worlds.

6.4.2 Dis-identification

In the cases of John and Brendan, at the time of initial interview they each expressed a clear preference for a career in a particular specialty. In both cases,

over time, new voices emerged which caused a shift in their understanding of themselves as future doctors.

6.4.2.1 John

John's case demonstrates the degree to which a stance can shift over a relatively short period of time. When first interviewed, John was a Final Year graduate entry student, committed to a particular specialty career. Coming from a background of basic science, John had been involved in research within this specialty prior to entering medicine and throughout his undergraduate career. As a result, he was very positively positioned, even as a student, as a future specialist in this area. His strong identification with that world was already well established;

> *'I already feel like I am in that community you know. I already feel like I can go up to someone and talk to them about something that I am familiar with and I think I know how to ask a good question.'*

John did not submit any audio-diaries. His second interview was conducted 12 months after the first, as he was coming to the end of his intern year. Over the course of the year, John had had many salient experiences, which, at the time of re-interview, had led to a major re-evaluation of his future as a doctor.

Like Valerie, John authored the transition to working in a hospital as difficult.

> *'I'd say the first two months were just a living hell, I'd say yeah, they were absolutely awful….you are talking about a 17 hour a day, every day. There were lots of other additional strains, like we were doing a lot of overtime and they weren't paying any of it. And financial pressures were huge and like, arguing with the bank and I mean it was just an awful lot'*

In this quote, he authored being powerless. He felt squeezed from all angles, for time and for money. He authored himself as being at the mercy of the bank and of the health system, which demanded these working hours but did not reward him. After a few months in the job, John had become acutely ill and was diagnosed with a chronic condition. His negative stance towards the health system had been further deepened by this experience.

> *'I was very, very sick….. it kind of, it completely opened my eyes, I mean, I think (the condition) is probably the best thing that has happened to me so far…I became very angry with the system .. the system is very unsupportive … I mean, the call shifts and everything are a real pain'*

John referred frequently to 'the system', without positioning any particular individuals as responsible for that system. He did not direct his frustration, for instance, at any of the senior doctors he had been working with during this time. John authored feeling pressure to return to work quickly to relieve a colleague who was covering for him.

> *'They never replaced me, so she just had to work pretty much nonstop until I came back. So I went back after 3 days because she was doing, she was doing*

> *80 hours in a row, kinda thing, you know. … I mean that's the pressure the system puts on you..'*

The diagnosis of a chronic condition also caused John to re-evaluate himself.

> *'You are used to being, fairly bullet proof, you know, more bullet proof than most people, a little harder and more resilient than most maybe and then you know, this is landed on you….'*

As John had recovered from the acute phase of his illness and had continued to cope with on-going treatment he authored mixed experiences. He had worked in his specialty of interest with a doctor he found to be an excellent role model, but he authored the trainee doctors working in that specialty as unhappy.

> *'I was very struck by how many of her staff weren't happy, you know with the system, and, like just how brutal it has gotten for them, because …. there is no kind of guarantee of any job, …. you can be sent anywhere in the country'*

As a student John had encountered voices expressing similar frustration with the health system and postgraduate training structures in Ireland; however, he had authored a different stance towards them at that time.

> *'I try not to tear the heads off these petulant 25 year olds who tell me 'Oh, as soon as you qualify, leave the country.' I get that once a week at least by some registrar … That is a terrible attitude to have and I think that is why I will focus as much as my training in Ireland as I possibly can.. it's about*

realizing that in order for someone to finally get the chance that I have

gotten .. the people who get the chance need to stay.'

Over a relatively brief period John authored himself as far more empathic towards

those who were disenchanted with the local context. He had moved from having a

clear stance towards those who leave Ireland to work elsewhere, to ventriloquating

their perspectives.

None the less, John had continued to figured his own future in that specialty and

had interviewed for a training post. This is something he had anticipated and had

worked towards for several years, yet he authored it as a disappointing experience.

'It was obvious from the start there was no competition, It was obvious they

weren't going to fill the jobs, it was obvious they had absolutely no interest, in

anything we had to say… I came into the room, and I sat down, and they went

through kind of, ridiculous questions and I left and I'd say I was in the room for

less than 20 seconds you know, of engagement, I mean it was literally like 20

seconds per person, and then out, it was awful…'

John's realisation that the training posts were not valued by others, and that there

was no great achievement or value attached to being offered one, was further

exacerbated by the lack of interest from the interview panel, who he authored as

not valuing the work he had done enough to ask about it. John was offered the

post. However, together with the voices of trainees he had encountered in this

specialty and with the shift in his self-evaluation brought on by his illness, he authored the experience of the interview as leading to a major decision.

'I was thinking to myself, I really wanted to do this, you know, I mean, I wanted to do this, so much, you know, I was looking forward to it, and I just thought, it's not going to give me what I want, you know….. I mean, my standards for what I want in a job, are one that it offers me a healthy lifestyle, you know, and that's, that's, that's more important now, than obviously with the illness, I mean, previously I would have been kind of, ah whatever, give me the rota I'll work it, you know, but now, I'm kinda like, no I won't do it, you know, .. now I'm just not going to do it,'

At the time of the second interview, John's figuring of himself as a future doctor was vague. Over the course of the year between interviews, he had begun to develop some business interests with a family member. He authored business as offering him greater possibilities and fewer constraints than Medicine.

'I will stay as a doctor, work as a locum, for the year, re-evaluate in about six months and see what the story is. I'd say I'll always be in medical practice, it's just to what extent, and doing what, I mean I'll definitely go on and do a training scheme. I mean with the business stuff, I feel like I can make great progress…..'

6.4.2.2 Brendan

Brendan had been in an internal medicine training post at the time of his initial interview.

> *'I feel a certain buzz or energy from staying in hospital and doing hospital medicine. Don't get me wrong there are times you are standing at 3.00 o'clock in the morning on call and you are going 'GP would be very nice (laughs) about now' but at the same time there is something about the acute medicine of it all and you are in the hospital and it seems very appealing for a while anyway…'*

Here he authored what had drawn him to hospital medicine, but he also referenced GP and the issue of on call. The addition of 'for a while anyway' hinted at some doubts as to whether hospital medicine would always be as attractive to him. Brendan was a graduate entrant to medicine and his authoring of his career choice was multi-voiced, including voices relating to age and the length of medical training, the opinions of his girlfriend and his desire to have a family.

> *'I am not coming out as a 23 year old intern. I am coming out as a 30 year old intern. I want to have a family, I want to have kids. I mean there is a lot of my fellow SHO's who aren't even thinking about that …'*

> *'Do we choose something that we both have a common pathway or should we both pursue what we like and try and work it out that we're together?'*

A year later, Brendan was still in a training post in Internal Medicine, but had made the decision to enter GP. He had secured a post on a training scheme. In an audio-diary entry he authored this change.

'I made this decision, I suppose as a shift slightly from hospital medicine to GP. I suppose for a number of reasons, one is I am touching 33 soon. The idea of being a medical registrar in the A & E at 4.00 a.m. at 40 odd years of age didn't quite appeal to me and I suppose quality of life as well is something I factored greatly into the future. In the near future hopefully get engaged, and get married and have children and the idea of uprooting them every six to 12 months to move them around the country wasn't quite appealing to me.'

Brendan played down the magnitude of this change in direction by describing it as a 'shift slightly', but again he drew on his age, the on-call and family and relationships in authoring his choice. He was drawn to aspects of GP that he has experienced in hospital settings also, such as for example continuity of care.

'The continuity of care is something the dialysis has really emphasised to me the continuity of meeting the same patients over and over again across several days, weeks, months and it is something that quite appeals to me.'

He also authored his experience of working in the Irish health system as having played a part.

'I have been quite disillusioned within hospital medicine for the last number of months, certainly with continuing cut backs and pressures for beds,

pressures with the same patient coming in and out because unfortunately the community care isn't there anymore due to cutbacks. I suppose the other thing which is always dwelling on every doctor's mind, if they stay in the hospital, is the continuing …I feel the fatigue and the disillusionment would get to me eventually.'

In his final audio-diary entry, Brendan was on his first day as a GP trainee. He had worked in Oncology in the interim and had developed an interest in pursuing some further training in palliative care as part of his GP training. In the following quote, he authored his hopes for the future in GP and what he would miss about hospital medicine.

'I hope working as a GP I can make a small difference in some people's lives…. That is something I am looking forward to. …In 10 years time I would love to have my own practice or be part of a practice with a partner but putting my own kind of stamp or feeling on what it is to be a GP and how to run a practice. I would like to see myself educating as well and taking both medical students and GP trainees. I won't lie to you I will miss the camaraderie of hospital medicine at times; there is something about being part of a team as opposed to being in a one or two GP practice. The banter at times on call we are all in this together and sink or swim kind of attitude we either all sink or we all swim. I am going to miss that a little bit I think but …I have no regrets about my decision to move into primary care I think it is always what I have wanted to do.'

Brendan's decision had not been entirely clear cut. His authoring of the world of hospital medicine here is an affectionate, if perhaps nostalgic, one. There are aspects of that world which he enjoyed and with which he forged emotional connections. When taken alongside his earlier comments about disillusionment and working hours, we can see the complexity of his stance towards it and the multi-voicedness he had encountered in making this decision. He authored himself as confident that primary care was the best choice for him, but this was interleaved with some doubt, as he signed off humorously stating

> *'Check in with me in 3 months time and I will tell you how it is going. Maybe it is the biggest mistake ever…but I don't think so.'*

6.5 Discussion

In this section I will synthesise the principal findings of this study and discuss its strengths and limitations. The relationship of the findings to existing published research and its implications for theory, for future research and for practice will be addressed in Chapter 8.

6.5.1 Principal findings

This study has shown that the development of identity within a specialty specific cultural world was not a time-stamped event. Rather, the dialogic process continued, as Bakhtin described, in an open-ended fashion. Participants authored themselves as particular kinds of doctors day to day, minute to minute in contexts

of medical practice. They were positioned in the Figured Worlds of their choice as they continued to learn the values and possibilities of those worlds. They orchestrated new voices arising from these day to day experiences, re-wording them and integrating them with their internally persuasive discourses, to craft responses in respect of themselves within that world. Participants' responses varied over time. For some there was a deepening identification; for others, a shift of stance towards dis-identification occurred.

At the outset of the study, Michelle had already spent a number of years training as a surgeon. She was immersed in that world and identified with it. Yet her audio-diaries revealed that she had experienced on-going struggle with aspects of her current and future identity as a surgeon. Her account of deciding to leave work, when she felt pressure to stay, was richly heteroglossic and she had difficulty orchestrating a stance on the issue. In her final interview, she authored the issue of work-life balance more effectively and figured herself as a future breast surgeon because of the possibilities of that world in respect of work-life balance. To the observer, Michelle might have looked like a trainee straightforwardly pursuing her chosen career path, but she authored a different account of herself, one marked by struggle and difference.

John's evaluation of himself and his future in medicine changed very significantly between his two interviews. Over the course of a year, the position from which he

made meaning of the world shifted. He moved from being a student in full health, to a working doctor living and working with a chronic medical condition. This change in position meant that John was addressed by the world in new ways. Bakhtin posited that we each occupy a unique space in the time-space continuum. No one else can occupy that same space and, therefore, no one else can ever be addressed by the world in exactly the same way as oneself. Over time, by definition, our position within the continuum changes, and we are addressed in ways that are different to before. For John, there were new voices which he had made his own, voices about health and work-life balance which had not been prominent in his initial interview. These were voices about the health system and his experiences of feeling unsupported with his illness. They were also voices about what this illness meant for him in a broader context. His experiences of the health system as a working doctor led to a shift in attitude towards unhappy trainee doctors. Furthermore, the positioning he experienced, when he went for a much anticipated job interview, added to the negative voices in respect of his future in medicine. At first glance, John's decision might seem like simple cause and effect. He had developed an illness and hospital medicine was not going to suit him. However, he authored a choice which was far more complex, nuanced and conflicted.

Brendan's change in stance was more subtle than John's, and had been signalled in his first interview to the extent that he had always authored his age, work-life balance and on call as contributing to his career choice. In Brendan's case it was not so much that new voices had emerged to address him over time, but that voices

already part of his intra-mental functioning became louder and were differently orchestrated, contributing more substantially to his internally persuasive discourse than previously. As Holland et al state;

> *'Sorting out and orchestrating voices is much more than sorting out neutral perspectives in some rationalist's argument; the voices, after all are associated with socially marked and ranked groups...and even with particularly potent individuals.'* (Holland et al. 1998, p.183)

Participants authored themselves as agents exploring career possibilities. Both Valerie and Conor actively sought opportunities to learn more about the Figured Worlds to which they were drawn. For Conor this was important, as the undergraduate curriculum did not provide an opportunity for him to enter the Figured World of pathology. While Valerie's dis-identification with the world of hospital medicine strengthened her figuring of herself as a future GP, she also actively arranged to spend time in General Practice to learn more about that world and its possibilities. In both cases, the Figured World to which they were drawn motivated them to action towards realising their future selves within that world. Individual agency was, however, constrained at times; for example, Valerie authored her student debt as something which might, in the future, force a decision to work abroad. This was not something that Valerie had figured for herself and at the time of final interview it remained an unresolved issue, a voice with which she will struggle to orchestrate with her desire to settle down as a GP in Ireland and start her family.

All five accounts demonstrate the open ended nature of identity and how it continues to unfold over time and in practice. As we move through different Figured Worlds and encounter new discourses we appropriate or reject them; we incorporate them into our internally persuasive discourse and we sometimes shift course as a result.

6.5.2 Strengths

The trustworthiness of my findings is supported by the alignment of my epistemological position, the research question, methodology and the methods employed. My approach has been underpinned by a strong theoretical foundation. I have been true to the constructionist orientation of the work through the use of reading, re-reading and constant comparison. The interpretations of the texts were co-constructed with TD, who is an experienced discourse analyst. Data was collected from more than one source, via both interview and audio-diary and participants were selected to represent a breadth of experience. Reflexivity has been inherent in my approach. I have kept a reflexive diary throughout the duration of the study, to monitor my own impact on the research process and findings.

6.5.3 Limitations

This study was conducted within a social constructionist paradigm and its findings are subject to the limitations that apply within that paradigm. Discourse analysis is

always an interpretation of an interpretation (Gee 1999) . It does not claim to reflect an independent reality and there is always the possibility of alternative interpretations. Furthermore, my findings are situated within a specific context.   I do not make claims of generalizability of my findings beyond that context. However, the theory rich nature of the study does support transferability to other situations. The provision of clear information regarding the research context, methods and my own role therein, will allow readers to evaluate the fruitfulness of my findings, in terms of applicability to other contexts, and for future research.

6.7 Conclusion

A decision to pursue a particular career trajectory does not represent an endpoint in the development of career identity. Stance towards oneself as a particular type of doctor continues to emerge from an on-going dialogic process in which daily experiences, imagined future selves and a range of wider discourses have a voice. In this study Figured Worlds and Bakhtinian theory have drawn attention to the open-ended nature of career identity casting the process of career choice in a new light, providing an account of confirmation and dis-confirmation of choice over time.

Chapter 7

Making Worlds in Medical Careers

'The gleam of an heroic act

Such strange illumination

The Possible's slow fuse is lit

By the Imagination'

Emily Dickinson (1999)

This study was undertaken during a period of flux and uncertainty in Ireland, which was reflected in upheaval in the Irish healthcare system. The country was in deep recession. Morale amongst doctors had plummeted as healthcare spending was slashed and recruitment halted. For trainee doctors, the imagined future of a rewarding and valued working life was not playing out in the everyday practice of medicine. In this chapter I focus on a broader career related identity; that of trainee doctor in Ireland. I explore the ways in which figuring of self as a successful trainee doctor, day to day experience as a trainee in practice, and the wider social and political context came together in the imagining of new possibilities for trainee doctors in Ireland.

7.1 Making worlds

According to Holland et al (1998), the Figured Worlds associated with particular social practices guide and motivate participants in ways that re-produce those Figured Worlds through practice. For example, doctors interact with each other and with patients in accordance with the recognised ways of interacting within the Figured World of Medicine. These interactions then feed back into the Figured World, which is a distillate of day to day reality. As it stands, this account does not allow for change within a Figured World, or for the development of new narratives and possibilities therein. Yet, we know that cultural worlds are not simply replicated over time. We have seen in previous chapters that the emergence of identities in practice is marked by individual agency, struggle and contest rather than an unproblematic process of reproduction.

Holland et al have described Making Worlds as the process through which Figured Worlds change. Making Worlds is a fourth context for identity, or way in which individuals make meaning of themselves in addition to Figured Identity, Positional Identity and the Space of Authoring (Holland et al. 1998, p.235). As an illustration of Making Worlds, Holland et al describe the self-authoring of women in rural Nepal. These women had appropriated the Figured World of the life path of a good Hindu woman during childhood. They framed themselves and their lives within its narratives and authored their emotional attachment to its values.   However, their day to day experience as women in that Figured World was as victims of injustice and inequality.   This positional identity and the embodiment of the feelings

associated with it was another 'voice' in their self-authoring. This voice was in tension with their narrativised or figured identity, which led to what Bakhtin referred to as a hybrid expression of identity, where two conflicting voices are brought into direct contact with each other (1981, p.305). In the context of wider political change in Nepal, a local festival provided a public space for the expression of this positional identity through political songs which criticised the government's treatment of women and called for change. These songs allowed the imagining of an alternative life path for women. These women authored a new figured world of being a woman in Nepal which had a dialogic relationship with the socio-political context; it was shaped by that context and also acted to shape the context (Holland et al. 1998, p.253).

Holland et al draw on socio-historical perspectives to account for change in Figured Worlds and everyday practice over time, linking intra-mental processes, local practice and wider social, political and economic struggle.

> *'The particular inspiration that we draw from the socio-historical school is its attention to continuing adjustment, reorganisation and movement'* (Holland et al. 1998, p.45)

Holland and Lave (2009) further develop this idea, describing how social practice theory, such as Figured Worlds, both extends and draws from Cultural Historical Activity Theory (Engestrom 2009; Yamagata - Lynch 2010). Both theories are underpinned by the Vygotskian description of semiotic mediation (Vygotsky 1981;

Wertsch 2007); however, Figured Worlds places emphasis on the production of identity, and introduces motivation, emotions and agency to social practice, while Activity Theory, as elaborated by Leontiev (1981) and Engestrom (1993), foregrounds conflict, tension and difference in historically constructed social, political and economic contexts (Yamagata - Lynch 2010).

Drawing these two theories together, Holland and Lave (2009) draw particular attention to the contentious nature of local practice and the conflicting perspectives within and between those participating in practice. These conflicts and tensions can lead to change in existing practices and Figured Worlds, and the generation of new worlds. In the case of the Nepalese women, there was conflict between the narrativised identities of the life path of a good woman and the day to day experiences of the women, who were positioned as inferior to men and whose agency was limited by their position. Their self-authoring was inconsistent and contradictory. To quote Holland et al;

> *'they arrived at a point where they both embraced and rejected the expected life path'* (1998, p.223).

It was the particular socio-political context at that time, however, which allowed these local struggles to enter a public space in a new form, as political songs imagining a new life path for women. Holland et al describe this shift below;

'Their specific visions have been publicized, moved from the local highly circumscribed, conditions of their original production to a broader purview, their audience grown from a coterie to a true public.' (1998, p.249)

7.2 Social, historical and political context

During the time that this study was undertaken, doctors in training were the focus of what Gee (1999, p.55) calls a national, 'big C Conversation' in Ireland. This Conversation created a social historical and political context for self-authoring. Gee defines such conversations as;

'the public debates that swirl around us in the media, in our reading and in our interactions with other people, not any one specific discussion among specific people. On certain issues (e.g., abortion, smoking gambling, feminism, affirmative action, etc.) you know what the 'sides' are, how they are talked about, and what sort of people tend to be on specific sides.'

Working conditions, quality and structure of training and long term employment prospects of Irish doctors became a hot topic nationally in early 2010, when hundreds of non-consultant hospital doctor posts were left unfilled (Jordan 2010; Freeman 2011). This crisis brought into focus the numbers of graduates of Irish medical schools who leave Ireland, temporarily or permanently, to train and practice abroad. Very few objective data were available to establish the scale of the 'exodus' or to explain the reasons for it (Bennett et al. 2014a); however, the

medical and national media largely attributed the phenomenon to poor working conditions and unsatisfactory postgraduate training (Jordan 2010). Within this conversation, trainee doctors were afforded both sympathy and approbation. They were seen both as victims of a dysfunctional health system being driven out of Ireland and as sun seekers fleecing the tax payer and taking their state-funded expertise to warmer climes (Freeman 2011).

Trainee voices were also heard. They raised concerns about lengthy working hours, patient safety and their own wellbeing (Campos 2013; Fearon 2013; Campion et al. 2013). Despite the European Working Time Directive having been established in Irish Law since 2004, it had not been implemented. Trainees questioned the quality and structure of training and the growing uncertainty in regard to their future prospects (MacCraith 2013; MacCraith 2014). In 2012, pay for new entrant consultants was cut by 30% , which resulted in a dramatic fall in the number of applicants for what would previously have been highly competitive posts. By 2014 there were many unfilled consultant posts across the country (Wall 2014). Failure to resolve the European Working Time Directive issue led to industrial action on the part of non-consultant hospital doctors in late 2013 (Hunter 2013).

It was within this context that the participants in the study authored themselves as trainees pursuing a career trajectory. The complex inter-relationship between trainees' figuring of themselves, the ways in which they were positioned in their

daily work and the public debate which swirled around them is the focus of this study.

The research question for this study was;

> *How can conflict and tension in practice lead to authoring of new possibilities for career identity?*

7.3 Methodology

The conceptual orientation of this thesis is discussed more fully in Chapter 2 (see page 58). In the current study, I have sought to bring theory into direct transaction with empirical data to shed light on possibilities for change which emerged from the complex inter-relationship between identity, daily practice and the wider socio-political environment. To that end, I have applied Figured Worlds theory (Holland et al. 1998) and a further elaboration of that theory described by Holland and Lave (2009). In keeping with Holland et al's (1998) discursive approach, which is underpinned by Bakhtin (Holquist 1990; Bakhtin 1981), Gee's tools (1999) for 'meso-linguistic' discourse analysis have been a sensitising influence in my approach. Skinner's methodological exemplar of Bakhtinian discourse analysis has also been a sensitising influence (Skinner et al. 2001). This study is social constructionist in orientation, a paradigm which emphasises the way people make sense of the world through language (Burr 2003) with which the choice of discourse

analysis aligns. Participant interviews and audio-diaries were used to capture construction of identity through discourse.

Within the social constructionist perspective, research is viewed as a co-production between the researchers and the study participants. Researcher reflexivity is a key element of this approach and, therefore, I have kept memos and a reflexive diary throughout the study relating my role in the production of the data collected and explicitly acknowledging ways in which my personal perspective may have shaped the research (Burr 2003, p.157). An iterative process, consistent with a social constructionist approach, was undertaken to co-construct an interpretation of the collected data in respect of the research question.

7.4 Method

7.4.1 Sampling

Of the original eighteen participants in the studies described in Chapters 5 & 6, eight worked as trainee doctors during the course of the project. I undertook a secondary analysis of interviews and audio-diaries provided by these participants in respect of this study. Details of sampling, recruitment, data collection and ethics have been provided in Chapters 5 & 6 (see pages 147 & 182).

7.4.2 Data analysis

Analysis in relation to this research question was conducted separately to those in the previous two studies. TD and I read, re-read and independently listened to the interviews and audio-diaries. I reflexively identified passages relevant to the research question for closer analysis. These passages were considered in light of the whole data set relating to each individual so that they remained embedded in the totality of that person's self-authoring. In the closer analysis, I specifically sought instances of figuring, positioning, self-authoring and making worlds and examined the manner in which these elements were combined. I also sought instances of hybrid or contradictory self -authoring and self-authoring using public discourses relating to trainee doctors. I offered an initial interpretation which I then debated with TD. Differences were resolved by returning to Figured Worlds theory and Gee's tools. Analysis moved to synthesis, as common features were identified within and between participants. We used a process of constant comparison, moving back and forth between, individual passages, the totality of each individual's data and an evolving interpretation informed by Figured Worlds theory.

7.5 Results

Details of participants in this study are provided in Table 7.1.

ID	Career Stage	Specialty	Gender	Years post-qualification	Sampling Strategy
Linda	Basic Specialist Trainee	Medicine	F	2	Gender/ Stage of Training/ Location
Brendan	Basic Specialist Trainee	Medicine	M	2	Gender/ Stage of Training/ Location
Margaret	Registrar	Obs & Gynae	F	4	Gender/ Stage of Training/ Location
Michelle	Registrar	Surgery	F	6	Female Surgical Trainee
Cian	Basic Specialist Trainee	Medicine	M	2	Male interested in GP
Valerie	Intern		F	1	Female Graduate Entrant interested in GP
John	Final Year Student/ Intern		M	-	Graduate Entrant
Cathy	Higher Specialist Trainee	Palliative Care	F	13	Senior Trainee

Table 7.1 Study participants

Participants authored themselves on trajectories in a Figured World of Medical Careers. Within this World, there were narratives of the typical trajectories of career success. Participants authored working in clinical environments in the role of trainee as a core element of this trajectory which moved them towards becoming senior doctors. Participants figured successful career paths as being characterised by impressing the right people, networking and making connections. They referenced valued actions and outcomes, such as gaining exposure to the right training, spending time undertaking research and publishing papers, and spending time working outside of Ireland. Integration of a successful career trajectory with family life and motherhood was also part of participants' narratives and figured futures. Participants evaluated themselves and their progress within this Figured World and were motivated to action by it.

