Exploring the academic experience of medical students from a non-traditional socio-economic background:

A study of their models of learning and professionalisation within an undergraduate medical curriculum

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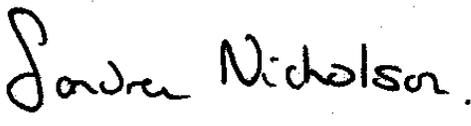
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Abstract
Students from lower socio-economic groups remain underrepresented in UK medical schools. This enquiry explores the perspectives of medical student participants to better understand how medical students from lower socio-economic backgrounds may be perceived, their experience of an undergraduate medical curriculum, and any issues concerned with what is required for them to learn in order to become doctors.

A conceptual framework that encompasses both sociological and sociocultural learning theories that enable the professional development and learning processes of medical students, and students from lower socio-economic backgrounds in particular, to be better understood was required. Theoretical concepts from the literature informed the iterative development of the research questions that addressed student perspectives, the relational aspects between student practice and medical school structures including the medical culture, and how student participation is pivotal to their learning.

An interpretive methodology including focus groups and individual interviews was used to access the perspectives of medical students from across the curriculum of one medical school. Analysis used a priori concepts and a modified grounded theory approach which generated three main categories of themes: who becomes a doctor, students' developmental processes and issues underlying their learning.

Non-traditional medical students were found to possess certain socio-economic characteristics that distinguished them from their peers from a more advantaged background. For some students this led to disadvantage inherent in their differing patterns of socialisation, issues with developing an effective medical habitus and resultant professional identity, and reduced or less effective participation in authentic learning activities. A more nuanced non-dualistic understanding of the nature of medical professional knowledge and the undergraduate curriculum by incorporating a more balanced approach to the insights afforded by participatory models of learning have several implications for both medical pedagogy and medical student practice.

PART 1: Background

Chapter 1

Introduction

Medical education and its inherent medical culture have a resistance to change despite being situated alongside rapidly evolving NHS and political contexts and subject to a plethora of innovations. This has been likened to "*reform without change*" and is brought sharply into focus when the political desires and persistent failure to widen participation and diversify the medical workforce are examined (Bloom 1988). The medical education literature continues to report an under representation of lower socio-economic groups within both application and admission processes to UK medical schools (Grant et al, 2002; BMA 2004 and Mathers et al, 2011). This is a specific issue independent of other socio-demographic characteristics namely gender and ethnicity which though acknowledged as being commonly associated with socio-economic groupings do not currently raise anxieties highlighting disparity within UK medical school admissions.

Concern was raised over 20 years ago that the numbers of medical students from higher socio-economic groups were disproportional, even taking into account the number of students from medical families (McManus, 1982). Despite the increase in university places and specifically a rapid rise in medical student numbers in the last decade there remains a persistent

inequality in representation from students from lower socio-economic groups in the UK where they are reported to make up only one-seventh of the medical student body (Kamali et al, 2005).

For the few students from these social groupings who do enter medical training there is a paucity of educational research and literature concerning their academic experience. Much of the literature and research concerning medical student widening participation outlines the difficulties of getting onto medical degree programmes and then managing to cope financially without exploring whether these students have specific difficulties with the curriculum, and more importantly how these difficulties may be overcome. This is particularly of note considering the already stated durability of the traditional nature of the medical culture and medical education itself. In addition widening participation within undergraduate medicine is poorly defined with the consequent difficulties in identifying medical students who may be deemed to widen participation by socio-economic group even though such statistics are collected (Seyan, Greenhalgh and Dorling, 2004).

Consequently the aims of this thesis were developed to explore the perspectives of medical student participants from both traditional and non-traditional socio-economic backgrounds to better understand how medical students from lower socio-economic backgrounds may be perceived, their experience of an undergraduate medical curriculum and any issues

concerned with what is required for them to learn in order to become doctors. The anticipated methodology requires an interpretative approach that facilitates framing how so-defined non-traditional medical students and their processes of learning are perceived today by themselves and their peers.

Commonly medical educational studies favour personal agency over structure by predominantly examining the student experience from psycho-social perspectives neglecting any institutional relational aspects affecting medical student learning (Maudsley and Strivens, 2000; Howe, 2002; Bleakley, 2006; Brosnan and Turner, 2009). However this thesis aims to explore the relationships between relevant structural aspects, such as the medical culture and medical student practices, and how student participation is pivotal to their learning. These aims encouraged the development of a conceptual framework that encompasses both sociological and sociocultural theories that enable the professional development and learning processes of medical students and non-traditional students from lower socio-economic backgrounds in particular to be better understood.