Participants authored being negatively positioned by others in the workplace. These daily experiences were orchestrated with their figured identities as successful and valued professionals on a forward career trajectory. Several participants demonstrated hybrid self-authoring, bringing the typical narratives of career success into conflict with their negative positional identities. They authored a discrepancy between their figured and positional identities. In a dialogic process, participants' self-authoring included elements drawn from the national Conversation about trainee doctors. The national Conversation, in turn, provided a public space for the expression of perspectives normally confined to local practice and intimate or intra-mental terrain.

Quotes have been selected to tell the story of the emergence of change from local conflict and tension brought into public spaces. Here Linda authored the expected career path of a successful trainee in hospital.

> *'I suppose the obvious bad is that Irish trained SPR's don't really get the consultancy posts like straight up, and that is an obvious bad… But the good is that there is so much competition for Higher Specialist Training posts. You generally do a year or two as a medical Registrar before you become a specialist Registrar and I actually think that is good. I think people should do that before they fully commit to a specialty anyway, so that doesn't really bother me…. But I am sick of intense competition and having the best research and the best audits and the best presentations, just to get a training scheme that you are probably not going to get a consultancy post*

with anyway….. So you know, there is so much pressure on, and audits and all this rubbish and like you know how many people do research that they actually really care about? I would say very few.. and you do research, you tick a box and you have something you can say that you did better than other people and that really frustrates me. I think that is rubbish.

I think I can be quite a good clinical doctor for the rest of my career without doing stupid research project talking about stupid cells or something. I am not research orientated whatsoever and that is a huge negative in medicine you know.'

In the first five lines of this quote, Linda authored a typical career pathway in hospital medicine in a relatively detached and evaluative manner. She wove concerns about poor longer term career prospects with the seemingly contradictory statement that training posts were competitive. She initially authored the delay in getting a training post as a positive aspect, providing an opportunity to take time to come to a specialty choice. There was a change of tone, however, when she then returned to the theme of competitiveness and, in a passage marked by strong emotion, she delivered a clear authorial stance on what is expected of her and the way she felt positioned as a trainee on a career path. Re-iteration of the word 'best' served to emphasise the pressure she felt and was brought into direct conflict with the idea that the 'prize' of an Irish training post was not worth the struggle. Research is a marker of career success but Linda viewed this negatively, calling into question how research is connected to being a good doctor. Her repeated use of 'rubbish' and 'stupid' and, in particular, her reduction of research to 'a project

about stupid cells or something' evoked a colloquial non-medical voice as she dis-identified with this aspect of Medicine. In the final sentence, Linda evaluated herself through the eyes of the other as an individual trying to progress in the world of medical careers. She knew that her feelings about research might count against her in the future. Linda's self- authoring was multi-voiced; while she figured herself as a good doctor in the future, she contested her positioning as someone who must complete what she perceived to be pointless exercises to reach her desired career goal.

Valerie also provided a hybrid account of herself as a doctor following the typical pathway of a successful trainee. She talked about her application for a training scheme in General Practice and authored herself as carefully ensuring that her CV would score as many points as possible, demonstrating her emotional engagement with following the expected path to success.

> 'So there would be points for having a published paper and higher points if it is a peer reviewed journal, there are points for having a presentation, points for having completed an audit, points for doing GP placements and doing college and after. Points for different SHO jobs and things like that so there is lots of little things you can do to increase your chances.'

> 'So I put a lot of effort into the application … I did 4 different days with GPs to make sure that I would have that experience of doing that time for the application. I put down different things like I had done my GP research

project and things like that into the application… I got my boyfriend to proof

read it a million times and perfected exactly what I wanted to say, and why I

wanted to be a GP and I was really happy with the application myself'

Unlike Linda, Valerie did not contest these requirements as part of the trajectory of a successful doctor, nor question their relationship to being a good GP. As discussed in previous chapters, Valerie strongly figured her future in General Practice and embraced the process of achieving it. In her everyday work experiences, however, she authored being positioned by others in ways that starkly contrasted with her figuring of herself as a good trainee progressing along the career trajectory. Having previously worked in a variety of other jobs, Valerie authored the world of medicine as one in which trainee doctors were not valued or respected.

'I have been a lab full time research assistant .., then I was a teacher .. and

then I was working in a Pharmaceutical Company and in all 3 of those jobs I

was treated with more respect than I have been as an intern; by nursing

staff, by administration staff, by secretaries and by doctors above me in the

hospitals, and it is really rude to be honest.'

She brought her history-in-person, as someone who was deserving of respect from colleagues, to the clinical environment. She dis-identified with the rudeness of others. In a strongly embodied account, below, Valerie went on to author the lack of support for trainee doctors while on call and the uncomfortable physical conditions they had to endure.

'There is one doctors' rest room ..and it's just extremely dirty. For some reason the cleaning staff in the hospital don't seem to clean this room, it seems to be up to the doctors to clean it themselves. Any doctor that uses it is on call at night, they are flying around the place, they are in and out, they might be eat something and they might throw it in the bin, but there are just piles of dirty cutlery and the room kind of smells so that's just really unpleasant and the food in the fridge would be going off and everything and it just really unhygienic and not a nice place to be.'

Valerie authored this failure to value trainee doctors by providing them with a clean rest room as an indicator of the degree to which they were valued by the hospital management. She emphasised how hard they worked, 'flying around', 'in and out'. Her disgust at the condition of the room, the smell of rotting food and the dirtiness, and her anger at this treatment were audible.

Valerie authored trainee doctors as an abandoned group; their cause was something no one cared about because they worked in particular posts for short periods. Her repeated positioning by the hospital system and the people she worked with left her in no doubt as to her place in the hierarchy.

'I think that there is nobody standing up for the Junior Doctors because people just move on, next job now, and I don't care about the interns now, I don't care about the SHOs … I just think it is bad. You are really at the bottom.'

During this time, Valerie authored her growing awareness of the wider 'conversation' around being a trainee doctor. In the quote below, she authored her growing understanding of the wider historical context for her own experience of medicine at a local level. Early in her intern year there had been a national trainee doctor strike. She authored how the public expression of dissatisfaction at the daily realities of being a trainee doctor shaped her own thinking about her career.

> *'I went out on strike as well and I joined the doctors' trade union, and I guess I felt initially that I didn't really know a lot about it and didn't know if I should be going out on strike, but I joined a Facebook group and I was reading a lot of the posts from junior doctors around the country and there seemed to be a lot of anger out there. I picked up a lot of the issues from reading those posts, people writing posts on it and informing everybody …. sharing their opinions and things like that and from what I can see the problems that are there at the moment with poor support you know understaffing, the long hours, it's just been going on for years and I don't know whether the strike is going to make any difference to it. People don't seem too hopeful about it, but it will be a long road but hopefully things will change. All of this does definitely turn me off considering a career in hospital medicine in Ireland. It looks like most Irish doctors, junior doctors who have been unhappy with the situation, have left and emigrated to Australia, New Zealand, Canada or they have gone down the GP road.'*

The relationship between the identities of trainees and the public expression of perspectives on the topic was dialogic. For example, the public discourse was a voice in Valerie's self-authoring, while through social media and strike action, Valerie's daily experiences, along with those of her peers, moved from the intimate and local context to a broader landscape and became voices in the national Conversation. In this public arena, trainees' voices were brought into direct contact with government, management and the wider public. Valerie authored the difficulties in the workplace as longstanding and she provided an ambivalent perspective on whether change was likely. She authored the choice to work abroad as causally linked to the working conditions in Ireland, a perspective which was widely expressed at that time, despite a lack of empirical evidence.

In the immediate aftermath of the trainee doctors' strike, Valerie authored herself as trapped into working long hours by the expectations of those who controlled her progress along the career path. She could not say no; she was positioned as powerless. The physical sensations of tiredness and headache and the frustration of her lack of agency were authored strongly in this passage.

> 'You were expected to work even though doctors went on strike specifically
>
> not to have to do this but the consultants are still deciding that they want us
>
> to come in and I can't exactly say no to somebody who is going to be writing
>
> out my reference. So we are coming in and it is exhausting and tiring and
>
> you have a headache and your eyes are closing on your job and so it is
>
> something that I am not happy with and I was just thinking you would be

insane to stay in this career; how do doctors ever put up with this but they

have'

In the last two lines Valerie summed up an apparent conundrum; progressing along a medical career path means being undervalued and mistreated, and yet trainee doctors, in general, are motivated to endure being positioned negatively in order to realise a figured identity of career success.

This was echoed in Michelle's authoring of her own decision to stay in Ireland to train, despite the difficulties on the ground;

'This year we have had a number of run-ins with salaries and manpower in the hospital, and memos going around just kind of outright saying, 'Actually, we're just not going to pay you for hours worked.' You are kind of sitting there thinking 'Why am I doing this to myself?' There have been times this year where I have definitely been considering up and leaving as a result of that … And it is very frustrating you know and then they turn around and say (when you are a consultant) we will pay you 30% less than everyone else that you will be working alongside and definitely a lot of people that I have spoken to have just decided that is it no way and they are looking at going abroad. Which makes me sound crazy for applying for the SPR in Ireland (laughs) but I suppose my major problem is surgical training in Ireland is still a very closed shop and there are not a lot of places and there are not a huge number of Consultancy posts and the consultancy posts go to people who

have trained in Ireland and that is the way they go and they actually go to people who have gotten on well with someone else who works in that city in Ireland. And while I would go abroad for a while I suppose deep down I have always seen myself ultimately settling in Ireland and I don't know, maybe I am mad because at times you look around and you say why? (laughs)'

Michelle figured her future self in this quote as a surgeon working in Ireland and 'settling' there, which connotes a broader figuring involving self in the worlds of family and friends. She authored the path to achieving this goal as a difficult one and even the ultimate goal itself, of a consultant post, as a compromise in which she would be positioned as less valuable than her peers by a lower salary. None the less, such was her emotional attachment to her figured identity, her future self, that she authored herself as committed to continuing on the expected career path. She drew on the voices of other trainees, however, who figure an alternative possibility of leaving Ireland to work elsewhere.

Whilst Valerie's experience on the ground resonated strongly with the themes of the national conversation, Brendan did not share her day to day experiences. He did, however, author himself as negatively positioned as a junior doctor by perspectives expressed in the media. In this quote, he authored the misperception of junior doctors and, echoing Valerie, the under-representation of their voice in public spaces.

'Everybody gets tarred with the same brush in the media…. an intern and a Consultant, they are all doctors, they are all making money, you know? I think a lot of stuff gets left out. My friend wrote an excellent piece in a national newspaper recently and I know it caused a bit of a stir.. …He said what job would expect someone to stay in and work 5 extra hours and say by the way you are not going to get paid for that but you have to do it …he said you wouldn't get a nurse (doing that) because they have a very strong voice and people identify with them. I think from a medical point of view there are very few voices being heard from the Junior Doctors … when it is its portrayed as you are all deserting the country….. there was an article I think last year 68% or some big figure of all our doctors who we have trained have left the country you know and nobody addresses the reason why they are leaving the country.

I mean I think given the general state of the economy they are looking for bad guys, I think it is just a national psyche, everybody loves a good moan at someone who is perceived as doing better than you. I have to say if you walk up and down the hospital here today and talked to Junior Doctors I don't think they are in it for the money most of them I think they are there to do a job and they have sick patients and we actually have a vocation.'

Like Valerie, Brendan authored junior doctors as being undervalued; they were not paid for the work they did, they were accused of deserting the country and their desire to deliver care to patients was unappreciated. He authored junior doctors as

victims of injustice, neglect and misapprehension. By entering the conversation about trainee doctors in a public arena, Brendan authored his friend as having 'caused a bit of a stir'. This pointed to the opportunities for change that come from the public expression of trainees' voices. The space for their perspectives to be heard was created by a wider socio-political context in which junior doctor posts had become difficult to fill and addressing 'doctor issues' had become a political imperative.

Emotional engagement with and salience of the national Conversation varied between trainees. It was most prominent in those who also authored strong experiences of negative positioning. John who, as outlined in a previous chapter, had authored a decision to take a break from Medicine and to pursue business opportunities, related in part to negative experiences in his day to day work, was amongst those for whom these issues were most salient. His authoring of being a trainee doctor was full of references to the national Conversation and he had contributed a trainee voice to that conversation on several occasions. In the quote below he authored his perspective on creating change by bringing local struggles to public spaces. When a colleague was rostered to work long hours John took action.

> *'There's only one way to do it, you know, so I went straight to the top and, wrote an open letter to the Minister for Health, the head of HIQA, Health & Safety Authority, the HSE and the head of the Hospital Group, and within 24 hours they had stopped it, and they put an extra doctor on the team….I blew the whistle fairly hard and fairly loud, you know.'*

John figured a new world of medical training, but one that needed to be utterly transformational. Asked if he regretted entering medicine as a career he responded;

> *'Absolutely not, no, it's fantastic, I'm delighted I did it because, I wanted to be a doctor and I'm glad I'm a doctor and it's a fantastic job, it's fantastic, I love every minute of it, I love the idea of helping people, and, I know that's a cliché thing, that you can really only say to another doctor, but like you know, it's a nice thing to be able to do. But when, what the system expects of you is everything, you just kinda think, it's not for me. You know I mean, I feel, like ethically … you're actually going to be taking your skills set out of the system, that's like treason, and then I thought, well you know, these guys watched me have awful illness, and watched me work 100 hours a week and thought it was ok. So you know, I have gone full circle, I mean, I will try everything I can to pull the system down. I'm thinking about doing to try and pull it down, the whole thing, because if you pull the whole thing down, well then maybe, they'll start filling spots, you know?'*

John's self authoring in this quote was a hybrid of two voices. On the one hand, his figured identity as a doctor remained strongly positive. He had an emotional attachment to that identity and the values associated with it. On the other hand, his experiences of not being valued or cared for while working as a doctor were a

strong counter voice. He authored the possibility of a different experience for trainees, a new Figured World, which would address the difficulty in recruiting doctors to training posts.

Over the course of the study, change did begin to occur, particularly in relation to working hours. This was reflected in Cian's authoring of the training environment. He had returned to study medicine as a graduate entrant. Cian was not oblivious to the challenging aspects of working in hospital medicine, but he authored the day to day job as enjoyable and outweighing the negative aspects.

> *'I am glad I came back to do it. I quite enjoy the actual medicine of it; there are parts of hospital medicine and politics and how hospitals work that frustrate everyone but the actual clinical medicine and day to day job or treating patients etc. I still quite enjoy and I am glad I came back to do it. I think it was the right decision for me to do.*
>
> *This time last year I was working 36 hour shifts, now it's down to 24 hour shifts. It's great knowing when you go to work that you can leave the following morning at 9.00 o'clock and that was it. At X hospital we were on 13 hour days, which is also great, you are not as tired, you are not as lethargic, you are more motivated the following day at work. It is just an easier working environment and it is all steps in the right direction. I don't think I could spend the next 5 years doing 36 hour shifts it certainly would have been a major stumbling block for me. But I think it is moving all in the*

right direction it is slowly moving in the right direction but I think it's a positive factor for me. If the 36 hour shifts were going to continue I am not so sure I would have applied for the Higher Specialist Training.'

The changes to working hours had allowed Cian to figure the possibility of being a specialist trainee without having to endure long hours. This new conception of a career path without huge personal sacrifice represents the creation of new possibilities and a new World for successful medical career paths.

7.6 Discussion

In this section I will discuss the principal findings of the study and its strengths and limitations. Relationship to other literature and impact, in terms of theory, practice and future research will be discussed in Chapter 8.

7.6.1 Principal findings

This study has shown how figuring as a successful trainee doctor, negative day to day experiences as a trainee, and the wider social and political context, came together in trainee doctors' imagining of new possibilities. Participants figured themselves as trainees following career paths leading towards the realisation of successful future selves. They were emotionally attached to their figuring of themselves as doctors committed to the values associated with medical practice. Part of this figuring of self as a good doctor involved being a valued professional deserving of respect. However, the day to day experience of participants in the

Figured World of Medicine often conflicted with this figuring. Participants authored themselves as being negatively positioned by experiences at work and by aspects of the national discourse about doctors to varying degrees. Emotional engagement with the national Conversation was strongest amongst those who authored themselves as having been repeatedly positioned as under-valued and who gave embodied accounts of emotional responses to these situations. Linda, Valerie and John told stories of ways in which they understood that they were not respected or valued in their daily work. Brendan did not author his working experiences in this vein; however, he contested the negative authoring of trainee doctors within the national Conversation on medical training. Perspectives expressed within that Conversation were that trainee doctors were deserting the country, taking their state funded expertise with them. Brendan felt negatively positioned by this portrayal of himself as a money-grabbing traitor.

These conflicting contexts for identity led to hybrid self- authoring as interviewees wove two voices, their figured and positional identities, to make inconsistent meaning of themselves, in the same fashion as the Nepalese women described by Holland et al. They authored simultaneously a desire to follow a successful career path and a dis-identification with the positions into which they were cast as part of that process. This tension, which was borne out of daily local practice, found a public space for expression in the national Conversation about doctors and medical training.

The trigger for this national Conversation can be traced to a crisis which arose in 2010, when significant numbers of trainee doctor posts were left unfilled. This situation was attributed to an 'exodus' of graduates of Irish medical schools quickly and without much analysis. Questions about pay and working conditions for trainee doctors, the quality of their training and their longer term job prospects became the stuff of parliamentary debate (Seanad Eireann 2011; Royal College of Physicians of Ireland et al. 2011) and talk radio (RTE Radio 1 2013), national press and social media, think-in meetings (Culliton 2011) and commissioned reports (MacCraith 2013; MacCraith 2014). Trainee voices were amongst the perspectives heard in this conversation, as a group through their union, but also as individuals in letters, blogs, posts and interviews. The national Conversation allowed the public imagining of new possibilities for trainees, new paths which would be trainee centred and linked to being a good doctor (MacCraith 2014; MacCraith 2013). The trainee voice was brought into direct contact with others, government, management, senior doctors, the public and having originated in local practice, fed back into the self-authoring of individuals at local practice level. The publicisation of new Figured Worlds may be accompanied by the figuring of a counter-world, which represents the opposite of the new world, a nightmare world (Holland et al. 1998, p.251). The voices of trainees authored such a world, in which the Irish hospital service would be abandoned by the graduates of Irish medical schools, leading to its collapse. Ultimately, trainees took strike action and change occurred at a local level to move the imagined new possibilities towards fruition in practice.

Once again, the personhood of individuals and their agency in responding to the address of the world is highlighted in this study. Each individual brought with them to the workplace an internally persuasive dialogue in relation to themselves as doctors, at that time and in the future. They responded differently to the negative positioning encountered in daily practice. For Michelle and Linda, both of whom authored themselves continuing on the hospital medicine career path, figuring of their future selves was sufficiently powerful to become a bootstrapping mechanism to over-ride negative positioning. For John, however, figuring was not sufficient to overcome negative positioning and he decided to take a break from the expected career path. For Valerie, General Practice offered a possibility to continue to figure herself as a successful trainee doctor, while side-stepping the negative positions offered by hospital medicine.

7.6.2 Strengths

Various features of this study help to make the findings trustworthy. The epistemological orientation, methodology, methods and interpretation are consistent and align with the research question (Carter & Little 2007). We sampled iteratively to ensure that a breadth of perspectives was captured. We co-constructed an interpretation of the texts in a systematic and reflexive manner and described our methods in detail. The strong theoretical underpinning of the work further supports its credibility.

7.6.3 Limitations

There are limitations to this work, which apply to all research findings within the social constructionist paradigm. These have also been outlined in Chapters 5 and 6 and are a feature of all of my qualitative studies. The possibility of other interpretations of the data must be acknowledged.

This study was conducted in a single country and in a very particular socio-political context. My findings are situated in the training structures, career paths and experiences of Irish trainees. These may differ in other countries. The Figured Worlds of medical careers may vary between health systems. I do not claim generalizability, but rather that the process of Making Worlds described here may to an extent be transferable to other cases and situations. Readers must determine, from the detailed accounts provided, which aspects of my findings may apply to their own contexts.

7.7 Conclusion

In this study I have looked beyond the Figured World in which trainees pursued their career objectives, and examined its relationship with the wider social, cultural and political field in which that world was located. The Figured World, and its possibilities, were in a dialogic relationship with the wider context. To return to the quote from Emily Dickinson which opens this chapter; it was through 'strange illumination', the public expression of conflict, tension and ultimately new

possibilities, 'an heroic act' of sorts, that trainee doctors came to figure themselves

in new ways.

Chapter 8

Discussion

'At the end of reasons comes persuasion.'

(Wittgenstein 1969)

A wealth of published research has addressed the topic of this thesis, *Career Choice in Medicine.* Most of this work has focused on identifying demographic (Scott et al. 2011a; Scott et al. 2011b), attitudinal (Rogers et al. 2010; Borges et al. 2009) and experiential (Parker et al. 2014) factors associated with particular career choices. The field lacks a unifying theory to account for the non-linear ways in which these elements, and others, combine to shape career choice. Despite the framing of medical education as the development of doctor identity (Cruess et al. 2014; Cooke et al. 2010), career choice has not, thus far, been viewed explicitly as a matter of identity. In this thesis, I argue that Figured Worlds theory (Holland et al. 1998), a socio-cultural theory of identity, is such a unifying theory, which has deep explanatory power in respect of the processes of career choice and offers new insights to inform practice and further research.

8.1 Summary of the thesis Chapters 1-7

In the opening chapter, I made the case that *Career Choice in Medicine* is an important topic. It has been extensively researched, yet remains problematic. I identified two gaps in the existing literature, which I aimed to address; the lack of a unifying theory of career choice and a lack of data describing medical career plans and pathways in Ireland. My research questions, crafted to fill these gaps, were:

1. What are the career plans and pathways of trainees in Ireland?

2. What are the expectations and experiences of training amongst trainees in Ireland?

3. How does Figured Worlds theory explain professional identity formation in medical students?

4. How can career choice be viewed as an aspect of professional identity formation?

5. How do medical students and doctors self-author their career possibilities and choices?

6. How does self-authoring of career possibilities and choices change over time?

7. How can conflict and tension in practice lead to authoring of new possibilities for career identity?

In Chapter 2, *Conceptual Orientation and Methodology*, I introduced Figured Worlds theory as a theoretical lens for my empirical work and traced the alignment of my epistemological position, methodology and methods. I provided detailed theoretical underpinning for the procedures I have undertaken in using Figured Worlds theory to analyse text. I reflected on my own role in the research and its effect on all stages of the research process.

I then presented descriptive data on postgraduate medical education and training in Ireland, looking at career plans, pathways and quality of clinical training environments. The problems faced by the Irish health service illustrated the importance of the topic and the need to understand its underlying processes. The complexity of the findings reported in Chapter 3 drew attention to the challenges of explaining career choice by using a-theoretical survey and demographic data alone. The need for a unifying theory was clearly demonstrated. Trainee expectations and experiences of clinical learning environments provided some context for the studies presented in later chapters. Chapter 3 addressed gaps in the data already published on PGMET in Ireland, providing useful demographic information on applicants and appointees to training programmes, the career plans of those entering Basic Specialist Training and the quality of Irish postgraduate training environments.

In the studies which followed, I used Figured Worlds theory to address five questions about the authoring of professional and career identity. In Chapter 4, *Figuring Doctor Identities,* I used two student reflections as exemplars to demonstrate my analytical approach. I argued that career identity and career

choice are aspects of professional identity development and that the relationship between them can be elucidated by viewing the self-authoring of professional identity as a base from which career identity develops; a special kind of Zone of Proximal Development (Holland et al. 1998, p.183). Using participants' authoring of their career possibilities and choices, I showed in Chapter 5, *Self Authoring in Specialty Cultural Worlds*, how individuals appropriated cultural worlds of specialty practice and identified and dis-identified with them, leading to career choices. Building on this study, Chapter 6 described a longitudinal study of a sub-group of participants, which showed that career identity emerged from an open-ended dialogic process. This led to deeper identification with or dis-identification from those cultural worlds. Finally in Chapter 7, *Making Worlds in Medical Careers*, I returned to the Irish context to tackle the relationship between Figured Worlds and the wider socio-political context in which they exist. I demonstrated that the authoring of new possibilities for trainee doctors in Ireland arose in the context of conflict in local practice. This world making was in a dialogic relationship with the socio-cultural, historical and political context in Ireland at that time.

In this final chapter I will discuss the meta-themes of my research and synthesise the findings of my empirical studies. I will relate my findings to the existing literature on career choice, highlighting the fresh perspective that my work brings to what is already known in the field. I will bring the results of my mixed methods studies into dialogue with each other. I will present some critiques of Figured Worlds theory and discuss the contribution my work has made to the further

development of the theory. I will then lay out the impact of my research findings for researchers, medical educators and policymakers.

8.2 Meta- themes

In this section I lay out the meta-themes of my findings and point to the new insights my work brings to the topic of Career Choice in Medicine.

8.2.1 Career choice and professional identity

Professional identity is often conceived as a uniform, non-negotiable, 'good doctor' identity, which must be inculcated in medical students (Frank 2005; General Medical Council 2009). Contrary to this conception, I have shown that students authored a diversity of possible doctor identities within the range of discourses of medical practice they encountered as they progressed through medical school (see page 130). This finding challenges the dominant discourse of standardisation in medical education. Sarah and Adam, both medical students who figured themselves as caring future doctors, authored Caring, a core aspect of professional identity, very differently.

Participants in the studies reported in Chapters 5-7 authored distinct specialty specific cultural worlds, which featured differences in relation to medical practice; different valued outcomes and actions (see page 148). Diverse professional

identities, such as those authored by Adam and Sarah, shaped the ways in which individuals figured themselves within these specialty specific cultural worlds. This explains why different students are drawn to different areas of practice. As they moved through clinical placements, participants encountered discourses of medical practice such as Competence and Caring (MacLeod 2011) being reproduced and combined in ways which were characteristic of particular specialties. In other words, in General Practice they encountered doctors and others who spoke about and delivered medical care in ways which were consistent with the values of that Figured World. In Surgery, they encountered a distinctly different, if overlapping, way of talking about and delivering care. They found specialties more or less salient to them as a result. Participants found it easier to orchestrate the discourses of specialty cultural worlds with their internally persuasive discourses in some specialties than others. It was individuals' responses to the question 'What is a doctor?' which they orchestrated with the discourses, valued actions and outcomes associated with specialty worlds.

It follows, therefore, that career specific professional identity can be seen as an aspect of broader professional identity. The space of authoring is a Zone of Proximal Development where internally persuasive discourse in relation to professional identity and the discourses of specialty specific worlds meet. Participants' choices to pursue particular training paths and work in particular locations emerged from the melding of these discourses. This is a new framing of the process of Career Choice in Medicine.

By explaining career choice as an aspect of professional identity formation, I have shown that career choice is not simply a superficial weighing of options but a profound process rooted in the personhood of the individual. This has methodological implications for researchers who wish to capture and explain the process of career choice and identify practical implications for how career choice might be supported and shaped by medical educators. I discuss these points in greater detail in Section 8.7.2 below.

8.2.2 The turn to complexity

Exploring career choices using Figured Worlds theory brought to the fore the complexity of the process and provided a means to think in complex ways about its analysis. To quote Spiro (1997, p.6):

> 'When the actor is brought in…..an actor with desires and fears, hopes and anxieties, loves and hates, conflicts and defences, the kind of actor we know ourselves and the people we study to be .. then complexity unfortunately cannot be avoided.'

Proponents of complexity thinking hold that it is not amenable to definition (Doll & Trueit 2010) since definitions require stability, a condition which complexity thinking denies. Broadly speaking, complexity refers to the study of complex adaptive systems. Such systems are always in a state of flux. They are composed of interacting elements whose relationships are non-linear and rich in possibility. It has been suggested that complexity thinking is a useful way to consider learning in

health care environments (Yardley 2014; Bleakley 2010; Mennin 2010). Socio-cultural theories such as Figured Worlds are closely linked to principles of complexity, with a common foundation in the work of Vygotsky (Wertsch 2007; Vygotsky 1981) and Activity Theory (Yamagata - Lynch 2010; Engestrom 2009). Figured Worlds theory holds that identity formation is the product of a complex network of connections between the mind and its socio-cultural environment (Holland et al. 1998, p.270). Career decisions amongst my study participants emerged from the non-linear and unpredictable interactions which occurred between the elements of such networks, cultural models, discourses, social others, histories-in-person, day to day experiences and so on. Figured Worlds theory allowed the question of career choice to be considered in complex ways.

Applying complexity thinking to career choice brought new starting points and perspectives. For instance, it shifted the focus from the individual to the network or system, of which the individual is but one point. This can be seen in Chapters 4 and 5, where participants' self-authoring was shown to be crafted from the words of others and framed by the cultural worlds in which they figured themselves. These discourses and cultural worlds, while socially constructed, were densely connected to the intra-mental processes of individuals and represented further points within a complex system. The properties which emerged from the interaction of these elements (identity and career choice) were unpredictable and unique. For example, we saw a contrast between Linda and Michelle's authoring of the Figured World of Surgery and the possibility of future selves as surgeons in Chapter 5 (see page 155).

They each took very different stances towards Surgery; for Linda, the surgical focus on 'fixing things' characterised an unthinking and simplistic type of practice while, for Michelle, it meant the satisfaction of achieving a quick and positive outcome. Linda authored gender-based exclusion from Surgery and could not figure herself in that world. When Michelle was also positioned as 'not right' for surgery on the basis of being female, she responded by resisting that positioning and using her resistance as motivation to pursue surgical training. These responses were both individual and complex and could not have been predicted.

In Chapter 6, *Self-Authoring Medical Careers Over Time,* I demonstrated the dynamic and open-ended nature of career identity formation. Continual unfolding over time is a further feature of complex systems. The participants in Chapter 6 were in a phase of their trajectories when career choices are made; however, even after a decision had been made, a dialogic process of negotiation of identity within the specialty cultural world continued. It was in day to day practice that identity emerged. From this perspective, identity formation is embedded in practice. This has important implications for attempts to support and shape career choice.

Thinking complexly is at odds with the way career choice has been considered in the published literature to date. Studies have tended to look at individual elements contributing to career choice rather than take a holistic approach and capture the total process. They have treated the influence of these elements as if in linear,

cause and effect relationships and have not acknowledged the unpredictable and individual nature of career choice. While shifts in career intention are recognised within the literature, the idea that career identity continues to unfold over a professional lifetime has not been emphasised.

8.2.3 Individual agency and personal journeys

Linking professional identity to career choice emphasises that the personhood of medical students and doctors is at the core of the process. Figured Worlds theory further stresses this individual aspect through its emphasis on the concept of agency. This freedom of the individual to choose, rather than to bow to deterministic demographic, attitudinal or experiential 'factors', contributes to the unpredictability of career choice. An individual student may choose to be an urban dermatologist, despite being selected for a medical school whose mission is to increase rural primary care physicians. Favourable demographic and attitudinal characteristics, exposure to rural primary care and being positively positioned as a future rural doctor will not result in the desired career choice in every individual. Agency is the fly in the ointment for managers and politicians who hope to control medical career choice.

Medical students and doctors are not just following career trajectories; they are people with broader lives, relationships and families. The participants in my

research moved in Figured Worlds beyond the world of Medicine and sometimes their figuring of themselves in those worlds was more important than their figuring of themselves as doctors. This was the case for Lorraine, who authored the decision to marry a farmer as having taken precedence over her doctor identity (see page 164). The medical career was just part of a bigger life path and sometimes the factors shaping career decision making fell outside the influence of those who design and deliver postgraduate medical training. This highlights the limits to how much we can hope to influence career choice and the importance of seeing students and trainees as individuals with lives beyond Medicine.

8.3 A unified account of career choice in Medicine

Drawing together the findings of Chapters 4-7, we can sketch a model of career identity development, beginning before students enter medical school and continuing throughout their professional lives. It is comprised of the following components: Priming, exposure, positioning and open-endedness.

8.3.1 Priming

Participants did not enter medical school as a blank canvas. Rather, they came primed by the cultural worlds and discourses they had encountered over the course of their lives. They authored a diversity of stances towards the Figured World of Medicine (see page 150). They foregrounded different aspects of that world: caring, competence, science, discovery, achievement, efficiency, success, importance. They

drew on discourses of being a doctor as well as many related and overlapping worlds and discourses.

While internal discourses at entry to medical school do not necessarily predict later career choice, Figured Worlds theory posits that they are voices which contribute to professional identity development. Some participants figured themselves within particular specialties very early in their undergraduate careers, even before they entered medical school. These individuals had taken clear stances in relation to medical practice. They authored a professional identity, which acted as a base from which to develop a career identity. These early stances on medical practice were not necessarily specialty specific; they could be broad, such as being person or procedure oriented. Participants approached new specialty worlds from these existing perspectives. For example, Valerie authored medicine as being about relationships with patients, caring and communication, and orchestrated this stance with the strong discourse of patient-centred care in the Figured World of General Practice to author herself as a future GP.

8.3.2 Exposure

In Chapter 5, I focused on the way in which, having entered medical school, participants appropriated cultural worlds of medical specialties and identified or dis-identified with them. These cultural worlds and their values and discourses then became voices in the self-authoring of career identity. A key point emphasised by

my findings in this chapter was the developmental process leading to identification, which required first that an individual gain some knowledge of the cultural world and spend time participating in its social practices. This allowed individuals to develop competence in using the cultural world as a mediating tool to evaluate themselves and to guide and motivate their actions. In terms of career choice, this means that experience in the practices of the cultural world of a particular specialty is essential to the development of an identity within that world. Brendan described the process clearly in Chapter 5; as he spent longer in the practice of General Medicine, he identified more deeply with that world and authored feeling greater responsibility towards its values (see page 163). While imaginative figuring of oneself in a particular world can happen without direct experience of the world, full identification in that world requires first-hand experience of practice.

8.3.3 Positioning

Figured Worlds theory drew attention to ways in which participants claimed positions during the course of daily practice and the ways in which others positioned them. The embodied response to negative positioning was sometimes strongly emotional and was a voice in participants' self-authoring. Students were positioned as 'right' or 'wrong' for medicine prior to entry to medical school, they were positioned as more or less 'academic' by faculty during their undergraduate years, they were positioned by patients, nurses, peers and senior doctors in the course of their daily work. Being positioned positively by others was a powerful experience, which allowed students to figure future selves in the typical narratives

of that cultural world. Negative positioning was resisted in some instances and became a motivating force, propelling the individual to pursue their figured identity regardless. When Michelle, as a woman, was positioned as 'not right' for surgery, she authored a response which resisted that positioning; '*I said 'that's what I'm going to do so*'. At other times, being positioned negatively led to dis-identification and a rejection of a future self in that world. We saw this in Valerie's authoring of her position '*at the bottom of the hierarchy*' in hospital medicine and her strong dis-identification with that world: '*you would be insane to stay in this career*'

The interplay between figured and positional identity was seen in Chapter 7 when participants talked about working as trainee doctors in Ireland (see page 227). They authored themselves in contradictory ways, in hybrid voices, which interwove figured selves as successful trainee doctors and positional identities as undervalued individuals at the bottom of the hierarchy. Again, for some participants, figured identity was a sufficiently powerful motivator to act as a bootstrapping mechanism to over-ride negative positional identity. For others, the response was dis-identification with the world of medical careers in Ireland.

8.3.4 Open-endedness

Career choice is often seen as a time-stamped event, which marks the end of a decision making process. In Chapter 6, I illustrated the open-ended nature of career identity development as participants self-authored within particular

specialty worlds over time. After choosing a career path, participants continued to negotiate their career identities. As they moved through time space they were addressed differently and authored themselves differently as a result. Brendan and John, who changed career direction, showed how career decisions sometimes emerged from these changes in stance (see page 203). In Chapter 5, Peter authored continuing shifts in career identity at a much later career stage (see page 168), which Bakhtin's theory would suggest continues until the end of professional life.

8.3.5 Discrepancies

Figured Worlds theory explained how participants came to make career choices in my studies in most cases. Figured Worlds is a very accommodating theory in terms of understanding people's self-authoring because individual agency can account for unpredictable or unexpected accounts of self. There were some instances, however, in which the theory did not provide an adequate account of the processes from which career choices emerged.

Lorraine, Gillian and to a lesser extent Peter, became GPs for reasons other than the development of strong identification with the Figured World of GP. Identification as a wife and mother had been dominant way in which Lorraine and Gillian figured themselves. Their choice of GP was driven by that identity rather than an orchestration of their professional identity with the values of the Figured World of GP. Peter had 'drifted' into GP because of difficulty figuring himself passing postgraduate exams and successfully undertaking specialist training. In

these instances individuals chose their careers without going through the process of identification. It is possible that identification would occur over time working in that Figured World. If it did not occur however, questions arise about how such individuals' motivations and actions are mediated within that Figured World. Both Lorraine and Gillian eventually developed portfolio careers, with Lorraine leaving GP later in her career. Peter authored not 'feeling good' about GP until he was in his late thirties/ early forties. Figured Worlds posits that we have multiple figured identities and that there are hierarchies amongst the Figured Worlds we inhabit. It does not fully explain the relationship between these identities. This is an interesting area for further exploration.

8.4 Relationship to existing literature

The synthesis of my findings is consistent with much of the published literature. It provides a new way in interpret previous findings and points to areas requiring further exploration.

8.4.1 Demographic and attitudinal factors: History-in-person and internal discourse

Demographic and attitudinal characteristics of an individual, at entry to medical school, can be viewed as proxy measures of their history-in-person and internally persuasive discourses. For example, women who are married with children and from a rural background are likely to share some commonality in their stances on medical practice and themselves as future doctors. This will not necessarily be the

case at the level of individuals, but, when looking at a large population, such relationships may become apparent. There have been many papers which have identified specific attitudes or characteristics linked to certain career choices (Svirko et al. 2014; Boyd et al. 2009; Scott et al. 2011b; Scott et al. 2011a). My findings that history-in-person and internal discourses shape career choice triangulates with these studies, providing an explanation of the process underlying this relationship.

8.4.2 Perceptions of specialties: Figuring of Specialty Cultural Worlds

When the literature refers to students' perceptions of specialties, from a Figured Worlds perspective, this means how students figure those specialties as cultural worlds. In my studies, students learned about specialty worlds through the socially constructed narratives and through first-hand experience on clinical placements. Figuring a specialty specific world was central to the process of developing career identity in that world. The literature supports the importance of students' figuring of specialties. There are many studies in which students and graduates attribute their career choices to perceived characteristics of specialties; for example, prestige, lifestyle, controllable working hours, woman friendliness, flexibility and being person or procedure based (Borges et al. 2009; Newton et al. 2005; Dorsey et al. 2005; Harris et al. 2005).

Negative stereotypes of the doctors who work in particular specialties and the nature of the work they undertake are instantly recognisable to those who are

familiar with the Figured World of Medicine. The 'weirdos with bow ties' of Pathology (Hung et al. 2011), or the self-confident, intimidating men of Surgery (Hill & Bowman et al. 2014) are types who feature in the typical narratives of those specialties. Students learn these narratives through an informal curriculum of medical specialties. Speaking negatively about primary care as part of a medical school's culture has been associated with fewer students choosing it as a career (Erikson et al. 2013). Several papers have identified students' negative perceptions of Pathology (Hung et al. 2011; Ford 2010) and Surgery (Hill & Bowman et al. 2014), which struggle to recruit trainees.

My work has provided an explanation for the origins of students' figuring of specialties and for the way in which individuals combine these Figured Worlds with internally persuasive discourses of medical practice, to author their career possibilities and choices.

8.4.3 Clinical placements: Participation and positioning

It was in the day to day practice of medicine in specialty worlds that career identity emerged in my studies. Participation in practice and being positioned positively by others allowed students and doctors to figure themselves in that world in the future. This finding echoes Burack's study (1997) in which he found that students were 'trying on possible selves' as they moved through different specialties. Electives have also been identified as allowing students to explore career

possibilities by providing experience of specialties, which are not part of a core curriculum (Mihalynuk et al. 2006).

Being positioned positively by others is a well-recognised feature of high quality learning environments (Dornan et al. 2014). A link has been made between the quality of teaching on a placement and interest in a career within that specialty (Williams et al. 1997; Griffith et al. 2000; Okayama & Kajii 2011). Being positively positioned by good teachers is likely to be at the root of this relationship.

Several previously published studies have focussed specifically on how career intentions and choices evolve as students move through clinical placements (Maudsley et al. 2010; Katz et al. 1984; Kassebaum & Szenas 1995; Durning et al. 2011). Rejection by undergraduates in the US of a previously favoured specialty has been found to occur most commonly during the third year (of a four year programme) (Dyrbye et al. 2012). From a Figured Worlds perspective, significant flux in career preference during the third year of medical school makes sense, as this is when students first fully enter the cultural worlds of medical practice. In my studies, as students gained increasing knowledge of those worlds and their possibilities, they re-evaluated themselves as future doctors within them.

Negative experiences can position trainee doctors in such a way that they are no longer able to figure a future in a previously chosen cultural world. This was clearly

illustrated in John's narrative in Chapter 7 (see page 203). He authored being negatively positioned both by individuals and by the health system and dis-identifying with the world of hospital medicine. He figured possibilities for himself outside that world and decided to leave medical training. Changes in career intention / choice have been linked to negative aspects of a specialty of previous interest, rather than positive aspects of another (Katz et al. 1984; Durning et al. 2011). Both low satisfaction with an undergraduate rotation and a perception of dissatisfaction among residents have been identified as important factors in pushing students interested in Internal Medicine away from the specialty (Durning et al. 2011). Quality of life, decline in interest in job content, poor career opportunities, arduous training and examinations and poor working relationships were cited by the 33.1% of UK graduates who had seriously considered, but ultimately rejected, a career option (Lambert et al. 2003).

My findings both confirm and explain the importance of exposing students and trainees to specialties, and ensuring they are positioned positively. These are key elements in promoting identification in specialty worlds and career choice.

8.4.4 Role modelling

Role modelling is a popular concept in Medical Education (Kenny et al. 2003), often cited as important in respect of career choice (Sanfey et al. 2006; Passi et al. 2013). In Chapter 1, I have discussed some of the difficulties around the lack of clear

definition of the concept and the differentiation between a general role model and a career role model; one who specifically influences an individual to enter their specialty. Amongst participants in my studies, references were made to individual doctors who were seen as examples of 'good doctors' in one respect or another, but who were not in the specialty of choice and were not authored as influential in respect of career choice.

More senior participants in my studies authored relationships with senior clinicians, which developed after the choice of specialty had been made. These relationships combined elements of role modelling and mentorship. It has been suggested that doctors who identify mentors have more successful careers (Stamm & Buddeberg-Fischer 2011). Given the open-ended nature of career identity development, it may be that mentors have an important role to play in the deepening development of career identity. This is an interesting direction for future research.

The way in which significant people encountered in cultural worlds come to play a role in the recruitment of individuals for that world and their identification within it remains unclear. Burack (1997) reported that residents in primary care specialties cited role models as having been important because they confounded negative stereotypes and demonstrated the feasibility of particular career options. By contrast, residents who were in non-primary care specialties dismissed role models as an influential factor in their career choice. Wenger (2011) has suggested that

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individuals are not role models because of the position they occupy within a cultural world, but because of their experiences in that world; in other words, people identify with the possible trajectory they represent. Hill (2013), found that the lack of such paradigmatic trajectories deterred women medical students from pursuing careers in Surgery. Figured Worlds does not specifically address role modelling and I will discuss this further in section 8.6 below. Further research is needed to fully explore role modelling in career choice in Medicine.

8.4.5 Interventions to shape career choice

Interventions to shape career choice have varied in scale and scope, from the provision of careers information (NHS 2015) to the re-design of curricula (Matson et al. 1999). Most reported interventions have been developed with the intention of encouraging a particular choice rather than providing general support to students and trainees in developing career identity. My findings suggest that a multi-staged approach is likely to be most effective in both shaping and supporting the process of choosing a career.

8.4.5.1 Selection

It has been proposed that selecting students for admission to medical school on the basis of demographic and attitudinal factors could increase recruitment to less popular specialties (Smith 2011; Scott et al. 2011a). My work supports the idea that selection on this basis will have some success. These elements, demographic

characteristics and attitudes to medical practice, may contribute to self-authoring within the targeted specialty worlds. So that students who figure Medicine as being about taking action, quick turn-over and outcomes are likely to figure themselves more easily in a procedure oriented specialty such as Surgery. Selecting such students for medical school may therefore increase recruitment to Surgery. In general, broadening access to medical school and admitting a greater diversity of students is likely to lead to a greater diversity in professional identities and therefore career choices.

Selection on the basis of demographic and attitudinal characteristics as a standalone measure overlooks some important aspects of the process of career choice. It does not give weight to personal agency; the freedom of the individual to make an unpredictable choice and author themselves in diverse ways. It also ignores the role of experiences during medical school, which might lead to shifts in stances held before coming to medical school. None the less, it is one of a number of approaches which, in combination, could prove effective in shaping career choice.

8.4.5.2 Shaping perceptions and providing experiences

My findings support the suggestion that interventions to shape students' perceptions or figuring of specialties, pitched at an early stage, can be valuable. This is in keeping with the finding that modules designed to develop understanding of

particular specialties, delivered before medical school or in the pre-clinical years, can impact attitudes towards those specialties (Gawad et al. 2013; Curtis et al. 2008; Grayson et al. 2001).

Providing students with experiences in specialty worlds has been at the heart of most interventions to shape career choice (Matson et al. 1999; Schwartz et al. 2005; Kahn et al. 2001) and there is evidence that this approach can be effective (Firth & Wass 2011; Grayson et al. 2001; Bland et al. 1995). Furthermore, Firth and Wass (2011) have shown that initial negative figuring of a specialty world, in their case primary care, can be redressed by a later positive experience within that world. My studies confirm these findings and explain how the processes of identification and dis-identification lie behind them. The key role of positive positioning, which is not prominent in the existing literature, is highlighted in my work.

8.4.5.3 Multi-staged programmes

Outcomes of two of the most comprehensive attempts to shape generalist careers, the RWJ Foundation's Generalist Initiative (Matson et al. 1999) and the Interdisciplinary Generalist Curriculum (Kahn et al. 2001), were confounded by changes which occurred contemporaneously in the US health system. None the less, the comprehensive multi-staged approach adopted by those programmes, including targeted selection and high quality first hand experiences, is an effective

way to allow students to figure possible selves in specific specialty worlds. Programmes aimed at increasing the numbers of doctors choosing to enter rural practice have proven effective by taking a similar approach, selecting students on the basis of rural background and then ensuring extensive exposure to rural practice (Stagg et al. 2009; Kapadia & McGrath 2011; Tesson et al. 2005).

My findings emphasise the open-endedness of career identity development suggesting that a programme of multiple staged interventions will be most effective in shaping and supporting career choice.

8.4.5.4 Support for career choice

Interventions to support medical students and trainees in career decision making in general, rather than with recruitment to a specific specialty, are less well described; however there is an acknowledged need for such support (Lambert & Goldacre 2007). Thinking about career choice as a process of identity formation highlights the superficiality of what is usually done; namely, to provide information about different specialties and access to online career decision-making tools (AAMC 2015; NHS 2015), perhaps supplemented by career advice or counselling. Provision of information about the culture of a particular specialty on a webpage will not counteract impressions garnered from peers and first-hand experience. Online tools cannot replace the process of appropriation and identification in cultural worlds which occurs through practice. Career counselling can only usefully support career identity development if it allows reflection on experiences and perceptions of

specialties. More often, career counselling relies on psychological testing to determine 'fit' for particular careers (Kidd 1996). The lack of literature describing provision of career counselling or advice in medicine, or the difference between the two, makes it difficult to comment on its utility.

8.5 Mixed methods

To realise the full benefits of the mixed methods I used in my programmatic research, I now bring the findings of my qualitative studies using Figured Worlds theory into dialogue with the quantitative data of the third chapter *Medical Careers in Ireland: Pathways, Plans and Environment*. The picture which emerged from my quantitative findings was a complex one, with trainees leaving Ireland to work abroad at different points in their training and for different reasons (see page 105). Re-examining these findings using the theoretical perspective of my qualitative work provides some new insights.

8.5.1 Paradigmatic trajectories of successful doctors in Ireland

Trainee doctors who were commencing training on BST programmes in July 2012 expressed a desire to undertake the majority of their training in Ireland, but also to spend some time working abroad. Almost all aspired eventually to become consultants in Ireland. These data tell us how trainees figured their future selves. While each individual is on a personal career journey, the cultural world of medical careers is a socially constructed one, which can be discerned from responses to the

career plans and pathways survey reported in Chapter 3. In responding to the questionnaire, each individual drew on the Figured World of medical careers and his/ her future self within it.

The cultural world of medical careers in Ireland has long included time spent working in the US or UK (McEntee et al. 2005). Until the late 1990s, there was no structured specialist training in Ireland and expertise gained by working in foreign centres was highly valued. Consultant posts were very competitive with many applicants returning from the top centres in the world. Despite the relatively recent desire of stakeholders to keep graduates of Irish medical schools working in the Irish health system, trainees still frame their career possibilities in a world in which almost every senior figure has worked overseas. These individuals provide paradigmatic trajectories (Hill & Vaughan 2013) for trainees figuring themselves as future senior doctors; their career paths define possibilities for younger doctors. It is not surprising that trainees figure their own career paths, likewise, as including overseas experience. In the Figured World of Medicine, value is placed on excellence and achievement. Expecting trainees to disregard the culture of the world with which they identify is unrealistic.