In wishing to fully examine what and how medical students learn a conceptual framework that highlights elements of socialisation, professional development and sociocultural learning theory is required. This necessitated a deeper understanding and use of the relevant literature concerning key perspectives that describe medical student socialisation, their professional

development, what it is that they need to know in order to practice and how participating in authentic activities contributes to their learning. Hence this thesis does not have what could be termed a traditional literature review. In preference Chapters 2-5 of this thesis explore the sentinel work and writing of key authors that these perspectives emanate from.

In identifying the issues that are pertinent to the learning of medical students key theoretical concepts were developed that helped direct the development of the research questions and initial data gathering. The following research questions were therefore formulated after an iterative process of reflective reading and early data collection:

- What perceptions do current medical students have of students who come from non-traditional lower socio-economic backgrounds?

- Are the patterns of socialisation within this medical school different for non-traditional students from lower socio-economic backgrounds? If so, how may this affect their learning?

- 'What' and 'how' do medical students learn as they progress through the undergraduate curriculum? Are there any significant differences for non-traditional students?

- Considering any subsequent findings what implications are there for future research and policy making concerning the medical undergraduate curriculum and widening participation?

The subsequent chapters introduce key authors and examine their conceptualisations of the perspectives thought to be significant in the learning of medical students. The opening chapter focuses on work principally from two sources; Merton et al, 1954, and Becker et al, 1961 whose writing emanates from different stances but each critically contributes to our understanding of the socialisation of medical students. Examining the processes involved in the professional socialisation of medical students sheds light on what medical students need to learn in order to practice and how they go about this. Merton's induction approach facilitates exploring how medical students begin to take on a professional role and identity whilst Becker's more interactive student perspectives facilitate examining the development of a student culture and its relationship with student learning. Understanding both perspectives encourages me to explore how the learning of medical students from non-traditional lower socio-economic backgrounds may be affected.

The third chapter introduces a text by Luke, 2003, who describes aspects of professional development within junior doctors that parallel similar development common to clinical medical students. Luke presents a

conceptualisation of the medical habitus which introduces an opportunity to develop a more nuanced understanding of the sociocultural processes involved in medical students' professional development. Such a perspective facilitates exploring the relationships between institutional structures such as the medical culture and daily medical student practices. Furthermore Luke's articulation of Bourdieu's concepts of habitus, field and capital provide a means for exploring any social disadvantage experienced by medical students who come from non-traditional backgrounds.

Chapters 4 and 5 examine the nature of knowledge and medical knowledge in particular. This involves a more sophisticated understanding of what is meant by professional medical knowledge and how it is learnt within the context of the undergraduate medical curriculum. Chapter 4 leads with Sfard's (1998) metaphors of acquisition and participation which expand upon the on-going debate within education surrounding the polarisation of how learning and knowledge are conceptualised. These metaphors help examine the polarised positions that signify medical education's traditional stance on what constitutes legitimate medical knowledge. Further elaboration on how knowledge may be viewed is afforded by examining the distinctions between what Bernstein (2000) called "*horizontal and vertical discourses*" where local context-bound everyday knowledge is identified separately from scientific theoretical knowledge. In addition Young (2008) with his theory of social realism contributes to our understanding of the acquisition metaphor by

arguing for the maintenance of the objectivity of knowledge alongside its social context and how this expands our understanding of a learner's developing professional identity. In parallel this discussion introduces the neglected examination within medical education of the participatory practices of medical students and their influence on what and how medical students learn. Chaiklin and Lave, 1996 and Brown et al, 1989 are used as exemplars of authors who have considered the importance of how learners participate in everyday activities and how this contributes to their learning and development of their professional identity. It is by examining how medical knowledge is understood, how learning occurs and the relationship between knowledge and the medical curriculum that facilitates a more nuanced conceptualisation of medical student practice.