8.5.2 Life beyond the Figured World of Medicine

Lifestyle was cited by the majority as an important reason to work abroad. This suggests that the Figured World of Medicine was not the only cultural world in

which graduates figured themselves and perhaps not the most important. This perspective was also found amongst some participants in my qualitative studies. The discourse of work-life balance, which emphasises the importance of lifestyle and wellbeing over work, is dominant amongst Generation Me, or Millenials; those born between 1982 and 1999 (Twenge 2010). This is the current generation of trainee doctors and medical students. The 'gap year' phenomenon, in which graduates of Irish medical schools go to Australia or New Zealand immediately after internship, has coincided with the entry of this group into the workforce.

Trainees authored being negatively positioned in day to day practice, in Chapter 7, despite figuring themselves positively as professionals deserving of respect (see page 227). These conflicting perceptions were echoed in the gap between expectations and experience of BST training found in my D-RECT survey, where the imagined experience of being a medical trainee was at odds with the reality. Participants authored differing responses to being negatively positioned but, for some, the outcome was a shift in stance, which led to a decision to leave training in hospital medicine in Ireland. There is a clear message for stakeholders that the day to day experience of being a trainee doctor in Ireland can be a very challenging one, which does not match trainees' vision of themselves as doctors.

Stakeholders in Ireland have failed to understand the way in which medical students and trainees frame their career trajectories. Training programmes have

been designed and imposed without sufficient consideration of trainees' perspectives. The policy and planning of PGMET have been riddled with assumptions; for instance that, if training were available in Ireland, trainees would rather stay at home than travel. These assumptions have hampered appropriate responses to address the medical manpower crisis and require critical examination.

If the trainee perspective is central to the design and provision of training programmes, then those tasked with these roles must provide discursive space for trainees' voices. My findings suggest that the engagement of trainees has been problematic and uneven. While there was a low response rate to a survey to provide feedback on the clinical learning environment described in Chapter 3, trainee voices were heard loudly in the national Conversation about medical training in Chapter 7, through social media and ultimately strike action. Amongst study participants, there was variation in the degree to which the discourses of that national Conversation were personally salient. Salience appeared to be greater amongst those who authored individual experiences of being positioned negatively in the workplace. In theory, providing feedback on clinical learning environments by completing a questionnaire created a space for trainees' voices but in practice this space was not taken up by the majority. Trainee engagement with researchers, postgraduate training bodies, or others is an aspect of the cultural world of being a trainee and emerges from the way in which trainees figure themselves and their relationships with others in that world. Further work is needed to explore how best

to bring the trainee voice into dialogue with the voices of other stakeholders towards meaningful change.

Using mixed methods has strengthened my programme of research in several ways. Together, the quantitative and qualitative elements have provided more complete description and explanation of career choice than either would do alone. The quantitative elements described, at a macro level, patterns in career paths and plans and the experience of doctors training in Ireland. The qualitative elements added depth to those patterns, providing a micro view, through individual stories of decision making in context. The voices of students, trainees and doctors brought to the fore the individual journeys behind the numbers. Explanatory insights into the quantitative findings were provided by the qualitative element, which aided interpretation, while the quantitative studies added scale to the qualitative narratives and emphasised the systemic impact of individual decisions.

8.6 Revisiting Figured Worlds theory

I have argued strongly for the affordances of Figured Worlds theory to the topic of career choice. In this section, I discuss some criticisms of the theory, in light of my own experience of using it in my work. I also outline how my work has contributed to the further development of the theory.

Figured Worlds is an elegant theory, which accounts for the complexity of career choice in ways that are both intuitive and grounded in a clear theoretical lineage. Mastery of the theory is challenging, however, in part because of the way the seminal text - *Identity and Agency in Cultural Worlds* (Holland et al. 1998) - is written. The prose is dense, using abstract terms and rendering ideas unnecessarily complex. The empirical examples used to illustrate the theory are not always helpful. These are significant barriers to the uptake of the theory and perhaps account for Urrieta's (2007) observation that Figured Worlds theory has not been applied to empirical research as often as it might. Urrieta also raised the issue of procedures; because the operational meaning of Figured Worlds theory was not clearly defined in the original text, researchers have applied the theory inconsistently (ibid). This issue was partially addressed by Skinner et al's (2001) later publication of an exemplar of a Bakhtinian analysis using Figured Worlds theory, which is less well known paper and cited less frequently than the seminal text.

By extending Figured Worlds theory to a new topic and demonstrating its fruitfulness in respect of professional identity formation and career choice, I have illustrated its potential for transferability. This adds strength to the theory. The work I have presented has provided detailed procedures and exemplars of analysis using Figured Worlds and Bakhtinian discourse theory, which may prove useful to researchers wishing to apply the theory. Both of these contributions to Figured Worlds theory may lead to its wider appropriation and use in empirical research.

The concept of the Figured World has been criticised as being more appropriate for small scale cultural worlds with well-defined boundaries, such as the example of Alcoholics Anonymous, than broader, more open domains such as college romance or mental health (Postill 2003). This argument is based on the lack of distinctness of a world of college romance from a broader world of romance and, in the case of mental health, on the lack of homogeneity in that world. This criticism is founded on a misapprehension of the concept of the Figured World as a rigidly defined and clearly boundaried model. In contrast to this position, I have found the idea of a Figured World of Medicine, within which nest a range of subspecialty worlds, to be a fruitful one. Despite the vastness of Medicine as a whole and the different worlds within it, there are typical narratives, characters and types, ways of interacting, significant acts and valued outcomes which are features of Medicine as a whole. Regardless of the scale of the world in question, we use Figured Worlds, or cultural models, to talk about it in generalities. We inhabit and pass through many overlapping Figured Worlds. Boundaries are not always clear cut. It may not always be clear which Figured World is being instanced when we speak (Holland et al. 1998). This is a feature of the complexity of the theory and in my view contributes to its applicability rather than detracting from it.

Figured Worlds theory does not provide an explicit account of how significant individuals, or role models, shape identity development. It emphasises the importance of interacting with social others in practice. It describes the particular

types and characters, which feature within Figured Worlds; however, the term role model is not used. Given the great value placed on role modelling within medical education, this is a frustrating deficit for those wishing to apply the theory to medical contexts. Williams (2011) has built on Figured Worlds theory to address this issue. He identifies the emblematic nature of different 'types' who are typically found within a particular Figured World, and of individuals encountered in practice, who may become symbolic, representing heroes or anti-heroes, who are appropriated and become part of the self-authoring of individuals. Individuals do not become heroes or anti-heroes because of who they are, as much as because of the possibilities they represent (Wenger 2011), a finding echoed by Burack (1997) and Hill (2013). This combination of imagined types and people encountered in a Figured World provides individuals with possibilities with which to identify or dis-identify.

Theorisation of the relationship between the Figured World and the wider socio-political context in which it exists was not sufficiently developed in *Identity and Agency in Cultural Worlds* (Holland et al. 1998). In their description of the world making of Nepalese women through song during the Tij festival, the socio-political context in Nepal is referred to but its role in world making is not explored in any detail. Holland et al draw a contrast with the work of Bourdieu, commenting that the focus of Figured Worlds theory is on daily activity on a local, rather than institutional scale. This focus is a strength of the theory, but also creates a blind spot. Figured Worlds do not exist in isolation, as self-perpetuating islands of socio-

cultural practice. Rather, Figured Worlds happen in wider socio-political contexts and fields of power. Individuals bring the socio-political to Figured Worlds as history-in-person, as fossilised responses and dispositions. Conflict and tension may arise when individual stances come into contact with the discourses of a Figured World. Holland and Lave (2009) have explored how history-in-person and the social, cultural and political context come together in contentious local practice to bring about change in Figured Worlds.

I have further examined the relationship between the Figured World and the wider socio-political context in Chapter 7. This study explored issues of power, position and voice within the Figured World of Medical Careers and described how new possibilities for trainees emerged from contest and tension and through the publicisation of the trainee voice. I demonstrated a dialogic relationship between the Figured World and the wider context in which it existed. By examining this less well defined aspect of Holland et al's (1998) theory, I aim to contribute to its development.

8.7 Impact

Research needs to be relevant and fruitful within academia and beyond, providing food for thought to fellow researchers and meaningful information to policymakers and other stakeholders. In this section, I will describe the dissemination and impact

of my work to date, and the potential future impact of the studies which have not

yet been published.

8.7.1 National impact

The studies presented in Chapter 3, *Medical Careers in Ireland: Pathways, Plans and

Environment*, were conducted in 2012-13 and published in the Irish Journal of

Medical Science in early 2014 (Appendix A). Summaries of the findings were also

published in the national (McDonagh 2014) and medical press (Gantly 2014). These

studies, although not widely generalizable, have had significant impact within

Postgraduate Medical Education and Training (PGMET) in Ireland.

In 2014, the Royal College of Physicians of Ireland undertook a review of its

postgraduate training programmes led by Prof. Kevin Imrie, President of the Royal

College of Physicians and Surgeons of Canada. The findings of my studies informed

that review, highlighting in particular the difficulties with Basic Specialist Training in

Medicine. I was invited to co-chair a working group on the Content and

Methodology of Training as part of the review and attended the International

Medical Education & Training Leaders Forum, which followed. Prof. Imrie's report

(2014) recommended several changes to current training, which are currently

underway. My work has contributed to this process and also positioned me as a

researcher with a voice in setting standards and an agenda for PGMET in Ireland.

The use of D-RECT (Boor et al. 2011) to measure clinical learning environment in my study led the Medical Council of Ireland to incorporate the instrument into their first national survey of trainee experience, Your Training Counts, conducted in mid-2014 (Medical Council 2014). I have worked closely with the Medical Council in regard to this. I provided advice in relation to the wording of the instrument in the Irish context and the benchmarking of expectations of medical experts of Irish training environments. I was commissioned to undertake the validation of D-RECT for use in Ireland using the Medical Council data and completed that project for inclusion in the Your Training Counts report, published in late 2014 (ibid). I now sit on the Quality Monitoring Sub-Committee of the Education and Professional Development Committee of the Medical Council, which is responsible for reviewing the inspection reports of all undergraduate and postgraduate programmes in Ireland.

In addition to providing useful data, these studies have supported linkage and exchange between academia / researchers and policy makers. Such relationships are essential to ensure that research is relevant and that findings are effectively embedded and enabled in policy. The professionalization of medical education is in the early stages in Ireland. Publication of studies such as these, and the presence of a Medical Education voice in conversations about the policy and delivery of PGMET, supports the recognition of Medical Education as a field of expertise in Ireland.

8.7.2 International impact

Framing of career choice as an aspect of professional identity formation, and identifying Figured Worlds as a unifying theory for this complex process, have the potential to impact researchers, medical educators and policy makers internationally.

8.7.2.1 Researchers

For researchers, thinking about career choice in this way may inspire new research questions and redress the balance in the published literature, which currently favours population patterns over the personhood of individuals. I have highlighted areas which need further exploration: how role models function in career choice; the role of mentors in supporting on-going career identity development; how best to provide discursive space for trainees in designing training programmes, and others. Following my work, researchers may pursue these areas to further explain career choice processes.

I have described procedures for undertaking analysis using Figured Worlds and Bakhtin's discourse theory. This may be useful to other researchers for whom the lack of defined procedures has been a deterrent. The clear alignment which I have traced, from epistemological stance, through methodology and various sensitising influences, to my choice of methods demonstrates the sound basis for my

approach. I hope that there might be wider appropriation of this fruitful theory as a result.

My work has contributed to the further development of Figured Worlds theory. I have demonstrated the transferability of the theory and its utility in a new context: career choice. To date, Figured Worlds theory has been applied to schools and teacher and student identities (Urrieta 2007; Urrieta et al. 2011) and to professional identity development in medical students (Dornan et al. 2015). My work adds to this body of research, highlighting Figured Worlds theory to other researchers concerned with professional identity formation and careers, who may find it a useful theoretical perspective within their fields.

I have discussed critiques of Figured Worlds theory and added my perspective as a researcher who has applied it. I have pointed out weaker aspects of the theory and its presentation. Through my work, I have tried to address these. In doing so, I have added to the strength of the theory, building on the work of Holland et al (1998).

8.7.2.2 Medical educators

My work can impact medical educators and policy makers by providing useful information for the design of programmes to support and shape career choice. It provides a new way to explain what works to influence career choice. It also

emphasises that career choice is often unpredictable and will always be a highly individual process. Thinking of career choice in this way can help educators and policymakers to consider interventions at individual and group level which may be effective and also to understand that the scope to control individual choice is limited.

Figured Worlds theory, and its four contexts for identity - figuring, positioning, space of authoring and making worlds - provides a framework for the evaluation of existing programmes. For example, are students given the opportunity to figure themselves in specialty worlds? How are they positioned in those worlds by others? Is there space for students to orchestrate the conflicting discourses they encounter? Is there space for students to imagine new possibilities for themselves as doctors? These questions may stimulate medical educators to reflect on how they support their students.

My findings provide food for thought for specialties which struggle to recruit. Understanding that Figured Worlds are socially constructed models should prompt reflection on the culture within specialties (Giles & Hill 2014). Figuring of a specialty may not reflect the particulars of every Department of Pathology or Surgery; but the Figured World is constituted by the regularities of daily practice and vice versa. The conclusion that students have the 'wrong' idea about a specialty is frequently reached in studies examining students' negative perceptions, coupled with a

suggestion that the 'true' nature of the specialty must be better communicated (Lorin et al. 2005; Rajagopal 2004). Perhaps a better starting point would be to consider how and why students have come to understand specialties in those ways and whether cultural change, rather than better communication, is the solution.

8.8 Conclusion

My original contribution has been to frame the topic of career choice in terms of identity development and to demonstrate the fruitfulness of this approach. This represents a turn in the conversation about career choice, which brings new starting points and moves the dialogue forward. My authoring of career choice is crafted from the words of those who have gone before me and may provide building blocks for the authoring of those who follow. To quote Bakhtin (Holquist 1990, p.39):

> *'There is neither a first word nor a last word. The contexts of dialogue are without limit. They extend to the deepest past and the most distant future.'*

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Appendix A – Published papers

Bennett, D., Dornan, T., Bergin, C. & Horgan, M., 2014a. Exodus? The training paths and plans of postgraduate medical trainees, under the Royal College of Physicians of Ireland. *Irish Journal of Medical Science*, Epub Mar 9………………………**page 310**

Bennett, D., Dornan, T., Bergin, C. & Horgan, M., 2014b. Quality of Postgraduate Training in Ireland: Expectations and Experience. *Irish Journal of Medical Science*, Epub Jan 5………………………………………………………………………**page 322**

ORIGINAL ARTICLE

Exodus? The training paths and plans of postgraduate medical trainees, under the Royal College of Physicians of Ireland

D. Bennett · T. Dornan · C. Bergin ·
M. Horgan

Abstract

Background In 2006, the Buttimer report highlighted the paucity of demographic data on those applying for and entering postgraduate medical education and training (PGMET) in Ireland. Today, concerns that there is an "exodus" of graduates of Irish medical schools are at the forefront of national discussion, however, published data on PGMET remains inadequate.

Aims The objectives of this study were to collate existing data relating to trainees and training programmes at three stages of training and to examine the career plans of junior trainees.

Methods Data from application forms for training programmes, commencing July 2012, under the Royal College of Physicians of Ireland ($n = 870$), were integrated with data from other existing sources. Candidates entering basic specialist training were surveyed with regard to career plans. Descriptive and comparative analysis was performed in SPSS version 18.

Results Graduates of Irish medical schools made up over 70 % of appointees. Over 80 % of BST trainees aspired to work as consultants in Ireland, but 92.5 % planned to spend time working abroad (response rate 77 %). Decisions to leave the Irish system were linked to lifestyle, but also to failure to be appointed to higher specialist training. Significant numbers of trainees return to Ireland after a period abroad.

Conclusions The trainee "exodus" is more complex than is often portrayed. The desire to spend time working outside Ireland must be accounted for in workforce planning and configuration of training programmes. Expansion of HST is a potential solution to reduce the numbers of graduates leaving Ireland post-BST.

Keywords Medical education · Postgraduate training · Doctor migration · Workforce planning · Medical careers

Introduction

Postgraduate medical education and training (PGMET) lies at the intersection of the interests of multiple stakeholders, the medical profession and its trainees, government, regulatory bodies, manpower planners, health service providers, patients, and medical educators. The career paths of graduates of Irish medical schools are currently at the forefront of national debate, with discussion linking an "exodus" of graduates to negative aspects of PGMET in Ireland [1, 2]. In 2006, the Buttimer report [3] highlighted the paucity of demographic data on those applying for, entering and progressing through PGMET in Ireland. This failure to track graduates and trainees was identified as a barrier to effective policy responses to challenging issues. Since then, some progress has been made in relation to data on PGMET, with the establishment of the health service executive-medical education and training (HSE-MET) database of non-consultant hospital doctor (NCHD) posts and the recent publication, by the Medical Council, of the Medical Workforce Intelligence Report [4]. Nonetheless,

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there remain areas in which data are lacking, such that current debate is often characterised by anecdote and opinion, with supporting evidence drawn from studies with low response rates, taken at a single point in time [2, 5, 6]. This study aims to provide data to better inform debate and policy making in PGMET.

There are two distinct, but related strands in the discourse about PGMET in Ireland. One focuses on a failure to retain graduates, whilst the other focuses on the quality of training and working conditions in the Irish healthcare system [7], which might affect their intention to stay within it [2, 6]. This paper addresses the first of these strands, the issue of graduate retention. There is some evidence to support the idea that graduate retention is a problem in the Irish healthcare system. Surveys of graduates suggest that the majority intend to pursue at least part of their training outside Ireland [8]. In 2004, 93 % of interns expressed this intention. More recently, the HSE-MET intern survey 2011 [5] showed that 66 % intended leaving Ireland at the end of the intern year. Subsequent tracking showed that 45 % were not working within the Irish health system 3 months after completion of internship [5]. In 2012, 6.4 % of 25–29 years old graduates of Irish medical schools exited the Medical Council register. There has been a long tradition of graduates of Irish schools undertaking part or all of their training in the UK or US [9]. Many of those doctors did not return. A study of the 1978 graduating cohort from Irish medical schools, found that 25 % were in practice abroad 26 years after graduation [10]. The current manpower crisis has led to concerns that the figure may now be much higher; however, in the absence of a tracking system for graduates we do not know how many graduates are lost from the Irish medical workforce permanently. Current data, relating to rates of return to Ireland, are needed to interpret the significance of these studies.

In 2008 [9], 45 % of 3,016 NCHD posts were held by graduates of Irish medical schools. 73 % of SHOs on training rotations were graduates of Irish medical schools. An "exodus" of graduates of Irish schools might be expected to result in a rise in the proportion of foreign medical graduates holding training posts; however, this does not appear to be the case. Data from the recent Medical workforce intelligence report [4] shows that the overall proportion of foreign trained doctors in Ireland and, more specifically, in training posts, has not increased over the past 5 years. A decline in demand for training posts in Ireland, amongst graduates of Irish medical schools might, however, be reflected in more subtle ways, with appointment to training programmes becoming less competitive and in a lower calibre of appointee. These are areas which we address in this paper.

Failure to retain graduates, whose medical education has been funded largely by the State, represents a significant loss of human and financial capital. Since the creation of formal higher specialist training (HST) schemes in Ireland, the stated intention has been to match projected future needs for consultants to training posts [11, 12]. The apparent rationale is that EU graduates of Irish medical schools, pursuing specialty careers will, on the whole, stay in Ireland for specialist training, perhaps spending a year or two abroad, before taking up consultant posts here. Current policy, therefore, is based on a proposed training trajectory which may be at odds with the career intentions of many graduates. It is essential that we explore the career plans of trainees, what influences their training choices and their perceptions of the options available to them, so that workforce planning is not based on erroneous assumptions.

It is well documented that the Irish healthcare system is over reliant on foreign trained doctors. The organisation for Economic Co-Operation and Development (OECD) counsels against this level of dependence on medical migration, which is not a long-term solution to doctor shortages [13]. In recent years, Ireland has become a less attractive training destination for these doctors, and the vulnerability of the health service workforce to the international doctor labor market was clearly illustrated by the crisis which arose in 2011, when unfilled NCHD posts triggered a controversial overseas recruitment campaign [14]. Expansion of undergraduate training capacity and domestic graduate retention are amongst the approaches suggested by the OECD to address this issue [13]. In Ireland, undergraduate places for EU students have increased significantly and attention now turns to graduate retention. Effective measures to improve retention can only emerge if there is a detailed understanding of when and why our graduates choose to leave Ireland.

The aim of this study was to examine a contemporary, cross-sectional dataset to inform the debate about graduate retention in Ireland. Specific objectives, in light of the gaps highlighted above, were:

1. To collate existing, but fragmented, data:

   (a) To identify demographic features of doctors, who applied and were appointed to training programmes at three points along the Irish PGMET trajectory.
   (b) To describe competitiveness of training programmes and to track those who were not appointed.
   (c) To examine evidence of trainees returning to Ireland after time spent abroad.

2. To conduct a survey of trainees entering Basic Specialist Training (BST), to examine the career plans of trainees currently entering BST, and influences on their choice of career path.

Method

Setting

In Ireland, PGMET is undertaken under the auspices of the Royal College of Physicians of Ireland (RCPI), Royal College of Surgeons of Ireland (RCSI), College of Anaesthetists of Ireland, College of Psychiatry of Ireland and the Irish College of General Practitioners. The study described here focuses on the training programmes under the auspices of the RCPI and its faculties, and is part of a joint programme of research into PGMET, between RCPI and the School of Medicine, University College Cork (UCC). Following internship, trainees can apply for BST or initial specialist training posts. These are 1 and 2 years rotational posts. Completion of BST takes 2–3 years; individual training bodies determine whether a trainee has met the requirements for basic training and award the trainee with a certificate. The RCPI oversees BST in general internal medicine (GIM), Paediatrics, Obstetrics and Gynaecology and Pathology. On completion of BST, trainees are eligible to apply for HST. In the intervening period between BST and HST trainees may take registrar posts, which may or may not be part of a reg-
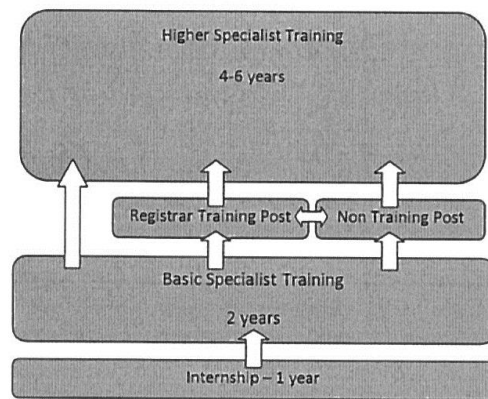
istrar training programme (RTP) and retrospectively partially recognised for HST. Training pathways are outlined in Fig. 1 below. In 2011, the RCPI oversaw 750 trainees at BST level and 593 at HST level, including those undertaking research or clinical posts abroad [12]. This represented 43.6 % of total trainees for the year 2011–2012.

Data sources

Data in this study came from a number of sources.

1. Data from the application forms of a total of 870 applicants to BST, RTP, and HST were entered into Excel in anonymised format. Items recorded included graduating medical school, degree class, years since graduation, postgraduate examinations, audit, publications, and employment history.
2. Data from databases within the RCPI, relating to which applicants were appointed and to which programmes and schemes was also entered into Excel.
3. The HSE-MET NCHD database was used to track those who applied, but were not appointed, to RCPI training programmes.
4. Successful candidates for the BST programme were sent a career plans and influences questionnaire by post. The questionnaire consisted of 44 statements relating to reasons for training in Ireland, 5 and 10 years career plans, reasons for choosing a specialty, attitudes to working in Ireland and abroad and sources of information on training. Responses were Likert scaled 1–6 to indicate level of agreement with the statements, ranging from strong disagreement to strong agreement.

Analysis

Medical Council number and RCPI ID numbers were used to link data between these sources and to compile integrated databases for each group of trainees. The identifiers were then removed and a study ID number used. Descriptive analysis of these datasets was performed in SPSS version 18. Responses to the trainee questionnaire were entered into Excel and analysed in SPSS version 18.

Fig. 1 Training pathways under the RCPI

Table 1 Demographic data for applicants and appointees to BST, RTP, and HST in 2012

	BST	RTP	HST
Applicants	$n = 549$	$n = 99$	$n = 242$
Mean age	27.8 (SD 4.4)	31.4 (SD 4.7)	32.2 (SD 4.9)
Mean years since graduation	2.5	6.9	7.9
Mean since BST completion	–	1.0	2.9
Appointees	$n = 333$	$n = 99$	$n = 95$
Mean age	27.4 (SD 3.9)	–	30.1 (SD 3.5)
Mean years since graduation	2.2	–	5.9
Mean years since BST completion	–	–	2.0

BST Applicants N=549

Ireland 69%
Other EU 16%
Africa 8%
Asia 5%
Other 2%

RTP N=99

Ireland 54%
Asia 21%
Africa 15%
Other 5%
Other EU 5%

HST Applicants N=242
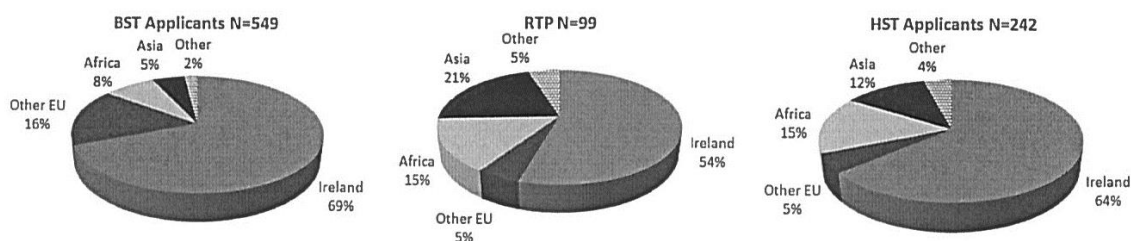
Ireland 64%
Asia 12%
Africa 15%
Other 4%
Other EU 5%

Fig. 2 Pie charts showing applicants at each level by location of qualifying medical school

Fig. 3 Appointees to BST and HST by location of qualifying medical school

HST Appointees N=95

Ireland 81%
Other EU 9%
Africa 4%
Asia 5%
Other 1%

BST Appointees N=333

Ireland 70%
Other EU 17%
Africa 8%
Asia 5%
Other 0%

BST

First Class Honours 9%
Pass 23%
Honours 68%

RTP

First Class Honours 6%
Pass 23%
Honours 71%

HST

First Class Honours 22%
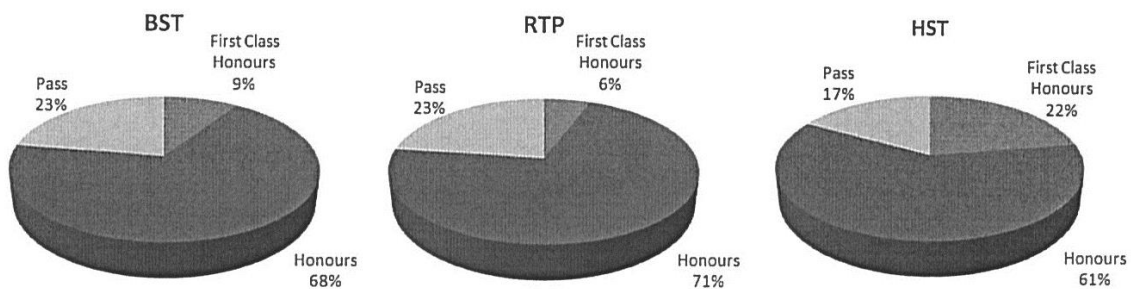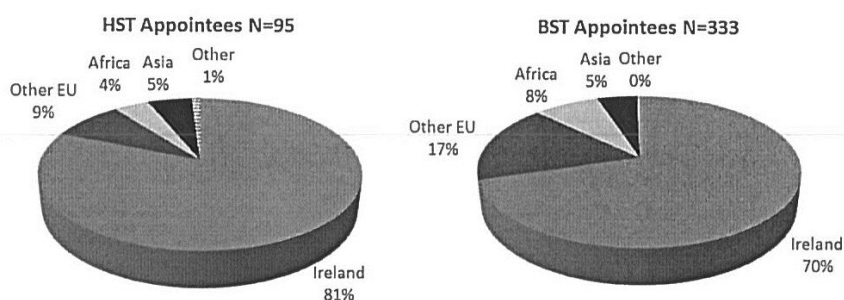Pass 17%
Honours 61%

Fig. 4 Distribution of qualifying degree class amongst graduates of Irish medical schools appointed at each training level

The Likert scaled responses were treated as ordinal data and Kruskal–Wallace non-parametric testing was used to examine differences in responses between graduates of Irish, other EU, and non-EU medical schools.

Ethical approval was granted by the Clinical Research Ethics Committee of the Cork Regional Hospitals, as this study is part of a UCC PhD. Ethical approval was not sought within the RCPI as at the time of commencement of the study a formal ethics process and committee was not in place.

Results

Demographic data for applicants and successful appointees at each point on the training trajectory are shown in Table 1. The RTP is not a competitive process and,

therefore, all registered on it are included. No data on gender were available as this was not recorded on application forms at that time.

Whilst the mean ages of applicants and appointees to BST are similar, appointees to HST are significantly younger than the HST applicant group, suggesting that some trainees who enter BST shortly after completion of the intern year progress relatively rapidly to HST whilst others follow a slower pathway through the system.

Graduates of Irish medical schools were the largest group applying to programmes at all levels, however, significant numbers of graduates of schools located in other EU countries, Africa (predominantly Sudan and Nigeria), and Asia (India and Pakistan) are also seen to be applying. The proportions vary, with "other EU" constituting the largest non-Irish group at BST level, but declining at RTP

Table 2 Appointees to BST internal medicine rotations by graduating medical school, expressed as a percentage of total appointees in each geographical location

	UCD	TCD	RCSI	NUIG	UCC	UL	Other university
Dublin (n = 143)	50 (35 %)	15 (10 %)	21 (15 %)	9 (6 %)	10 (7 %)	5 (3 %)	33 (23 %)
Galway (n = 38)	2 (5 %)	4 (11 %)	2 (5 %)	20 (47 %)	1 (2 %)	1 (2 %)	8 (19 %)
Cork (n = 34)	1 (3 %)	3 (9 %)	0	1 (3 %)	20 (62 %)	0	8 (24 %)
Other (n = 55)	1 (2 %)	3 (5 %)	6 (11 %)	5 (9 %)	2 (4 %)	0	38 (69 %)

Fig. 5 *Bar chart* showing to BST by specialty—single specialty and multiple specialty applications
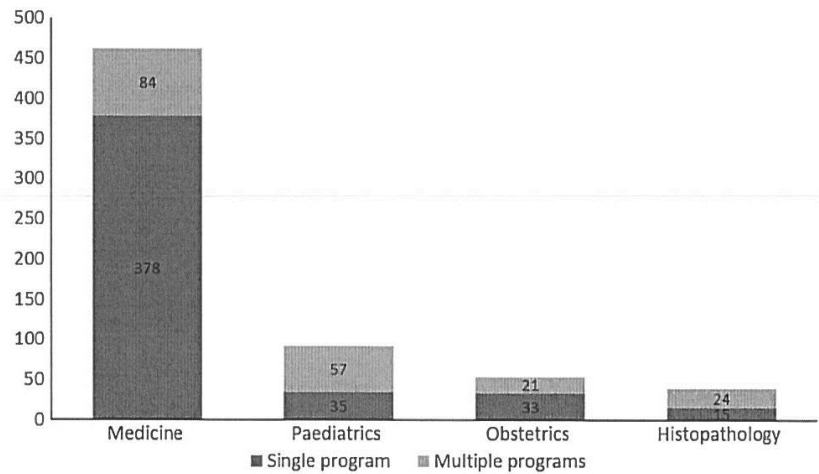

Fig. 6 *Bar chart* showing ratio of applications to appointments per specialty for BST
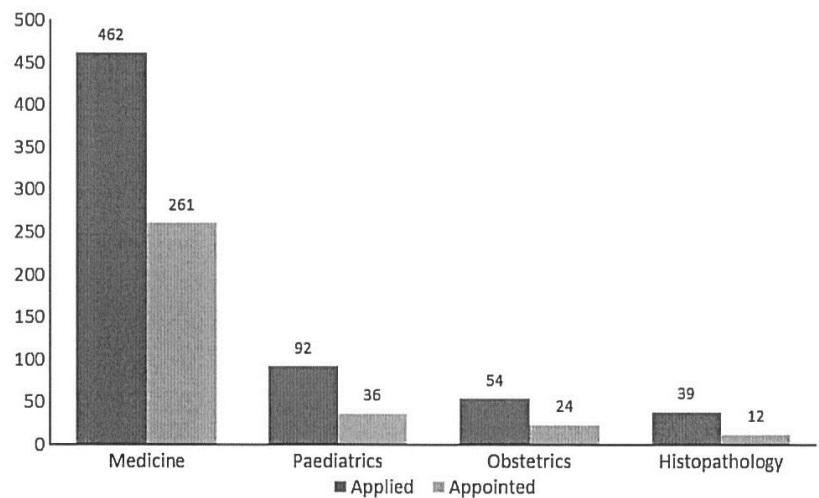
and HST level (Fig. 2). This may relate to the increasing number of Irish nationals attending other EU schools and subsequently returning to Ireland for postgraduate training.

The pattern for appointees is slightly different (Fig. 3). Graduates of Irish medical schools and other EU schools are the two largest groups of post holders at BST and HST level.

Qualifying degree class of appointees

In the case of qualifying degree class, only graduates of Irish medical schools were included, due to the variety of grade descriptors in use in international universities. All second class and undifferentiated honours degrees were combined into an "honours" category (Fig. 4).

BST

There were 555 interns in the 2011–2012 cohort, of whom 519 were graduates of Irish medical schools. 51.6 % of interns within that group applied for a BST position in RCPI programmes. A total of 54.6 % (300) of those applying to BST were within 1 year of qualification.

Distribution of applications across BST programmes

GIM was most frequently applied for, followed by Paediatrics, Obstetrics and Gynaecology and Histopathology. A considerable number of applicants apply for more than one programme as illustrated in Fig. 5. This is particularly marked amongst those applying for Paediatrics and Histopathology. Figure 6 shows number of applications when compared with numbers appointed per programme. Histopathology was the most competitive programme in 2012, with 3.25 applicants per post, GIM was the least competitive, 56.5 % of applicants were appointed within that programme (Fig. 6).

For the purposes of analysis, BST posts in GIM were categorised as Dublin, Cork, Galway, or Other, on the basis of whether it involved rotation through a hospital in one of these centres or not. Dublin, Cork, and Galway each act as hub to a number of different GIM rotations, which incorporate posts outside those centres to varying degrees. Some rotations; however, do not include posts in these cities and these have been categorised as "Other". The distribution of appointees by graduating medical school across these geographical areas is shown below in Table 2.

As might be expected there is a clear tendency for graduates of Irish schools to undertake BST in the geographical area in which their school is based. Although graduates of non-Irish schools are seen to be working in all geographical areas, the percentage ranges from 19 % of trainees in the Galway region to 69 % in the "Other" category, which includes posts in Limerick, Letterkenny, Louth/Meath, Kilkenny, Wexford, Clonmel, and the Midlands Regional Hospitals.

RTP

71 % of RTP trainees were registered as training in medical specialties, the majority in GIM and in Cardiology.

14 % were training in Obstetrics and Gynaecology and 12 % in Paediatrics. 24 % of those registering for RTP had been unsuccessful candidates for HST in July 2012. In total, 32 % had previous applied to a HST programme, up to 3 years prior to July 2012. Only 10 % of trainees were noted to have participated in RTP previously.

HST

At HST level, the RCPI oversees training programmes in medical specialties, Pathology, Obstetrics and Gynaecology, Paediatrics, Public Health and Occupational Medicine. Numbers of posts available in a given year vary, determined by the number of available approved clinical training posts and affected by numbers completing training and numbers of existing trainees taking or returning from out of programme experience. Figure 7 shows numbers of applications and appointments by programme for July 2012.

Overall, Public Health was the most competitive programme, with 4.75 applicants per post. Within the medical specialties, Cardiology and Gastroenterology had the most applicants, 18.3 and 11 % of total applicants, respectively. Dermatology, however, was the most competitive specialty, with 6.5 applicants for each post (Fig. 7).

Tracking of candidates who were not appointed to BST and HST

BST applicants who were not appointed may not have been offered a post, or may have rejected an offer or withdrawn from the process. In the 2012 cohort, at least 80 % of graduates of Irish schools who were not appointed were in the latter two categories. The Table 3 shows outcomes for those who were not appointed using data taken from the HSE-MET NCHD database for the year from July 2012.

Of those who were not appointed to HST ($n = 147$), 55.4 % were graduates of Irish schools. Of these, 36 % stayed in Ireland and took up RTP posts. A further 17 % took up registrar posts in Ireland, but did not register for RTP. 6 % entered alternative training. 13 % are no longer registered with the Medical Council and 27 %, although registered with the Medical Council, are neither registered with a training body or recorded as holding a post in Ireland and are therefore unlikely to be working here.

Table 3 Outcomes for those who were not appointed to BST	$n = 208^a$	Other training programme in Ireland	Non-training post in Ireland	Not in the Irish system
	Graduates of Irish medical schools ($n = 137$)	47 %	8 %	45 %
[a] Data missing on eight candidates	Graduates of non-Irish medical schools ($n = 71$)	14 %	26 %	60 %

Fig. 7 Applications and appointments to HST programmes
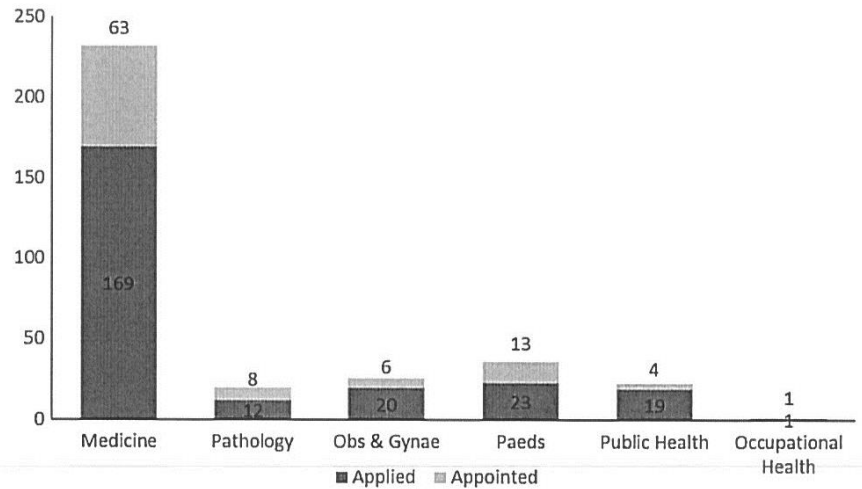
Therefore, 40 % of graduates of Irish medical schools, who were not appointed to HST, appear to have left the country.

History of working abroad

The employment histories of all applicants who were graduates of Irish medical schools were examined for history of working outside Ireland (Table 4). Time spent working in the US as part of the Galway BST rotation was not included here.

Career plans and influences of BST trainees

The response rate to the BST questionnaire was 77 % ($n = 259$). Of these 74 % were graduates of Irish medical schools, 14 % of other EU schools, and 11 % from schools outside the EU, therefore, the sample was representative of the whole group, in that regard. Of note, graduates of Irish medical schools are a younger cohort, with mean age 26.5 years, compared with other EU graduates, mean age 28.6 years, and non-EU graduates, mean age 30.8 years. Trainees were asked to indicate their agreement with a series of statements, relating to training and careers, on a Likert scale of 1–6, where 1 indicates strong disagreement and 6 indicates strong agreement.

Overall, 87 % of BST trainees agreed that the high quality of training in Ireland was a factor in their decision to undertake training here. For 64.5 % friends and wider family was a factor in staying in Ireland, while for 32 % having a spouse/partner or children influenced the decision. 57.2 % agreed that income is reasonable for trainees in Ireland, but fewer (45 %) agreed that working conditions were acceptable. Graduates of Irish medical schools were significantly less positive about income and working conditions in Ireland compared with others ($p < 0.005$ and $p < 0.02$, respectively).

88 % hoped to be on a HST programme in 5 years time and 86 % to be a consultant in Ireland in 10 years time. Graduates of Irish medical schools were significantly less positive in their agreement with these aspirations than their EU and non-EU counterparts ($p < 0.02$). General practice in Ireland was the primary objective of 14 % of the group. Graduates of other EU schools were the group most likely to agree that GP was a career goal. Overall, BST trainees expressed confidence about achieving their goals with 94 % confident of the 5 years goal and 86 % confident of the 10 years goal. 81 % felt they had a good understanding of what it means to be a consultant in Ireland. 87 % ultimately would like to work in Ireland. 74 % felt that training in Ireland would give them a better chance of a consultant post in Ireland. 52.5 % agreed that training abroad was of a higher standard than in Ireland. 92.5 % stated they would like to

Table 4 Frequency of previous working abroad in applicants for BST, RTP, and HST

	Worked outside Ireland	Location	Duration
BST applicants	47 (12.4 %)	Australia/NZ	Up to 2.5 years
RTP applicants	8 (22 %)	All Australia/NZ	Up to 1 year
HST applicants	51 (28 %)	Australia/NZ UK, Canada and Africa	Up to 18 months

spend time outside Ireland in the future. 57.4 % attributing this to life experience rather than training. Graduates of Irish medical schools were significantly more likely to be unsure of what they would be doing in the future and to be less confident of achieving their 10 years goal. They were less likely to have identified a subspecialty of interest and less likely to feel that they had a good understanding of what it means to be a consultant. However, they were the group most likely to want to ultimately work in the Irish healthcare system. Controllable working hours were significantly more important to Irish and other EU graduates.

In response to questions about the sources of information on which they base their career plans, over 90 % agreed that their own experiences, talking to peers and talking to trainees working a few years ahead of them in the Irish system were important sources. Talking to consultants and trainees working abroad were less important, but still significant sources, used by over 70 % of trainees. Only 22 % were influenced by what they read and heard in national media; however, the medical press appears more influential and was considered a source by 37 % of trainees.

Discussion

This study provides useful data on trainees and training programmes at three different points along the training trajectory, during a time of controversy and change in the Irish healthcare system. Monitoring trends in applications to PGMET, in terms of graduating medical school and competition for training posts, and understanding the career aspirations of trainees will support the development of evidence-based policy in this area. Much of the data presented in this paper has been collated from pre-existing, but fragmented sources. We were unable to report on some important aspects, e.g., trainee gender or reasons for refusal of posts, as they had not been recorded. Whilst this is a methodological limitation, it also highlights the inadequacy of existing data systems relating to PGMET.

This study shows that the majority of trainees, at all levels, are graduates of Irish medical schools, which is consistent with recently published Medical Council figures. Therefore, the impact of any "exodus" is not currently being seen in an increase in foreign trained doctors in RCPI training programmes. Furthermore, we have shown that as one progresses along the training trajectory that an increasing proportion of graduates of Irish medical schools have spent some time working abroad, particularly in Australia and New Zealand, up to 28 % at HST level, and for varying periods up to 2.5 years. This provides a context for the findings of the intern tracking study, which showed that 45 % of interns were not working in the Irish healthcare system 3 months after completion of internship [5]. It is evident that a proportion of those who leave

Ireland subsequently return to continue training here. Confirmation of this trajectory is also seen in the career plans and influences questionnaire. It is clear that spending some time working abroad is now part of the career plan of the vast majority of trainee doctors and that this is often a lifestyle choice. This is a factor which is beyond the influence of stakeholders in PGMET, but one which needs to be planned for, in terms of the doctor shortages which may occur as a result, but also in relation to ensure that the quality of PGMET in Ireland will attract graduates back to train and work here. Development of formal linkages with institutions abroad and the integration of posts outside Ireland into Irish training programmes could be a key means to address this issue.

Policy makers considering the creation of additional training posts, as a graduate retention solution, need to consider current levels of demand for such posts. Current HST-MET policy is to expand training posts, to counter the "exodus" of medical graduates. Posts at BST level are competitive, in that there is more than one applicant per post available. In relation to the graduates of Irish medical schools, however, those who were not appointed either withdrew from the process or rejected the post offered in at least 80 % of cases. This may be because they have been appointed to a training post under another training body, or because they have decided to work outside the Irish healthcare system. 47 % of this group took posts with other training bodies, suggesting that BST under the RCPI was not their primary aim. A further 45 % left Ireland, most likely for lifestyle reasons [5]. Only 8 % ($n = 16$) of graduates of Irish schools, not appointed to BST, took nontraining posts in Ireland, which suggests that, at BST level, there is little evidence of graduates of Irish schools being unable to avail of training in Ireland should they wish to do so. Increasing numbers of training posts in BST is unlikely to improve retention at this level. Furthermore, new BST posts, created to compensate for the reduction in hours worked under the European Working Time Directive, are unlikely to be filled by graduates of Irish medical schools.

At HST level the picture is more complex. 88 % of those entering BST hope to continue to HST in Ireland, yet the numbers of graduates of Irish schools applying for HST are lower than would be expected if these aspirations were maintained as they progress through training. Systematic weaknesses have been identified in BST training environments [7], which may impact on decisions to pursue HST. We know little about what happens to trainees after completion of BST and the factors that affect progression to HST. Despite this level of attrition, HST is much more competitive than BST, for applicants in general, and for graduates of Irish schools. The RTP, which will cease in 2014, currently captures a minority of those waiting to secure HST positions. Follow up data on those who were not appointed to HST reveals that 40 %, of those who were graduates of Irish schools, left the country. This would

suggest that a significant number of trainees are lost, at least in the short term, at this transition point due to a shortage of HST posts. With the cessation of RTP, the lack of a recognised training option for those failing to be appointed to HST could exacerbate numbers leaving Ireland. Expansion of HST posts would ameliorate this situation and plans to do so are in progress; however, this policy needs to be tempered by consideration of the likely availability of consultant posts on completion of training.

Geographical configuration of training schemes is an important consideration, in terms of health service delivery, but also trainee satisfaction. This has been highlighted in the recently published Interim Report of the Stragetic Review of Medical Training and Career Paths [15]. Graduates of Irish schools tend to show a preference for BST rotations near their qualifying medical school. This is particularly marked in relation to UCD graduates, who, in the 2012 cohort, rarely took posts outside the Dublin area. UL graduates are an exception to this pattern, although a small cohort in absolute numbers, no UL graduates took GIM BST posts in the Mid-Western Regional Hospital training programme. Training posts, which do not rotate through the major urban centres, were taken by graduates of non-Irish schools in a majority of cases. The creation of hospital groups [16] and the implementation of the small hospitals framework [17] offer an opportunity to reconfigure training rotations in ways that reflect the affordances of the training environments across hospital sites, while recognising that the majority of graduates of Irish schools have a preference for training in larger urban locations. In April 2013, the RCPI commenced a strategic review of BST to address these issues. A significant minority of BST posts in all geographical areas are held by foreign trained doctors, including Dublin, which suggests that, for graduates of Irish schools, the issue is not simply one of location.

We have attempted to address the issue of trainee quality in this study, in response to anecdotal impressions that quality is declining. We acknowledge that the metric applied here, degree class is a crude measure with several limitations. We could examine degree class only for the graduates of Irish medical schools, as the descriptors used by international medical schools vary widely and are not directly comparable. Even within Ireland; however, the different grade descriptors in use, and the lack of data available regarding the proportions of graduates from each school awarded the various classes of degree, make this data difficult to interpret. At best, it acts as a baseline for future studies. With the introduction of the use of class centile position for in intern placement, we have an indicator of candidate quality that might be argued to be comparable amongst graduates of Irish schools. Class centile was not collected on RCPI applications to BST, although it would have been available for the 2012 cohort. The introduction of a national licensing examination would add to the transparency of the issue of candidate quality, and is a matter for wider debate.

The context for PGMET in Ireland is changing week to week. The career plans and influences questionnaire was administered before some of the more recent changes in relation to consultant pay and conditions [18] and; therefore, does not capture trainee responses to those changes. None the less, it is encouraging to see that for many, the quality of training in Ireland is a positive factor in deciding to train in Ireland. However, it must be noted that working conditions are viewed negatively, particularly amongst graduates of Irish schools. The impact of implementation of the European Working Time Directive on this perspective will require further investigation. Trainees are more likely to be influenced by talking to peers and more senior trainees than consultants, which raises questions as to why consultants do not play a greater role in providing career guidance. The RCPI commenced an informal mentorship programme in July 2013 for all first year BST trainees initially, with more formal recommendations to be made in the strategic review of BST, currently underway.

This study provides a context for the discussion of PGMET in Ireland, as it currently exists and into the future. It addresses the issue of inadequate availability of demographic data raised by the Buttimer report [3] and others. We suggest that the issue of the trainee "exodus" is more complex than is often portrayed. Our graduates want to experience life and work abroad and their medical degree affords them the opportunity to do so. For many, this is a "gap year" phenomenon after which they return to Ireland. It is also true, however, that the attrition rate for trainees between BST and HST is high and related to the bottleneck at HST, sending trainees abroad in pursuit of training programmes. Selective expansion of HST posts is a potential solution, but quality of BST is also an area that requires attention. Despite the negativity of the public discourse, many graduates of Irish medical schools continue to choose to pursue PGMET in Ireland, where they believe the training to be of high quality and where they ultimately see themselves working as consultants. The Implementation of the RCPI Quality Improvement in Education and Training (Exemplar) Programme and changes in the structure of the health system, through the establishment of hospital groups and the small hospitals framework, offer an opportunity to re-examine the delivery of training, to attract and retain graduates of Irish medical schools within the training cohort.