To this end Sfard's participation metaphor is highlighted as an analytic tool with which to critique the undergraduate medical curriculum by focussing on the work of Lave and Wenger (1991) within Chapter 5. In this way a more enhanced and sophisticated view of how medical students learn what is required is gained. Furthermore by examining how medical students participate in learning may shed light on any differences between the learning of traditional and non-traditional medical students coming from lower socio-economic backgrounds. By understanding what better defines legitimate knowledge facilitates taking a fresh look at the undergraduate medical pedagogy and medical student learning. This better prepares us to then

explore during the empirical part of the study how such processes may affect medical students from non-traditional backgrounds.

In summary this thesis sets out to explore and describe how medical students who come from non-traditional lower socio-economic backgrounds may differ in terms of their learning from their peers from a more traditional background who study at the same medical school. The importance of this enquiry is that whilst it is established that students from these non-traditional lower socio-economic backgrounds remain underrepresented in medical education their academic experience also remains under examined. Furthermore this thesis engages with the institutional structures that affect medical student learning as well as exploring student perspectives to develop a more nuanced conceptual framework. This conceptual framework encompasses both sociological and sociocultural aspects, specifically highlighting the role of student participation, that provide a comprehensive and insightful means to explore what is required of medical students, and students from non-traditional lower socio-economic backgrounds in particular, to learn in order to become doctors.

Chapter 2

The Socialisation of Medical Students

Introduction

The medical profession is experiencing an unprecedented period of change. Modern medicine has radically evolved as shown by changes in the medical workplace and major structural changes within the National Health Service (Department of Health, 2004). The impact of increasing external regulation upon the medical profession and consequently its declining autonomy questions what it means to be a doctor today and most importantly the nature of medical professionalism itself. Despite these turbulent influences, today's medical students still undergo a process of socialisation which remains a necessary prerequisite to entry to the medical profession. In light of this observation, this chapter sets out to examine the current process of socialisation of medical students through the analysis of two key sociological texts which continue to highlight the germane issues (Becker et al, 1963 and Merton, 1957).

Since these groundbreaking first studies were written there have been substantial changes in both the nature of the role and context of medicine as briefly outlined above but additionally the student body itself has changed. For example, the medical student population has become more diversified

with more women than men qualifying, increasing ethnic variation whilst retaining disparity among the socio-economically disadvantaged groups (Seyan et al, 2004 and Lempp, 2009). The effects of such diversification on medical student socialisation are under researched. The residual lack of diversification by socio-economic class within current medical student populations has resulted in medical schools largely considering widening access to be an issue of increasing the participation from such groups (Fair Access to Professional Careers, 2012). The subsequent discussion prepares the reader to consider the possible interaction between the effect of such widening participation and medical student socialisation by examining the academic experiences of medical students who come from non-traditional socio-economic backgrounds.

Before embarking on this discussion, it may help to define how the term socialisation is to be used within this context. Socialisation has been defined as an on-going process whereby individuals learn to conform to society's prevailing norms and values (Bilton et al, 1996). In this context the socialisation of medical students therefore refers to the proselytisation of novice students into mature student doctors. Once graduated these students will be ready and equipped to join their chosen profession and meet the expectations of both colleagues and patients. However before this happens medical applicants aspire to and enter into a collective student body that can be identified by its own distinctive medical student culture.

The aim of this chapter is two-fold: initially to understand how the process of socialisation takes place for medical students and what effect medical student culture with its inherent attitudes, values and sanctioned behaviours may have on this; and subsequently to highlight areas of this process where the experience of students from non-traditional socio-economic backgrounds may differ. Medical students begin their medical careers as a cohort of "freshers" who are part of an organisation, the medical school, in which student members interact both with each other and other people within the organisation who have significant roles. The following section, two perspectives on medical student socialisation, analyses the work of Merton and Becker, two classical texts on medical sociology, to examine their divergent paradigmatic assumptions. Specifically Merton bases his work on the model of 'functionalism' whereas Becker uses 'symbolic interactionism' to explain how he arrives at his conclusions. However both texts shed light on the different aspects of medical student culture that influence medical student socialisation which are still relevant to the socialisation of today's medical students. The last section of this chapter introduces concepts associated with professional socialisation of the medical student. It is this final section that highlights the major differences between Merton and Becker's work. Becker prioritises the concerns of the students, particularly their anxiety over getting through medical school, whilst Merton considers the importance of the role of

the student doctor within the medical school organisation and what facilitates taking on a professional identity.

Therefore this chapter by outlining the differences and commonality between these classic texts sets the scene for my study and forms a basis from which to explore any issues for medical students from non-traditional socio-economic backgrounds within medical student socialisation.