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Conflict of interest None.

Appendix

Career Plans and Influences Questionnaire.

BST & RTP Form - Medicine

RCPI number : _____

Are you:　　　　　Male ☐　　Female ☐

Are you a graduate of:

Irish medical School ☐　　Other EU medical school ☐　　Non EU Medical School ☐

Why have you chosen to train in Ireland?

Indicate how important each of these factors was in your decision making.	Not important at all				Very important
The medical training is of high quality in Ireland	1 2 3 4 5 6
Income for junior doctors is reasonable in Ireland	1 2 3 4 5 6
Working conditions (hours, holidays, study leave) are acceptable in Ireland	1 2 3 4 5 6
I have a spouse/ partner/ children in Ireland	1 2 3 4 5 6
My wider family and friends are in Ireland	1 2 3 4 5 6
Staying in Ireland was the easiest option	1 2 3 4 5 6
I tried but failed to get a job outside Ireland	1 2 3 4 5 6
I am unsure of my career plan and need some time to work it out	1 2 3 4 5 6

Career plans: Please indicate the degree to which the following statements apply to you

Ideally, in five years time…..	Disagree Strongly				Agree Strongly
I hope to be on a Higher Specialist Training Scheme in Medicine in Ireland	1 2 3 4 5 6
I hope to be training in or to have completed training in General Practice in Ireland	1 2 3 4 5 6
I hope to be on a Higher Specialist Training Scheme in Medicine outside Ireland	1 2 3 4 5 6
I hope to be training in or to have completed training in General Practice outside Ireland	1 2 3 4 5 6
I am unsure what I will be doing	1 2 3 4 5 6

Other : please indicate job and location _____

I am confident that I will achieve my 5 year goal　　1 2 3 4 5 6

Ideally, in ten years time…………

I hope to be a Consultant Physician in Ireland	1 2 3 4 5 6
I hope to be a Consultant Physician outside Ireland	1 2 3 4 5 6
I hope to be a GP in Ireland	1 2 3 4 5 6
I hope to be a GP outside Ireland	1 2 3 4 5 6
I don't know what I will be doing	1 2 3 4 5 6

Other : please indicate job and location _____

I am confident that I will achieve my 10 year goal　　1 2 3 4 5 6

	1=Disagree Strongly	6=Agree Strongly

Choosing a medical specialty. Please indicate your agreement with the following.

I feel I have a good understanding of what it means to be a consultant physician in Ireland		1 2 3 4 5 6
I have already identified a specialty in which I could see myself working in the future		1 2 3 4 5 6
I expect I will identify the right specialty for me as I work in different specialties over the next few years		1 2 3 4 5 6
Things that would make me want to enter a particular specialty are :	Seeing a role model in that specialty	1 2 3 4 5 6
	Having a good educational experience while working in that area	1 2 3 4 5 6
	Intellectual interest in the content of the specialty	1 2 3 4 5 6
	Greater degree of patient contact	1 2 3 4 5 6
	Dealing with chronic disease	1 2 3 4 5 6
	Dealing with acute conditions	1 2 3 4 5 6
	Income	1 2 3 4 5 6
	Controllable working hours and on call schedule	1 2 3 4 5 6
	Likelihood of job opportunities in the future	1 2 3 4 5 6
	Opportunities to undertake research	1 2 3 4 5 6
	Opportunity to train part time	1 2 3 4 5 6

Training abroad: Please indicate your level of agreement with the following statements — Disagree Strongly → Agree Strongly

I would like to spend time training outside Ireland in the future	1 2 3 4 5 6
I would like to spend time abroad for the life experience rather than specifically for training	1 2 3 4 5 6
Ultimately I would like to come back to Ireland	1 2 3 4 5 6
Training in Ireland would give me a better chance of a consultant post in Ireland	1 2 3 4 5 6
Training abroad is of a higher standard than that in Ireland	1 2 3 4 5 6

Opinions on training:

Please rate the importance of the following in forming your opinions on training in Ireland — Disagree Strongly → Agree Strongly

My own experiences	1 2 3 4 5 6
Talking to my peers	1 2 3 4 5 6
Talking to people a few years ahead of me training in Ireland	1 2 3 4 5 6
Talking to people a few years ahead of me training abroad	1 2 3 4 5 6
Talking to consultants	1 2 3 4 5 6
National press & Media	1 2 3 4 5 6
Medical press	1 2 3 4 5 6

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ORIGINAL ARTICLE

Postgraduate training in Ireland: expectations and experience

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Abstract

Background Postgraduate medical training in Ireland has been compared unfavourably with training abroad and blamed for an "exodus" of graduates of Irish medical schools. Exploration of features of a good training environment and development of tools to measure it have been the focus of much published research. There have been no Irish studies examining training environment using such validated tools.

Aim The aim of this study was to use a validated tool, to examine the expectations and experience of training, amongst those training under the Royal College of Physicians of Ireland (RCPI).

Method The Dutch Residency Education Climate Test (D-RECT) is a 50 item tool to measure postgraduate learning environments. D-RECT was sent to all new entrants to RCPI training programmes in July 2012 ($n = 527$) and completed in regard to expectations of training (response rate 80.6 %). In March 2013, D-RECT was sent to all RCPI trainees ($n = 1,246$) to complete in relation to the post held on 1 March (response rate 32.6 %). Data were analysed in SPSS version 18.

Results Experience fell short of expectations for basic specialist training, however, scores for experience rose with greater seniority to match expectations. Positive aspects were teamwork, consultant willingness to discuss patients and respectful treatment of trainees. Areas of weakness were provision of feedback and time to learn new skills.

Conclusion Measurement of learning environment at a national level using a quantitative tool provides useful information for quality assurance and improvement of training.

Keywords Learning environment · D-RECT · Medical education · Postgraduate medical education and training · Graduate retention

Introduction

In 2006, Irish government and key stakeholders agreed a vision for Postgraduate Medical Education and Training in Ireland;

> "that the postgraduate education and training environment will be attractive to all medical graduates and deliver high-quality schemes that will result in a sufficient number of fully trained, competent doctors to deliver a patient centred health service in this country" [1]

The Medical Council of Ireland, the Health Service Executive and 13 postgraduate training bodies have legislative responsibilities for the delivery of this vision. The Health Service Executive Medical Education and Training Unit (HSE-MET), oversees the organisation, structure, management, coordination and funding of medical education and training in Ireland. Through service level agreements, the postgraduate training bodies are responsible to

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HSE-MET, for the provision of postgraduate training and to the Medical Council of Ireland, as their accrediting body, which assures the quality of training provided.

While relationships between these bodies and their relative functions have been formalised in recent years, the quality of postgraduate medical education and training (PGMET) remains a focus of debate in Ireland, both in the medical media and in the public domain. Within this discussion, training in Ireland is compared unfavourably with training abroad and blamed for the "exodus" of graduates of Irish medical schools from the Irish healthcare system [2, 3]. Evidence to support this position is derived from trainee surveys which focus on satisfaction with current training. In 2004, 63 % of interns agreed with the statement that training abroad was better than that available in Ireland [4]. This was supported in the Career Tracking Survey 2005, looking at the 1994 and 1999 graduating cohorts who identified better training facilities, further training and better career prospects as advantages of training outside Ireland [5]. More recently, in 2012, a survey of non-consultant hospital doctors (NCHDs) [2] (response rate not provided) reported 50 % ($n = 190$) of respondents currently working fulltime in Irish hospitals were dissatisfied with their current post, in terms of the general nature of the job and the quality of training they were receiving [2]. A study examining satisfaction amongst surgical trainees (response rate 30 %) found that only 51 % of junior trainees would undertake training in surgery in Ireland again [6]. In contrast, the National Survey of GP trainees 2012 [7] (response rate 55 %) showed much higher levels (>80 %) of satisfaction, with both hospital and GP registrar posts. In the middle ground, the intern survey in 2011 (response rate 44 %) showed 65 % rated their experience of the intern year, including training aspects, as excellent or good [8]. Both the Buttimer Report [1] and the HSE strategy for medical education, training and research 2007 [9] emphasise the need for quality assurance of training posts. However, the available data in relation to satisfaction of trainees across PGMET in Ireland are patchy and based on studies with low or moderate response rates. Training bodies conduct site visits and collect trainee feedback through various mechanisms and the Medical Council has accredited all, but one of the postgraduate training bodies [10]. However, there is a lack of transparency in relation to training quality data when compared with medical training systems in other countries. The results of the UK General Medical Council's National Training Survey of all NHS trainees (98 % response rate), are published online and provide detailed quality data on individual training sites and posts [11].

Postgraduate Medical Education and Training happens predominantly through workplace learning, learning that is informal, opportunistic and frequently unrecognised [12].

In 2008, 67 % of registrars and SHOs felt that the majority of their learning was informal/situational rather than through formal scheduled activities [13]. While trainee satisfaction with training, as explored by the studies quoted above, is an important measure, the evaluation of training environments should go beyond what trainees like and examine the conditions for learning afforded by the clinical settings in which they work. Learning environment can be defined as "The material and social context wherein learners 'learn', which influences learners' behaviour, emotions, and practical competences. Learning should be understood here as 'acquiring knowledge' as well as 'participating in practice [14]'." What constitutes a good learning environment, and how to measure its elements, as part of quality assurance, has been the focus of much published research in the medical education literature [15]. Tools have been developed and validated for this purpose in both undergraduate and postgraduate settings. These tools are quantitative questionnaires which are based on theories of workplace learning [16] or derived from expert consensus using the Delphi technique [17]. Confirmation of construct validity of a quantitative tool means that it has been shown to measure the "constructs" or elements that you want to assess. Use of pre-existing validated tools allows benchmarking between clinical sites and international training systems. The Dundee ready educational environment measure (DREEM) is such a tool for the undergraduate setting [18] which has been widely used internationally, measuring perceptions of learning, teachers and atmosphere, as well as academic and social self-perceptions [19–22]. DREEM has been used in the Irish undergraduate context to demonstrate the strengths of particular types of learning environment for junior students [23, 24]. Such information is valuable in planning undergraduate curricula and student placements. The Manchester Clinical Placement Index is a more recently developed tool which has the advantage of having fewer items than DREEM, more robust construct validity and allowing space for qualitative comments [16]. Tools for the postgraduate setting include the postgraduate hospital education environment measure (PHEEM) [25] which looks at role autonomy, support and supervision. The construct validity of PHEEM is under question, however, and the Dutch Residency Educational Climate Tool (D-RECT) [26], which is used in this study, is a more recently proposed alternative. D-RECT is a 50 item tool which measures supervision, coaching and assessment, feedback, teamwork, peer collaboration, role of consultants, matching of work to level of trainee, formal education, role of trainer and learning from handover. Its items are derived from studies of positive features of learning environments. There are no published data to date that we are aware of in the Irish PGMET setting using such a validated tool to

examine learning environment. This study aims to address this deficit by examining trainee expectations and experience of training environment.

The relationship between training environment and working conditions complicates any attempt to understand the affordances and constraints of postgraduate learning environments. Although often presented as such, training and service are not two distinct entities. Service provision is a fundamental part of training, which represents a trajectory of increasing participation in practice over time [27]. Nonetheless, working conditions for trainees, in Ireland, have deteriorated in recent years as a result of wider changes in health policy and the economic climate. Health cutbacks and the moratorium on recruitment within the Health Service Executive have led to short staffing across the health service. A joint statement to the Department of Health and Children from Royal College of Physicians of Ireland, Royal College of Surgeons of Ireland and the Institute of Obstetricians and Gynaecologists of Ireland, in 2011 suggested that service pressures and failure to implement the European Working Time Directive have impacted negatively on the training environment and led to a breakdown in trust between trainees and the health service [28]. Recent industrial action was further evidence of the problem. The issue of the European Working Time Directive illustrates the complexity of the relationship between working conditions and learning. While working excessive hours is dangerous for patients and a barrier to learning, there has also been concern that shortening trainee working hours will also reduce learning opportunities [29]. Working under poor conditions may impact learning negatively, however, satisfactory conditions do not guarantee a good learning environment.

The Royal College of Physicians of Ireland (RCPI) is the largest of the accredited postgraduate training bodies. The RCPI and its Faculties of Paediatrics, Obstetrics and Gynaecology, Pathology, Public Health and Occupational Health, oversaw 44 % of postgraduate trainees in Ireland in 2011–2012 [30]. The training pathway is as follows; on completion of internship, trainees can apply for Basic Specialist Training, in General Internal Medicine, Paediatrics, Obstetrics and Gynaecology or Pathology. Completion of basic specialist training (BST) takes 2–3 years, following which trainees are eligible to apply for higher specialist training (HST). In the intervening period between BST and HST trainees may take registrar posts, which may or may not be part of a registrar training programme (RTP) and retrospectively recognised for HST. The study described here focuses on the training programmes under the auspices of the RCPI and its faculties and is part of a wider programme of research on PGMET being conducted jointly by RCPI and University College Cork.

The aims of this study were:

1. To examine the expectations of trainees entering BST, RTP and HST under the auspices of the RCPI in July 2012.
2. To examine the trainees experiences of training across programmes under the RCPI in 2013.
3. To compare expectations with the realities of the training experience.

Methods

Expectations of training

Trainees entering BST, RTP and HST in July 2012 ($n = 527$) were sent the D-RECT questionnaire, with their training agreement, to evaluate their expectations of the training programmes. D-RECT is a 50 item validated questionnaire for the measurement of learning environment in the postgraduate setting. Trainees indicated their agreement with 50 statements on a Likert scale from 1 to 5, where 1 is strongly disagree and 5 is strongly agree, with 3 indicating neither agree nor disagree. For this study, the wording of D-RECT was altered to reflect expectations rather than experiences of training and for the Irish context. Other minor changes were made to reflect local terminology for grades of trainee, trainers and the handover process.

Experiences of training

In March 2013, all RCPI trainees, the cohort commencing training in July 2012 and also those who were already part way through the programme at that time ($n = 1,282$), were sent the D-RECT questionnaire by post, requesting that they complete it in relation to experiences of training in the post held on March 1st 2013. The "Experiences" questionnaire featured the same items as the "Expectations" version, with appropriate grammatical alterations. Follow-up reminder questionnaires were sent by email with a link to an online version of the questionnaire. The survey was not anonymous, as the data needed to be linked to the post in question and the training programme. The surveys were returned directly to the researcher and were confidential.

Questionnaire data were entered into EXCEL 2007 and analysed in SPSS Version 19. Descriptive statistics, Mann–Whitney U testing and Kruskal Wallis testing were performed to compare expectations and experience of training, by mean total D-RECT score and mean score for individual items, between programmes, specialty training groups and geographic areas. Multiple comparisons were allowed for by setting p at <0.0001. Data relating to opening the reminder email, accessing and completion of the

Table 1 Responses to expectations of training D-RECT

	BST	RTP	HST	Programme not recorded	Total
Sent	333	99	95		527
Returned	224	38	76	87	425
Response rate (%)	67.2	38.3	80		80.6

questionnaire, provided by Newsweaver, a communications software provider, were examined. Ethical approval was granted by the Clinical Research Ethics Committee of the Cork Teaching Hospitals.

Results

Response rates

Expectations of training

New entrants to RCPI programmes at BST, RTP and HST level ($n = 527$) were sent D-RECT questionnaires before the commencement of their first post and asked to return the form with their training agreement. Four hundred and twenty-five (80.6 %) forms were returned in total. Details of responses across programmes are outlined in Table 1.

Experience of Training

Experience of training questionnaires was sent by post and email to 1,282 trainees, 587 in BST, 129 in RTP and 566 in HST. A number of HST trainees contacted were currently out of programme, in research posts or clinical posts abroad and were ineligible to complete the survey, reducing the HST group to 530 and the total to 1,246. Response rates are shown in Table 2.

Paired responses

One hundred and twenty-three trainees responded to both expectations and experiences questionnaires, allowing paired analysis of these responses.

Table 2 Responses to experience of training D-RECT

	BST	RTP	HST	Total
Sent	587	129	566	1,246
Returned	210	32	165	407
Response rate (%)	35.7	24.8	29.0	32.6

Mode of response

Fifty-seven percent of responses to the D-RECT experience of training questionnaire were returned via post and 43 % via the online system. The initial email, sent 2 weeks after the postal version, to all trainees, was opened by 48 % and the survey within the email opened by only 8 %. A reminder email, led to 33 % of trainees opening the survey. A range of 67–78 % of trainees opened the email on a mobile device rather than a PC on each occasion.

Non-responder analysis

Response rates for the expectations and experience questionnaires differed significantly. The high response rate to the Expectations questionnaire is likely to be related to the compulsory nature of the paperwork which accompanied it, although completion of the questionnaire itself was not compulsory. In light of the lower response to the Experiences questionnaire, analysis of the representativeness of the responders was undertaken.

(i) Demographics: Data on gender and qualifying medical school were not available for the whole study population, however, data for first year BST and first year HST trainees showed that responses within these groups were spread proportionately across gender and location of qualifying medical school.

(ii) Responses by training level: As shown in Tables 1 and 2, RTP was under-represented in responses to both Expectations and Experience questionnaires. RTP has therefore been excluded from the analysis.

(iii) Responses by specialty area: Medicine, Paediatrics and Obstetrics and Gynaecology as training programmes were proportionately represented in the responses. Other programmes (Pathology, Public Health, and Occupational Health) were excluded due to under-representation and doubt about the relevance of the questionnaire for their training activities.

(iv) Wave analysis, looks at results from responses to the initial round of questionnaires, in comparison with those returned in response to reminders, on the assumption that those who reply late are more likely to respond in similar ways to those who did not respond. No significant difference in mean total D-RECT score on wave analysis of the responses to the Experience questionnaire.

Having excluded RTP and some specialty groups, we believe these data are likely to be representative of the population in terms of gender, qualifying medical school, training level and specialty. Further analysis relates only to

Table 3 Mean D-RECT scores for expectations and experience of training by trainee group- all responses

	Expectations mean total D-RECT (SD)	Expectations (N)	Experience mean total D-RECT (SD)	Experience (n)	Gap	p value Mann–Whitney U
BST (year 1)	190 (34)	230	162 (32)	108	28	p < 0.0001
BST (year 2)			164 (31)	95		
HST	194 (29)	61	187 (31)	146	7	NS
Total	192 (33)	351[a]	173 (33)	349	18	p < 0.0001

[a] Includes those whose training level was not indicated on the questionnaire

Table 4 Mean D-RECT scores for expectations and experience of training by trainee group. Paired responses only

	Expectations mean total D-RECT (SD)	Expectations (N)	Experience mean total D-RECT (SD)	Gap	p value Wilcoxon Signed Ranks
BST (year 1)	189 (35)	84	164 (33)	25	p < 0.0001
HST	197 (32)	17	193 (32)	4	NS
Total	191 (35)	123	170 (35)	21	p < 0.0001

BST and HST, in medicine, obstetrics and gynaecology, and paediatrics.

Mean total D-RECT scores—expectations and experience

Scores are discussed below in terms of mean total score and mean score for individual items. The maximum possible D-RECT score is 250. Across the trainee group as a whole, there was a gap between expectations and actual experience of training. This gap narrowed with progression through training, due to an improvement in the training experience, rather than a decline in expectations, which were similar for all trainees. Total mean D-RECT scores at each training level are shown in Table 3. Mean score for BST experience (163) was significantly lower than that at HST level (187) ($p < 0.0001$).

Paired analysis of total D-RECT scores

Subanalysis of paired questionnaires using Wilcoxon signed ranks testing confirmed the picture in the overall group (Table 4).

Individual item scores—expectations and experience

The table below shows the 50 items of the D-RECT tool, with mean score for each item, in relation to expectations and experience of training. The range of possible scores for individual items is 1–5. A score of 3 indicates ambivalence, 1–2 disagreement and 4–5 agreement. Items for which there was a statistically significant difference ($p < 0.0001$) between expectation and experience are marked with an asterisk (Table 5).

13 questionnaire items had mean item scores of 4 and above, pointing to strengths of the training environment. These were predominantly in the subscales of teamwork, peer collaboration and consultants' role. Trainees generally work well with each other and with other healthcare professionals. A less positive aspect of peer collaboration was seen in relation to being able to find a peer to swap on-call, which was most marked amongst BST trainees in medicine (mean item score 2.9). Consultant willingness and availability to discuss patients emerged as positive aspects, as well as their respectful treatment of trainees. On the whole these items met expectations, and in the case of consultant availability, actually exceeded expectation.

Subscales relating to more active participation of consultants in training showed more mixed results. The coaching and assessment subscale showed all, but one item falling short of expectation, with mean scores ranging from 2.2–3.6. The feedback subscale was the weakest, with trainees reporting they do not receive regular feedback on performance and that structured formats of evaluation and feedback are not generally in place. For trainees in internal medicine, there was a rise in the likelihood of getting feedback as one progresses through training, with HST trainees responding to Q12 with a mean item score of 3.3 as compared with a mean item score 2.4 in for first year BST medical trainees.

Subscales for formal education and trainer role showed most items falling short of expectations. This was most marked in relation to trainers monitoring progress and with evaluations being useful. For BST trainees in medicine, the mean item score for trainers monitoring progress was lowest of all trainee groups (mean item score 2.5). A further area of weakness identified was that of sufficient time to learn new skills. Again in Medicine, scores for this item,

Table 5 Mean scores for expectations and experience of training by individual D-RECT questionnaire item

		Expectations mean item score (SD)	Experience mean item score (SD)
Subscale: supervision			
1	The guidelines clearly outline when to request input from a supervisor	3.8 (1.0)	3.1 (1.2)*
2	The amount of supervision I receive is appropriate for my level of experience	4.0 (0.9)	3.8 (1.1)
3	It is clear which consultant supervises me	4.3 (0.9)	4.0 (1.2)
Subscale: coaching and assessment			
4	I am asked on a regular basis to provide a rationale for my management decisions and actions	4.0 (0.8)	3.5 (1.2)*
5	My consultants coach me on how to communicate with difficult patients	3.6 (1.1)	3.0 (1.2)*
6	My consultants take the initiative to explain their actions	3.7 (1.0)	3.6 (1.1)
7	My consultants take the initiative to evaluate my performance	3.8 (1.0)	3.1 (1.2)*
8	My consultants take the initiative to evaluate difficult situations I have been involved in	3.7 (1.0)	3.1 (1.1)*
9	My consultants evaluate whether my performance in patient care is commensurate with my level of training	3.9 (0.9)	3.2 (1.1)*
10	My consultants occasionally observe me taking a history	2.8 (1.2)	2.2 (1.1)*
11	My consultants assess not only my medical expertise but also other skills such as teamwork, organisation or professional behaviour	4.0 (0.9)	3.3 (1.2)*
Subscale: feedback			
12	My consultants give regular feedback on my strengths and weaknesses	3.6 (1.1)	2.8 (1.2)*
13	Observation forms (i.e. Mini-CEX) are used to structure feedback	3.4 (1.1)	2.2 (1.1)*
14	Observation forms (i.e. Mini-CEX) are used periodically to monitor my progress	3.3 (1.1)	2.1 (1.1)*
Subscale: teamwork			
15	Consultants, nursing staff, other allied health professionals and residents work together as a team	4.3 (0.8)	4.1 (0.9)
16	Nursing staff and other allied health professionals make a positive contribution to my training	4.0 (0.9)	3.7 (1.1)
17	Nursing staff and other allied health professionals are willing to reflect with me on the delivery of patient care	3.9 (1.0)	3.7 (1.1)
18	Teamwork is an integral part of my training	4.5 (0.7)	4.3 (0.9)
Subscale: peer collaboration			
19	Residents work well together	4.3 (0.7)	4.2 (0.9)
20	Residents, as a group, make sure the day's work gets done	4.2 (0.8)	4.1 (0.9)
21	Within our group of residents it is easy to find someone to cover or exchange a call	3.8 (0.9)	3.2(1.2)*
Subscale: professional relations between consultants			
22	Continuity of care is not affected by differences of opinion between consultants	3.8 (1.0)	3.3 (1.2)*
23	Differences of opinion between consultants about patient management are discussed in such a manner that is instructive to others present	3.9 (0.9)	3.4 (1.1)*
24	Differences of opinion are not such that they have a negative impact on the work climate	3.7 (1.0)	3.6 (1.0)
Subscale: work is adapted to residents' competence			
25	The work am doing is commensurate with my level of experience	3.8 (0.9)	3.7 (1.0)
26	The work I am doing suits my learning objectives at this stage of my training	4.0 (0.9)	3.6 (1.1)*

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Table 5 continued

		Expectations mean item score (SD)	Experience mean item score (SD)
27	It is possible to do follow-up with patients	3.9 (0.9)	3.8 (1.0)
28	There is enough time in the schedule for me to learn new skills	3.8 (1.0)	2.9 (1.2)*
Subscale: consultants' role			
29	My consultants take time to explain things when asked for advice	4.1 (0.8)	4.1 (0.8)
30	My consultants are happy to discuss patient care	4.2 (0.7)	4.2 (0.8)
31	There are NO consultants(s) who have a negative impact on the educational climate	3.2 (1.3)	3.3 (1.4)
32	My consultants treat me as an individual	4.0 (0.8)	4.1 (0.9)
33	My consultants treat me with respect	4.1 (0.8)	4.2 (0.8)
34	My consultants are all in their own way positive role models	3.9 (0.9)	3.9 (1.0)
35	When I need a consultant, I can always contact one	3.8 (1.0)	4.1 (1.0)*
36	When I need to consult a consultant, they are readily available	3.7 (1.1)	4.0 (1.0)
Subscale: formal education			
37	Trainees will generally be able to attend scheduled educational activities	3.7 (1.1)	3.4 (1.3)
38	Educational activities will take place as scheduled	3.7 (1.0)	3.7 (1.0)
39	Consultants will contribute actively to the delivery of high-quality formal education	3.9 (0.9)	3.4 (1.2)*
40	Formal education and training activities will be appropriate to my needs	3.9 (0.9)	3.2 (1.3)*
Subscale: role of the trainer			
41	My trainer monitors the progress of my training	3.9 (0.9)	3.1 (1.2)*
42	My trainer provides guidance to other consultants when needed	3.7 (0.9)	3.3 (1.2)*
43	My trainer is actively involved in improving the quality of education and training	3.8 (0.9)	3.4 (1.2)*
44	In this rotation evaluations are useful discussions about my performance	3.9 (0.8)	3.2 (1.1)*
45	My plans for the future are part of the discussion	4.0 (0.9)	3.6 (1.2)*
46	During evaluations, input from several consultants are considered	3.8 (0.9)	2.9 (1.2)*
Subscale: patient handover			
47	When there is criticism of a management plan I have developed in consultation with my consultant, I know the consultant will back me up	3.7 (1.0)	3.7 (1.0)
48	Handover takes place in a safe climate	3.8 (1.0)	3.5 (1.1)
49	Handover is used as a teaching opportunity	3.8 (1.0)	3.2 (1.2)*
50	Consultants encourage trainees to join in the discussion during patient handover	3.9 (0.9)	3.4 (1.1)*

* Significant at $p < 0.0001$

rose with increasing seniority, from mean item score 2.5 (BST 1) to 3.3 (HST).

Training environment by location

Trainees were asked to provide the name of the hospital in which they were training. In view of small numbers of trainees in some hospitals and the need to preserve trainee confidentiality, these hospital sites have been collapsed into four categories based on geographical location; Dublin, Cork, Galway and Other.

Site was provided for 333 experience of training D-RECT forms. Distributions across sites and mean total D-RECT score by location are shown in Table 6.

Table 6 Mean total D-RECT score for training experience by location

Location	N per location	Mean total D-RECT (standard deviation)
Dublin	180	176 (34)
Cork	39	176 (34)
Galway	23	179 (23)
Other	91	168 (33)

Discussion

This study demonstrates how measurement of learning environment at a national level, using a quantitative tool, can provide useful information in relation to strengths and weaknesses present systematically. Over time, it also has the potential to identify individual sites and posts where training is exemplary or problematic. These data are essential in addressing quality issues within postgraduate medical education and training. Benchmarking training in Ireland against that delivered elsewhere provides a context for discussion of quality of training. We found that total mean D-RECT scores for trainees in Ireland (173) were lower than those reported for Dutch trainees (188) [26]. The Dutch study looked at trainees across all specialties nationally; up to 6 years post qualification, a comparable group to those examined in our study. Although there are differences between the Irish and Dutch health systems, the fundamental elements of workplace learning [31, 32] addressed in the D-RECT questionnaire are as applicable in Ireland as in the Netherlands and this difference in score should not be dismissed.

The response rate for the Experience questionnaire (32.6 %) is a weakness of this study; however, it is in keeping with response rates for similar studies [26, 33, 34]. Meta-analyses of response rates to questionnaires in healthcare [35] and organisational [36] studies show a range of response rates, an average of 52 % (SD 21.1) being typical. A response rate within one SD of this mean has been proposed as acceptable for such studies [36], placing our study at the lower end of the acceptable range. In an attempt to mitigate for non-response bias [37], under-represented subgroups within the responses were excluded. Responses included in the study were representative in terms of gender, location of qualifying medical school, training levels specialties and geographic areas. Non-responders to surveys can be categorised as passive or active. Passive non-responders do not differ in any systematic way from responders, while active non-responders have specific reasons for not responding and are systematically different. Wave analysis suggested that late responders in this study were passive, however, this does not preclude the existence of active non-responders (ibid).

Online questionnaires sent by the RCPI to its trainees tend to have response rates in line with the average quoted above. We attempted to improve on this by sending both postal and online versions. The key role of trainee feedback in quality improvement was emphasised in the accompanying cover letter, and when reminders were sent out, trainees were made aware of the low response rate and appealed to for their responses. The network of trainee representatives was advised of the study and asked to encourage participation at grassroots level. Nonetheless, we were unable to achieve a good response rate. Data for the online questionnaire reveal that fewer than 50 % of trainees even opened the email requesting their feedback, and only 8 % clicked on the survey to open it. There are many potential explanations for this, including frequent emails from the training body, frequent requests to complete questionnaires, concerns re-confidentiality or even disillusionment with the training body. Survey length and suitability for completion on mobile devices may also be an issue.

Establishment of an ongoing monitoring process for training quality will require the effective engagement of trainees in a quality improvement partnership. Mandatory completion of quality surveys may lead to biased data and is not recommended [36]. Nonetheless, an acceptable and representative response is essential. One option to deal with this issue is to make the return of the survey mandatory, but to allow blank returns to be made. Selection of an appropriate survey instrument, grounded in educational theory and validated for the measurement of clinical training environments is crucial. The D-RECT, used in this study, is the only existing instrument which meets these criteria. Development and validation of an alternative instrument, with fewer items, is an option but represents a significant psychometric research undertaking. How best to collect data on training environments and ways to engage trainees in that process require further investigation and this is the focus of joint efforts between the authors and the Collegiate Members Committee of the RCPI. This work will inform the programme of quality improvement already underway within the RCPI, through the exemplar programme, which focuses on continual improvement of delivery of RCPI training programmes. Targeted site visits, informed by survey data, offer an additional perspective on training quality. The Medical Council, as the accreditation body for the postgraduate training bodies, has an important role as a driver in the development of these processes.

We have identified positive aspects of the training experience in Ireland. Trainees on the whole are treated well by their consultants and work well with other healthcare professionals and each other. Consultants are generally available when needed and happy to discuss patients with trainees. However, we also identified specific

elements of training which are weak throughout the system. These are core training items—provision of feedback, monitoring of progress by supervisor, usefulness of supervisor meetings and adequate time to learn new skills. Amongst trainees in general internal medicine these items improved as training progressed suggesting that consultants and trainers focus their efforts on senior trainees, making time for their learning and taking a greater interest in their progress. Consultant attitudes towards training and trainees, particularly at BST level, require further investigation. Trainee characteristics such as greater seniority, enthusiasm and interest have been shown to enhance consultant interest in clinical teaching [38]. HST trainees, working in their specialty of choice, may be likely to meet these criteria. We have shown that the weakest area of postgraduate training under RCPI is at BST level and that training at this level falls far short of the expectations of trainees entering training. Disappointment with training amongst the BST cohort inevitably filters down to those at intern and senior student level, with clear implications for graduate retention. The strategic review of BST, which commenced in April 2013, aims to address these issues.

Training quality was scored similarly across sites in Dublin, Cork and Galway. Mean score for sites outside of these centres was somewhat lower. Small numbers in training at some sites precluded analysis at individual site level, however, repeated collection of this type of data over time would allow for individual site profiles and a closer examination of specialty training within sites. Such data are an adjunct to, rather than a substitute for, site visits. Qualitative comments collected within our study, and the range of scores reported, indicate that at an individual level some trainees have very poor experiences of training. Cumulative quantitative data can help to flag up such posts and to remediate them.

In addressing issues in PGMET we should take heed of lessons learned elsewhere. An example is seen in the Danish experience, where an extensive reform of postgraduate medical education and training, did not lead to any improvement in training environment [39]. Inclusion of various structural elements does not necessarily improve the day to day experience on the ground, and though well meant, these exercises can be somewhat cosmetic. Mortensen et al. concluded that structural educational initiatives fail to be effective unless the entire workplace organisation accepts and prioritises the educational responsibility in planning the daily work. This is an area we plan to explore in future work.

This study provides, for the first time, data which elucidate the question of quality of postgraduate medical education and training in Ireland. It has demonstrated that there are features of Irish training environments which are working well in challenging times. By highlighting specific areas of weakness this work forms the basis for quality improvement and informs future initiatives.

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Appendix B – Career plans and influences questionnaire

RCPI number :

Are you: Male ☐   Female ☐

Are you a graduate of:

Irish medical School ☐   Other EU medical school ☐   Non EU Medical School ☐

Why have you chosen to train in Ireland?

Indicate how important each of these factors was in your decision making.

High quality training   1   2   3   4   5   6

Family in Ireland (dependents)   1   2   3   4   5   6

Relationship in Ireland (non-dependent)   1   2   3   4   5   6

Unsure of career plan   1   2   3   4   5   6

Easiest option   1   2   3   4   5   6

Failed to get a job abroad   1   2   3   4   5   6

Career plans: Please indicate which of the following statements applies best to you. Choose ONE.

I intend to train in a Medical Specialty   ☐

I might train in a Medical Specialty but might also go into General Practice   ☐

I am unsure what I will do long term   ☐

Training abroad: Please indicate your level of agreement with the following statements

I would like to spend time training abroad in the future   1   2   3   4   5   6

I would like to spend time abroad for the life experience rather than specifically for training

                                                                  1   2   3   4   5   6

Ultimately I would like to come back to Ireland   1   2   3   4   5   6

Training in Ireland would give me a better chance of a consultant post in Ireland

                                                                  1   2   3   4   5   6

Training abroad is of a higher standard than that in Ireland

                                                                            1 2 3 4 5 6

Opinions on training:

Please rate the importance of the following in forming your opinions on training in Ireland

My own experiences	1 2 3 4 5 6
Talking to my peers	1 2 3 4 5 6
Talking to people a few years ahead of me training in Ireland	1 2 3 4 5 6
Talking to people a few years ahead of me training abroad	1 2 3 4 5 6
Talking to consultants	1 2 3 4 5 6
National press & Media	1 2 3 4 5 6
Medical press	1 2 3 4 5 6

Appendix C – Ethical approval

UNIVERSITY COLLEGE CORK
Clinical Research Ethics Committee of the Cork Teaching Hospitals

PROTOCOL SUBMISSION FORM

All items must be completed as indicated; incomplete applications will be returned. A protocol application must include:

1. Protocol Submission Form (pages 1-4) – **Original and seven copies. Original must be signed by the Chief Investigator. Hand written forms will not be accepted.**
2. Consent Form (the standard Ethics Committee format) – **Eight copies.**
3. Detailed Protocol including instruments involved – **Eight Copies,**
4. Details of insurance policies in place to cover the study.
5. Curriculum Vitae of Chief Investigator (2 page document only) - **One copy.**

The complete application package must be received in the Ethics Committee office by the appropriate deadline in order to ensure review the next month. The Ethics Committee office is located at Lancaster Hall, 6 Little Hanover Street, Cork. The telephone number is (021) 4901901 and fax number is (021) 4901919.

Chief Investigator

Name of Chief Investigator: Dr Deirdre Bennett

Appointment: Senior Lecturer

Department: Medical Education Unit, School of Medicine

Office Address: School of Medicine, University College Cork, Brookfield Health Sciences Complex, College Road, Cork.

Telephone No.: 021 490 1591

Protocol Details

Protocol Number:

Protocol Title: Postgraduate Medical Education and Training under the Royal College of Physicians of Ireland: A Case Study

Site(s) of Performance: University College Cork
Royal College of Physicians of Ireland, South Frederick St. Dublin

Co-investigators

Names & Appointments:
Prof. Mary Horgan, Director of the Graduate Entry to Medicine Program, UCC.
Prof. Colm Bergin, Dean of the Royal College of Physicians of Ireland.

Only the co-investigators listed may perform the procedures indicated on this protocol. They may NOT amend the protocol.

Is this protocol part of an active or pending externally funded project: Yes ☐   No ☒

If yes, complete the following:

Names of Agency/Sponsor:

Address of Agency/Sponsor:

Title of Grant Proposal:

Does the Chief Investigator personally gain financially from this study: Yes   □   No   □

Are there any additional cost implications for the hospital management beyond standard of care:

Yes   □   No   □

If *yes* please specify

_____

_____

SPECIAL CONSIDERATIONS

Is this study is part of a **multi-centre** project: Yes   □   No   [x]

Does this study involve **laboratory/clinical procedures** NOT part of ordinary management: Yes   □   No   [X]

Does this study involve the clinical experimental use of **radiation or radioisotopes:**   Yes   □   No   [X]

Does this study involve the use of **biohazardous** or **infectious radioisotopes:**   Yes   □   No   [X]

If yes, please explain:

_____

_____

Are human subjects from the following **special population(s)** involved in this study: *Tick where appropriate*

Infants (<1 Year)	□	Children(1-17 years)	□
Elderly (>59 years)	□	Pregnant Women	□
Prisoners	□	Mentally Disabled	□
Mentally Retarded	□	None of these	[X]

No investigator shall recruit from a student group where he/she, or any of the co-investigators, have material influence over the assessment of academic performance of that student group.

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PRECODED STUDY DESCRIPTION For each of the categories below, please select the items(s) which best describe(s) your study. You may tick up to two items for each category.

Type of study:

Behavioural-Social	[x]	Compassionate [ ]	Descriptive [x]
Diagnostic	[ ]	Educational [x]	Epidemiologic [ ]
Preventive	[ ]	Therapeutic [ ]	

Other: _____

Organ System(s):

Not Applicable [X]	Breast [ ]	Cardiovascular [ ]
Dermatologic [ ]	Endocrine/Metabolic [ ]	Gastrointestinal/Hepatic [ ]
Haematologic [ ]	Musculo-skeletal [ ]	Neurologic [ ]
Ophthalmologic [ ]	Otolaryngologic [ ]	Pulmonary [ ]
Renal [ ]	Reproductive [ ]	Urinary tract [ ]

Cells, blood, other body fluids or tissues only [ ]

Other : _____

Type of Disorder:

Not Applicable [X]	Congenital [ ]	Degenerative [ ]
Infectious [ ]	Immunologic [ ]	Malignant [ ]
Metabolic/Endocrine [ ]	Normal Physiologic [ ]	Psychiatric [ ]
	Traumatic [ ]	

Other :

Type of Drug/Device:

Not Applicable [X]	Analgesics [ ]	Anaesthetics [ ]
Anti-asthma/allergy [ ]	Anticoagulant [ ]	Anti-infectives [ ]
Anti-inflammatory/Anticonvulsants [ ]	Biologicals/Vaccines [ ]	Blood Components [ ]
Cardiovascular/Antihypertensive [ ]	Chemotherapeutic Agents [ ]	Contraceptives [ ]
Contrast Media [ ]	Dermatologics [ ]	Diagnostics [ ]
Hormones [ ]	Immunosuppressives [ ]	Vitamins [ ]

Sedatives/Antidepressants/Tranquilizers [ ]   Other: _____

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PROTOCOL ABSTRACT – This page **must** be completed; Use additional pages as needed).

Purpose of Investigation:
The proposed work is a case study of postgraduate medical education and training (PGMET) under the auspices of The Royal College of Physicians of Ireland, covering Basic and Higher Specialist Training in Medicine, Paediatrics, Obstetrics and Gynaecology and Histopathology. Postgraduate Medical Education and Training lies at the intersection of the interests of multiple stakeholders - the medical profession and its trainees, government, regulatory bodies, manpower planners, health service providers and medical educators. It is a complex area impacted by larger overlapping domains. As a reflection of the multifaceted nature of the topic, this study will employ both quantitative and qualitative methods to inform these diverse perspectives.
Objectives:

- To add to the available quantitative data on trainees in Basic Specialist Training (BST), the Registrar Training Program (RTP) & Higher Specialist Training (HST), linking demographics, academic achievement, training experience and career path.

- To propose a minimum data set for the tracking of graduates of Irish Medical Schools to support planning and policy.

- To evaluate the Learning Environment for Irish PGMET using quantitative and qualitative methods from both trainer and trainee perspectives, exploring in depth the unique context specific problems affecting PGMET in Ireland today.

- To propose means through which the RCPI can monitor quality of training on an ongoing basis.

- To propose means to improve the quality of PGMET in the face of current challenges.

Procedures to which humans will be subjected:
This study will involve the administration of questionnaires through trainee e-portfolios and in person at training days. Return of the questionnaire will be mandatory, however there is an option to return it blank should the trainee wish to do so.

There will be focus groups and qualitative interviews with trainees and trainers selected on the basis of their responses to the questionnaires. These will be subject to the agreement of the individuals to participate in the study.

Potential benefits to subjects and/or society:
Retention of native medical graduates is not a problem unique to Ireland. However, a lack of quantitative data and no clear understanding of why our graduates choose to train abroad have hampered interventions to reverse the trend in Ireland. The failure to track graduates of Irish Medical Schools and their career pathways has led to reliance on anecdotal evidence to inform policy making. This work aims to add to the available quantitative data by tracking a cohort of BST & RTP trainees through to HST or exit from training in Ireland. A minimum data set for the tracking of graduates of Irish Medical Schools to support planning and policy will be proposed. The experience of our trainees and their trainers of the Irish PGMET Learning Environment has not been evaluated despite the unsubstantiated perception that it is substandard. This work aims to explore in depth the unique context specific problems affecting PGMET in Ireland today.

Potential risks to subjects and precautions taken to minimise risk:
Sensitive data relating to feedback on training will be held by the researcher and fed back to RCPI in aggregate format. The researcher is not an employee of the RCPI and has no influence over trainee assessment or progression.

Alternative procedures, if any, available to subjects:
None

Subjects:

What is the total number of subjects to be studied?   700

How will subjects be chosen? (Inclusion and Exclusion Criteria)   <u>All trainees in BST, RTP & HST under</u>
<u>the auspices of the RCPI</u>

Will there be payment to subjects?   No   If Yes how much?
If so, how much?

	X

Methods used to ensure confidentiality of data:
All of the data will be stored in full compliance with Data Protection Laws and Principles and sensitive elements will be held by the researcher and reported to the RCPI in aggregate format.

Declaration of the Chief Investigator

I certify that the protocol and method of obtaining informed consent as approved by the Ethics Committee will be followed during the period of this research project. Any changes of protocol, PI or consent will be submitted for Ethics Committee review and approval prior to implementation. Any adverse reactions will be promptly reported to the Ethics Committee office. This research will be carried out only by the approved Chief Investigator and co-investigators. All records of this research will be maintained as required by the Department of Health & Children.

Signature Chief Investigator:

Print Name: Dr Deirdre Bennett

Date: (dd/mm/yyyy)

                               28/01/2012

Clinical Research Ethics Committee

Tel: + 353-21-490 1901
Fax: + 353-21-490 1919

Coláiste na hOllscoile Corcaigh, Éire
University College Cork, Ireland

Lancaster Hall,
6 Little Hanover Street,
Cork,
Ireland.

Our ref: ECM 4 (x) 06/03/12

14th February 2012

Dr Deirdre Bennett
Senior Lecturer
Medical Education Unit
University College Cork
Brookfield Health Science Complex
College Road
Cork

Re: Postgraduate medical education and training under the Royal College of Physicians of Ireland: A case study.

Dear Dr Bennett

Expedited approval will be granted to carry out the above study at

➢   University College Cork

subject to receipt of the following documents

➢   Signed Application Form
➢   Questionnaire
➢   Interview Guide.

We note that the co-investigators involved in this study will be:

➢   Professor Mary Horgan and Professor Colm Bergin.

Yours sincerely

Dr Michael Hyland
Chairman
Clinical Research Ethics Committee
of the Cork Teaching Hospitals

Ollscoil na hÉireann, Corcaigh - National University of Ireland, Cork.

30th January 2013

Our ref: ECM 3 (c) 12/03/13

Dr Deirdre Bennett
Senior Lecturer
Medical Education Unit
University College Cork
Brookfield Health Science Complex
College Road
Cork

Re: Postgraduate medical education and training under the Royal College of Physicians of Ireland: A case study.
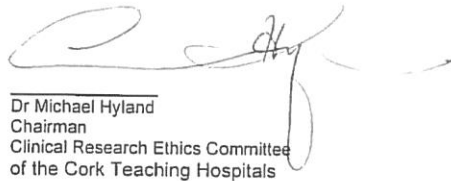
Dear Dr Bennett

The Chairman approved the following:

> Signed Application Form
> Information Leaflet
> Questionnaire
> Interview Guide.

We note that the co-investigators involved in this study will be:

> Professor Mary Horgan and Professor Colm Bergin.

Full approval is now granted to carry out the above study.

Yours sincerely

Dr Michael Hyland
Chairman
Clinical Research Ethics Committee
of the Cork Teaching Hospitals

Ollscoil na hÉireann, Corcaigh - National University of Ireland, Cork.

AMENDMENT SUBMISSION FORM

When any revision to an approved research protocol, written consent form and/or advertisement for subject recruitment is desired, an amendment must be filed with the Ethics Committee. The amendment submission form must be completed indicating the changes; revisions may be within the protocol itself, the written consent form or the advertisement. The form should explain what changes have been made and the rationale for the change. Eight copies of the revised pertinent original documents (protocol, consent form, and/or advertisement) should also be submitted with the changes identified using a blue highlighter pen. A cover letter or additional information may also be attached, as necessary.

Amendments to approved protocols may not be initiated until Ethics Committee approval has been obtained, except when necessary to eliminate apparent <u>immediate</u> hazards to the subject. Amendments usually require full Board review at the scheduled monthly meetings; therefore, the submission deadlines must be met. The Ethics Committee reserves the right to determine whether proposed changes are substantive and to request further information or a new protocol submission, as appropriate.

Chief Investigator: Dr. Deirdre Bennett

Department: Senior Lecturer in Medical Education, School of Medicine, UCC.

Protocol Title: Postgraduate Medical Education and Training under the Royal College of Physicians of Ireland: A Case Study

---

The following changes are proposed for this protocol:

Chief Investigator	☐	Co-investigator(s)	☐
Dosage	☐	Treatment Procedures	☐
Drug/Device	☐	Study Population	[X]
Number of Subjects	☐	Risks	☐
Advertisement	☐	Editorial Corrections	☐
Other	Method of data collection		

Is a revised protocol necessary as a result of this amendment?   Yes ☐   No [x]
If yes, please attach a revised protocol to this amendment.

Is a revised consent form necessary as a result of this amendment?   Yes ☐   No [x]
If yes, please attach a revised consent form to this amendment.

Is a revised advertisement necessary as a result of this amendment?   Yes ☐   No [x]
If yes, please attach a revised advertisement to this amendment.

Please list the specific changes from the previously approved protocol and provide sufficient rationale for each change to allow the committee to make a decision. Use additional pages as necessary.

Specific changes are as follows:

1. Recruitment of undergraduate medical students

In order to provide a complete picture of the training trajectory across the undergraduate / postgraduate divide, the study will be extended to include undergraduate medical students. They will not be part of the quantitative element of the study but will contribute to the qualitative data collected.

The qualitative element of this study focuses on the influence of learning environment on professional identity formation, and in particular on career choice. A small number ($n=10$) of undergraduate students will be purposively selected to participate in the study. Selection will be on the basis of graduate entry / direct entry background, known career interests and level within the course. Students will be provided with information regarding the purpose of the study and will provide written consent for participation. Students will be asked to provide "audio-diary" recordings of their reflections on their experiences of clinical training and the ways in which these are shaping their vision of themselves as future practitioners. Audio-diary recordings will be transcribed and identifiers removed before analysis. All data will be stored securely and will be entirely confidential. Audio-diaries are an established means of qualitative data collection (Monrouxe, 2009), with the advantage of allowing participants to record their impressions close to the events in question. As the PI is a Year co-ordinator within the undergraduate programme, students currently in that year will not be recruited.

2. Use of audio-diary technique in postgraduate participants

As an adjunct to the interviews outlined in the original protocol, audio-diary recordings will also be used for participating postgraduate trainees ($n=10$).

Monrouxe, L. V. (2009). Solicited audio diaries in longitudinal narrative research: a view from inside. *Qualitative Research*, *9*(1), 81–103. doi:10.1177/1468794108098032

Investigator _____   Date _____

This form must bear the original signature of the chief investigator)

Our ref: ECM 3 (aaaaaa) 01/10/13

1st October 2013

Dr Deirdre Bennett
Senior Lecturer
Medical Education Unit
University College Cork
Brookfield Health Science Complex
College Road
Cork

Re: Postgraduate medical education and training under the Royal College of Physicians of Ireland: A case study.

Dear Dr Bennett

The Chairman approved the following:

> Signed Application Form
> Addition of Undergraduate Medical Students and the use of an Audio-Diary Recordings
> Information Leaflet and Consent for Audio-Diary Participants.

Yours sincerely

Professor Michael G Molloy
Chairman
Clinical Research Ethics Committee
of the Cork Teaching Hospitals

UNIVERSITY COLLEGE CORK
Clinical Research Ethics Committee of the Cork Teaching Hospitals

PROTOCOL SUBMISSION FORM

All items must be completed as indicated; incomplete applications will be returned. A protocol application must include:

1. Protocol Submission Form (pages 1-4) – **Original and seven copies. Original must be signed by the Chief Investigator. Hand written forms will not be accepted.**
2. Consent Form (the standard Ethics Committee format) – **Eight copies.**
3. Detailed Protocol including instruments involved – **Eight Copies**,
4. Details of insurance policies in place to cover the study.
5. Curriculum Vitae of Chief Investigator (2 page document only) - **One copy.**

The complete application package must be received in the Ethics Committee office by the appropriate deadline in order to ensure review the next month. The Ethics Committee office is located at Lancaster Hall, 6 Little Hanover Street, Cork. The telephone number is (021) 4901901 and fax number is (021) 4901919.

Chief Investigator

Name of Chief Investigator: Dr Deirdre Bennett

Appointment: Senior Lecturer

Department: Medical Education Unit, School of Medicine

Office Address: School of Medicine, University College Cork, Brookfield Health Sciences Complex, College Road, Cork.

Telephone No.: 021 490 1591

Protocol Details

Protocol Number:

Protocol Title: Figuring Doctor Identities: A Socio-cultural approach to Career Choice in Medicine

Site(s) of Performance: University College Cork

Co-investigators

Names & Appointments:
Prof. Mary Horgan, Dean, School of Medicine, UCC.
Prof. Colm Bergin, Dean of the Royal College of Physicians of Ireland.
Prof. Tim Dornan, Maastricht University, Netherlands.
Prof. Yvette Solomon, University of Manchester, UK

Only the co-investigators listed may perform the procedures indicated on this protocol. They may NOT amend the protocol.

Is this protocol part of an active or pending externally funded project: Yes ☐   No ☒

If yes, complete the following:

Names of Agency/Sponsor:
Address of Agency/Sponsor:
Title of Grant Proposal:
Does the Chief Investigator personally gain financially from this study: Yes ☐   No ☐
Are there any additional cost implications for the hospital management beyond standard of care:
Yes ☐   No ☐   If *yes* please specify
_____
_____

SPECIAL CONSIDERATIONS

Is this study is part of a **multi-centre** project: Yes ☐ No ☒

Does this study involve **laboratory/clinical procedure**s NOT part of ordinary management: Yes ☐ No ☒

Does this study involve the clinical experimental use of **radiation or radioisotopes**:   Yes ☐ No ☒

Does this study involve the use of **biohazardous** or **infectious radioisotopes**:   Yes ☐ No ☒

If yes, please explain:

_____

_____

Are human subjects from the following **special population(s)** involved in this study: *Tick where appropriate*

Infants (<1 Year)	☐	Children(1-17 years)	☐
Elderly (>59 years)	☐	Pregnant Women	☐
Prisoners	☐	Mentally Disabled	☐
Mentally Retarded	☐	None of these	☒

No investigator shall recruit from a student group where he/she, or any of the co-investigators, have material influence over the assessment of academic performance of that student group.

PRECODED STUDY DESCRIPTION For each of the categories below, please select the items(s) which best describe(s) your study.   You may tick up to two items for each category.

Type of study:

Behavioural-Social [X]	Compassionate [ ]	Descriptive [X]
Diagnostic [ ]	Educational [X]	Epidemiologic [ ]
Preventive [ ]	Therapeutic [ ]	

Other: _____

Organ System(s):

Not Applicable [X]	Breast [ ]	Cardiovascular [ ]
Dermatologic [ ]	Endocrine/Metabolic [ ]	Gastrointestinal/Hepatic [ ]
Haematologic [ ]	Musculo-skeletal [ ]	Neurologic [ ]
Ophthalmologic [ ]	Otolaryngologic [ ]	Pulmonary [ ]
Renal [ ]	Reproductive [ ]	Urinary tract [ ]

Cells, blood, other body fluids or tissues only [ ]

Other : _____

Type of Disorder:

Not Applicable [X]	Congenital [ ]	Degenerative [ ]
Infectious [ ]	Immunologic [ ]	Malignant [ ]
Metabolic/Endocrine [ ]	Normal Physiologic [ ]	Psychiatric [ ]
	Traumatic [ ]	

Other : _____

Type of Drug/Device:

Not Applicable [X]	Analgesics [ ]	Anaesthetics [ ]
Anti-asthma/allergy [ ]	Anticoagulant [ ]	Anti-infectives [ ]
Anti-inflammatory/Anticonvulsants [ ]	Biologicals/Vaccines [ ]	Blood Components [ ]
Cardiovascular/Antihypertensive [ ]	Chemotherapeutic Agents [ ]	Contraceptives [ ]
Contrast Media [ ]	Dermatologics [ ]	Diagnostics [ ]
Hormones [ ]	Immunosuppressives [ ]	Vitamins [ ]

Sedatives/Antidepressants/Tranquilizers [ ]   Other: _____

PROTOCOL ABSTRACT – This page **must** be completed; Use additional pages as needed).

Purpose of Investigation:
The proposed work is a peer reviewed paper which will use empirical data from two students to demonstrate the affordances of sociocultural theory, specifically Figured Worlds theory, to the question of career choice as an aspect of professional identity formation.

Procedures to which humans will be subjected:
This study involves the application of Figured Worlds theory to written reflections from two students, written during academic Year 2010-11, when they were second year graduate entry students. The reflections will be analysed using qualitative methods, specifically discourse analysis. The two students involved have been approached and have consented to the use of their written work for this purpose.

Potential benefits to subjects and/or society:
The paper will introduce to a Medical Education audience a theory infrequently cited in the domain, which may increase understanding of processes of professional identity formation and how these subsequently shape career choice.

Potential risks to subjects and precautions taken to minimise risk:
The only risk to subjects is that they might be identifiable from the content of the reflections. To avoid this names have been changed and the academic year during which the reflections were written will not be identified.

Alternative procedures, if any, available to subjects:
None

Subjects:

What is the total number of subjects to be studied?   2

How will subjects be chosen? (Inclusion and Exclusion Criteria) The reflections were chosen from a pool of 50 such reflections on the basis of their illustration of the affordances of the theory in question.

Will there be payment to subjects?   No   If Yes how much?
If so, how much?

	X

Methods used to ensure confidentiality of data:
This is data which has been collected as part of ongoing student assessment. As such it is stored securely. For analysis and publication all identifying features will be removed

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Declaration of the Chief Investigator

I certify that the protocol and method of obtaining informed consent as approved by the Ethics Committee will be followed during the period of this research project. Any changes of protocol, PI or consent will be submitted for Ethics Committee review and approval prior to implementation. Any adverse reactions will be promptly reported to the Ethics Committee office. This research will be carried out only by the approved Chief Investigator and co-investigators. All records of this research will be maintained as required by the Department of Health & Children.

Signature Chief Investigator:

Print Name: Dr Deirdre Bennett

Date: (dd/mm/yyyy)
                               8/9/2014

COISTE EITICE UM THAIGHDE CLINICIÚIL
Clinical Research Ethics Committee

Tel: + 353-21-490 1901
Fax: + 353-21-490 1919

Coláiste na hOllscoile Corcaigh, Éire
University College Cork, Ireland

Lancaster Hall,
6 Little Hanover Street,
Cork,
Ireland.

ECM 3 (mm) 07/10/14

15th September 2014

Dr Deirdre Bennett
Senior Lecturer
Medical Education Unit
School of Medicine
University College Cork
Brookfield Health Sciences Complex
College Road
Cork

Re: Figuring doctor identities: a socio-cultural approach to career choice in medicine.

Dear Dr Bennett

Expedited approval is granted to carry out the above study at:

> University College Cork.

The following documents have been approved:

> Application Form.

We note that the co-investigators involved in this study will be:

> Professor Mary Horgan, Professor Colm Bergin, Professor Tim Dornan and Professor Yvette Solomon.

Yours sincerely

Professor Michael G Molloy
Chairman
Clinical Research Ethics Committee
Of the Cork Teaching Hospitals

Appendix D – D-RECT expectations and experiences

Dutch Residency Educational Climate Test (D-RECT) – EXPECTATIONS OF TRAINING

RCPI Number:

Please complete the following indicating what you **EXPECT (rather than what you would like)** in relation to your training over the next year.

	Strongly Disagree				Strongly Agree
1. The guidelines will clearly outline when to request input from a supervisor	1	2	3	4	5
2. The amount of supervision I will receive will be appropriate for my level of experience	1	2	3	4	5
3. It is will be clear which consultant supervises me	1	2	3	4	5
4. I will be asked on a regular basis to provide a rationale for my management decisions and actions	1	2	3	4	5
5. My consultants will coach me on how to communicate with difficult patients	1	2	3	4	5
6. My consultants will take the initiative to explain their actions	1	2	3	4	5
7. My consultants will take the initiative to evaluate my performance	1	2	3	4	5
8. My consultants will take the initiative to evaluate difficult situations I have been involved in	1	2	3	4	5

	Strongly Disagree				Strongly Agree

9. My consultants will evaluate whether my performance in patient care is commensurate with my level of training   1   2   3   4   5

10. My consultants will occasionally observe me taking a history   1   2   3   4   5

11. My consultants will assess not only my medical expertise but also other skills such as teamwork, organization or professional behaviour   1   2   3   4   5

12. My consultants will give regular feedback on my strengths and weaknesses   1   2   3   4   5

13. Observation forms (i.e., Mini-CEX) will be used to structure feedback   1   2   3   4   5

14. Observation forms (i.e., Mini-CEX) will be used periodically to monitor my progress   1   2   3   4   5

15. Consultants, nursing staff, other allied health professionals and residents will work together as a team   1   2   3   4   5

16. Nursing staff and other allied health professionals will make a positive contribution to my training   1   2   3   4   5

17. Nursing staff and other allied health professionals will be willing to reflect with me on the delivery of patient care   1   2   3   4   5

18. Teamwork will be an integral part of my training   1   2   3   4   5

19. SHOs will work well together   1   2   3   4   5

20. SHOs, as a group, will make sure the day's work gets done   1   2   3   4   5

	Strongly Disagree				Strongly Agree

21. Within our group of SHOs it will be easy to find someone to cover or exchange a call   1   2   3   4   5

22. Continuity of care will not affected by differences of opinion between consultants   1   2   3   4   5

23. Differences of opinion between consultants about patient management will be discussed in such a manner that will be instructive to others present   1   2   3   4   5

24. Differences of opinion will not be such that they will have a negative impact on the work climate   1   2   3   4   5

25. The work will be doing will be commensurate with my level of experience   1   2   3   4   5

26. The work I will be doing will suit my learning objectives at this stage of my training   1   2   3   4   5

27. It will be possible to do follow up with patients   1   2   3   4   5

28. There will be enough time in the schedule for me to learn new skills   1   2   3   4   5

29. My consultants will take time to explain things when asked for advice   1   2   3   4   5

30. My consultants will be happy to discuss patient care   1   2   3   4   5

31. There will be NO consultants(s) who have a negative impact on the educational climate   1   2   3   4   5

	Strongly Disagree				Strongly Agree

32. My consultants will treat me as an individual   1   2   3   4   5

33. My consultants will treat me with respect   1   2   3   4   5

34. My consultants will be all in their own way positive role models   1   2   3   4   5

35. When I need a consultant, I will always be able to contact one   1   2   3   4   5

36. When I need to consult a consultant, they will be readily available   1   2   3   4   5

37. Trainees will generally be able to attend scheduled educational activities   1   2   3   4   5

38. Educational activities will take place as scheduled   1   2   3   4   5

39. Consultants will contribute actively to the delivery of high-quality formal education   1   2   3   4   5

40. Formal education and training activities will be appropriate to my needs   1   2   3   4   5

41. My trainer will monitor the progress of my training   1   2   3   4   5

42. My trainer will provide guidance to other consultants when needed   1   2   3   4   5

43. My trainer will be actively involved in improving the quality of education and training   1   2   3   4   5

44. In this rotation evaluations will be useful discussions about my performance   1   2   3   4   5

45. My plans for the future will be part of the discussion   1   2   3   4   5

46. During evaluations, input from several consultants will be considered   1   2   3   4   5

47. When there is criticism of a management plan I have developed in consultation with my consultant,
 I know the consultant will back me up   1   2   3   4   5

48. Handover will take place in a safe climate   1   2   3   4   5

49. Handover will be used as a teaching opportunity   1   2   3   4   5

50. Consultants will encourage trainees to join in the discussion during patient handover   1   2   3   4   5

Dutch Residency Educational Climate Test (D-RECT)- EXPERIENCES OF TRAINING

Thank you for taking part in this survey of training environment across all RCPI trainees. Your responses are confidential and will be returned to the RCPI in aggregate format, so that it is not possible to identify you. Please indicate your agreement with the statements below on the scale from 1 (strongly disagree) to 5 (strongly agree) **in relation to the post you are working in on March 1st 2013**. There is space for free text comments at the end of the form.

Current Hospital: _____   **Specialty:**_____   **Gender: Male / Female**

	Strongly Disagree				Strongly Agree
1. The guidelines clearly outline when to request input from a supervisor	1	2	3	4	5
2. The amount of supervision I receive is appropriate for my level of experience	1	2	3	4	5
3. It is clear which consultant supervises me	1	2	3	4	5
4. I am asked on a regular basis to provide a rationale for my management decisions and actions	1	2	3	4	5
5. My consultants coach me on how to communicate with difficult patients	1	2	3	4	5

	Strongly Disagree				Strongly Agree

6. My consultants take the initiative to explain their actions

    1   2   3   4   5

7. My consultants take the initiative to evaluate my performance

    1   2   3   4   5

8. My consultants take the initiative to evaluate difficult situations I have been involved in

    1   2   3   4   5

9. My consultants evaluate whether my performance in patient care is commensurate with my level of training

    1   2   3   4   5

10. My consultants occasionally observe me taking a history

    1   2   3   4   5

11. My consultants assess not only my medical expertise but also other skills such as teamwork, organization or professional behaviour

    1   2   3   4   5

12. My consultants give regular feedback on my strengths and weaknesses

    1   2   3   4   5

13. Observation forms (i.e., Mini-CEX) are used to structure feedback

    1   2   3   4   5

14. Observation forms (i.e., Mini-CEX) are used periodically to monitor my progress

    1   2   3   4   5

15. Consultants, nursing staff, other allied health professionals and residents work together as a team

    1   2   3   4   5

16. Nursing staff and other allied health professionals will make a positive contribution to my training

    1   2   3   4   5

	Strongly Disagree			Strongly Agree

17. Nursing staff and other allied health professionals are willing to reflect with me on the delivery of patient care   1   2   3   4   5

18. Teamwork is an integral part of my training   1   2   3   4   5

19. SHOs, Registrars & SpRs work well together   1   2   3   4   5

20. SHOs, Registrars & SpRs as a group, make sure the day's work gets done   1   2   3   4   5

21. Within our group of NCHDs it is easy to find someone to cover or exchange a call   1   2   3   4   5

22. Continuity of care is not affected by differences of opinion between consultants   1   2   3   4   5

23. Differences of opinion between consultants about patient management are discussed in a manner
that is instructive to others present   1   2   3   4   5

24. Differences of opinion are not such that they have a negative impact on the work climate   1   2   3   4   5

25. The work I do is commensurate with my level of experience   1   2   3   4   5

26. The work do suits my learning objectives at this stage of my training   1   2   3   4   5

27. It is possible to do follow up with patients   1   2   3   4   5

	Strongly Disagree				Strongly Agree
28. There is enough time in the schedule for me to learn new skills	1	2	3	4	5
29. My consultants take time to explain things when asked for advice	1	2	3	4	5
30. My consultants are happy to discuss patient care	1	2	3	4	5
31. There are NO consultants(s) who have a negative impact on the educational climate	1	2	3	4	5
32. My consultants treat me as an individual	1	2	3	4	5
33. My consultants treat me with respect	1	2	3	4	5
34. My consultants are all in their own way positive role models	1	2	3	4	5
35. When I need a consultant, I am always able to contact one	1	2	3	4	5
36. When I need to consult a consultant, they are readily available	1	2	3	4	5
37. Trainees are generally be able to attend scheduled educational activities	1	2	3	4	5
38. Educational activities take place as scheduled	1	2	3	4	5
39. Consultants contribute actively to the delivery of high-quality formal education	1	2	3	4	5

	Strongly Disagree				Strongly Agree

40. Formal education and training activities are appropriate to my needs   1 2 3 4 5

41. My trainer monitors the progress of my training   1 2 3 4 5

42. My trainer provides guidance to other consultants when needed   1 2 3 4 5

43. My trainer is actively involved in improving the quality of education and training   1 2 3 4 5

44. In this rotation evaluations are useful discussions about my performance   1 2 3 4 5

45. My plans for the future are part of the discussion   1 2 3 4 5

46. During evaluations, input from several consultants is considered   1 2 3 4 5

47. When there is criticism of a management plan I have developed in consultation with my consultant,
 I know the consultant will back me up   1 2 3 4 5

48. Handover takes place in a safe climate   1 2 3 4 5

49. Handover is used as a teaching opportunity   1 2 3 4 5

50. Consultants encourage trainees to join in the discussion during patient handover   1 2 3 4 5

Your current career plans

I have applied for the Registrar Training Program for 2013   Yes   No

I have applied for Higher Specialist Training for 2013   Yes   No

If you have applied for HST and you are unsuccessful – will you apply for RTP?   Yes   No

Do you plan to enter GP training ?   Yes   No

Do you plan to enter training in a specialty under a different postgraduate training body, e.g. radiology, anaesthetics, surgery etc.?   Yes   No

Do you intend leaving Ireland when you complete your current post?   Yes   No

Is it your long term intention to be a consultant in Ireland?   Yes   No

 What post will you take up in July 2013?   Grade, specialty and location (if you know)

Any further comments on your current training post?

Information for Interview Participants (Students & Trainees)

What is the purpose of this project?

The overarching aim of this research is to inquire into the processes through which medical trainees make career related choices and how these decisions relate to aspects of their training and education.

The study is concerned with location of training and specialty choice, quality of training and experience of role models.

Why have I been chosen?

You have been purposively selected from amongst the trainee population undertaking BST under the RCPI. Your selection has been on the basis of the location in which you are training, your training program and demographic data. The aim is to capture a variety of trainees to ensure a range of perspectives are represented.

Do I have to take part?

No. Participation is voluntary. There are no negative consequences should you prefer not to be involved. The RCPI is not informed of who has been approached, who has been interviewed or who has declined.

Should you agree to take part you can terminate your participation at any time and are free to decline to answer any questions posed during the course of the interview.

What's involved?

If you agree to be involved you will be invited to meet with the researcher for an interview. The interview will take approximately an hour to an hour and a half and will be digitally recorded. All data is stored anonymously and your identity will be known only to the researcher. Any identifying elements within the interview itself will be anonymised. You will subsequently have the opportunity to see the interview transcript. You may be asked for a follow up interview in 12 to 18 months time.

The interview will cover the following areas –

Your choice of medicine as a career; your perceptions of your career options as you progressed through medical school; your thoughts on those options; your undergraduate experience; role models positive & negative; your understandings of what it means to practice in certain areas of medicine; your perceptions of training in Ireland and abroad;

your experience of training to date; your decision to pursue your current career path; options you considered but rejected; your vision of your future practice.

What happens to the interview transcript?

The data collected at interview will be analysed qualitatively, for themes relating to the objectives of the project. Ultimately, anonymised quotes may be used in papers submitted to peer reviewed publications. Care will be taken to ensure that trainees could not be identified from the content of their quotes.

Once the project is complete the outcomes will be shared with participants.

Who is doing this research project?

This study is a joint undertaking between Dr. Deirdre Bennett, Senior Lecturer, School of Medicine, UCC and the Royal College of Physicians of Ireland. The RCPI is funding data entry and transcription costs for this study. The objectives of the study align with priorities of the RCPI as stakeholders in postgraduate medical education and training. However, all data in this study is held by the researcher. The RCPI do not have access to the raw data and any data seen by RCPI will be fully anonymised.

Does the study have ethical approval?

The study has been approved by the Cork Regional Ethics Committee.

Information for Interview Participants (Consultants)

What is the purpose of this project?

The overarching aim of this research is to inquire into the processes through which medical trainees make career related choices and how these decisions relate to aspects of their training and education.

The study is concerned with location of training and specialty choice, quality of training and experience of role models.

What's involved?

If you agree to be involved you will be invited to meet with the researcher for an interview. The interview will take approximately an hour to an hour and a half and will be digitally recorded. All data is stored anonymously and your identity will be known only to the researcher. Any identifying elements within the interview itself will be anonymised. You will subsequently have the opportunity to approve or edit the interview transcript.

The interview will cover the following areas –

Your perspective, both as a trainee and now as a consultant, is the focus of the interview. Your choice of medicine as a career; your perceptions of your career options as you progressed through medical school; your thoughts on those options; your undergraduate experience; role models positive & negative; your understandings of what it means to practice in certain areas of medicine; your perceptions of training in Ireland and abroad; your own experience of training; your decision to pursue your current career path; options you considered but rejected; your current role as a consultant in relation to training; your perception of your influence on trainee career choice; your experience and awareness of acting as a role model or mentor; your role within the training environment.

What happens to the interview transcript?

The data collected at interview will be analysed qualitatively, for themes relating to the objectives of the project. Ultimately, anonymised quotes may be used in papers submitted to peer reviewed publications. Care will be taken to ensure that trainees could not be identified from the content of their quotes. Once the project is complete the outcomes will be shared with participants.

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this study is held by the researcher. The RCPI do not have access to the raw data and any data seen by RCPI will be fully anonymised.

Does the study have ethical approval?

The study has been approved by the Cork Regional Ethics Committee.

Interview Schedule

The interviews in this study are "open –ended" to allow for participants to provide full and rich responses.

The topics which will be addressed in the interviews with trainees are the following:

Early concepts of medical practice and origin of these

Decision to study medicine

Undergraduate experience and evolution of vision of self in practice related to this

Working and training experiences

Ideas about different areas of medicine in general and in relation to themselves

Role of financial reward, working hours, gender etc. in career choice

Influence of role models

Decisions regarding location of training and influencing factors

Beliefs in relation to successful career pathways

Interviews with trainers / established doctors will include the following additional topics:

Their own function as a trainer / role model / mentor in general and in relation to career choice

Views on how training environment might impact career choice

Appendix F – Participant Information on audio-diaries

Information and Consent for Audio-Diary Participants

What is the purpose of this project?

This project is part of a larger study which aims to look at how learning environments influence the development of professional identity, including specialty choice. Professional identity means the way in which individuals view themselves as doctors.

Why have I been asked to participate?

You have been asked to participate because you are currently an undergraduate medical student and on the basis of the stage you are at in the course, whether you are a graduate entrant, mature entrant or school leaver, and in some cases, your stated career interest.

Do I have to take part?

No. Participation is voluntary. There are no negative consequences should you prefer not to be involved. Should you agree to take part you can terminate your participation at any time.

What's involved?

If you agree to be involved you will be asked to leave a recorded message or audio-diary recording, every four to six weeks. The subject of your recording should be recent experiences you have had in the course of your clinical attachments and how these have made you think about yourself as a doctor in the future. We are trying to capture how you envisage yourself as a future practitioner, both in terms of working within a particular specialty, but also the way that you would like to practice. You leave your message by calling a freephone number which is unique to this study and accessible only to the researcher. All data is stored anonymously and is confidential. Any identifying elements within the recording itself will be anonymised. You will subsequently have the opportunity to approve the recording transcripts. Once transcribed the audio recordings will be deleted.

What happens to the audio diary transcript?

The data collected via the audio diary will be analysed qualitatively, for themes relating to the objectives of the project. Ultimately, anonymised quotes may be used in papers submitted to peer reviewed publications. Care will be taken to ensure that students and trainees could not be identified from the content of their quotes.

Once the project is complete the outcomes will be shared with participants.

Who is doing this research project?

This study is being undertaken by Dr. Deirdre Bennett Medical Education Unit, UCC in conjunction with the Royal College of Physicians of Ireland

Does the study have ethical approval?

The study has been approved by the Clinical Research Ethics Committee of the Cork Teaching Hospitals.

Participant Consent

If you are willing to take part in the audio-diary project, under the conditions laid out above, please complete and sign the section below.

I, _____ , have read and understood the conditions laid out above. I agree to participate in the audio diary project, describing my experiences of learning in clinical environments and how they make me think about myself in the future as a doctor. I understand that my audio diary will be transcribed and that I will have an opportunity to review that transcript for accuracy. All identifiers will be removed from my audio diary before analysis. I also understand that extracts from my interview may eventually be published but that I will not be identifiable. I understand that I can withdraw from this process at any time and that in that case my audio diary will not be used.

Signed _____

Print Name _____

Date _____