Two perspectives on medical student socialisation

Functionalism and Symbolic Interactionism

To fully understand the work of Becker and Merton and to draw on their conclusions for my own study it is necessary to locate their texts within the theoretical traditions from which they emanate. Merton's work is associated with functionalism which has been defined by:

"*its assumption that you can explain social institutions, practices and processes by attributing to them "functions" which are necessary for the survival of a society, a social group or social structure"* (Purvis, 1985, p.6).

These functions may be seen as different roles within an organisation which if effective bring cohesion, integration and stability. This cohesion within societies is formed from similarities between individuals, common experiences, common roles and values. Norms are shared understandings of how one should function within the organisation and are essential if the organisation is to flourish. Norms and functions are outside the control of

individuals and illustrate how these structures shape our lives. Education, and in this context how medical students learn to become a member of the medical profession, can therefore be seen as a means of socialisation.

Conversely Becker's stance stems from symbolic interactionism which seeks to explain how people construct by their interaction, using symbols and language, their view of the "social world" (Bilton et al, 1996). Symbolic interactionism is concerned with how people interpret each others' actions and share common meanings and symbolism. Symbolic interactionism is not a static definition of the social world but a dynamic mechanism for understanding how people and the world they live in is both defined by them and defines who they are, as expressed succinctly below:

"*At the heart of symbolic interactionist inquiry is the assumption that the social life is characterized by a multiplicity of points of view. How any aspect of social life is perceived and understood depends upon the standpoint from which it is viewed. Therefore there is no one "ultimately correct" description to be given of any social situation*" (Cuff, Sharrock, and Francis, 1992, p.151).

Merton introduced the idea of manifest and latent functions. Manifest functions being the overt reasons for roles existing within society whereas latent functions are considered the underlying reasons for the existence of such social structures. This development helps us to better understand the complex world of students and their many roles within the medical school.

In contrast using the concepts of symbolic interactionism Becker wished to examine the "*more conscious aspects of human behaviour and relate them to the individual's participation in group life*". Here human behaviour is not thought of as a cause and effect mechanism but more as a "*process in which the person shapes and controls his conduct by taking into account (through the mechanism of "role-taking") the expectations of others with whom he interacts*" (Becker et al. 1963, p.19). Becker used participant observation as his major methodology. He and his co workers took part in the daily lives of the medical students whom he studied. This gave the researchers opportunities to observe and question medical students about their behaviour and their interactions with each other and key persons within the medical school organisation. Becker prioritised what he thought concerned the students most and what therefore most frequently caused conflict between students and other significant persons within the medical school. The next section goes on to further illustrate the differences between the aims, paradigmatic assumptions and conclusions of Merton and Becker's texts specifically in relation to the development of medical student culture.

Medical student culture

The following discussion of the development of medical student culture and how it is sustained highlights significant differences in the philosophy of these two major works. Merton contends that the student's role within the medical school is to learn how to become a doctor and defines student culture

principally by the functions of the medical school organisation that induct students into their profession. Becker is far more concerned with the development of the students' group perspective and how he perceives that this facilitates students' success at medical school.

Merton's functionalist approach centres on the student developing a professional role, with its inherent skills, knowledge and appropriate attitudes in contrast to Becker's student perspectives, which concern motivation, identity and survival that sustain students through medical school. A model developed to describe the socialisation of student nurses aims to conceptualise aspects from both Merton and Becker's work and stresses that there need be no absolute competition and that for successful student socialisation aspects from both are required (Simpson, 1979).

In discussing these issues which are paralleled in medical student socialisation in the context of a modern era the development of a professional role and the degree of autonomy students have within medical school affecting student culture are specifically highlighted. How these issues may affect the socialisation of medical students from non-traditional socio-economic backgrounds is introduced but subsequently constitutes the subject of later chapters.

Becker is interested in the group process and defines student culture as a "*body of collective understandings among students about matters related to their role as students*" (Becker et al, 1961 p.46). These understandings stem from common shared assumptions leading to coherent and consistent perspectives about being medical students who share the same difficulties, challenges and successes studying within a defined organisation, the medical school. This "*group perspective*" also advocated by Mead[1] says there is a coordinated view and plan of action that is followed by people in problematic circumstances. The process by which this common view is gained is explained by the interaction between group members that indicates they both trust one another and share a common understanding of their interaction to reach an agreed outcome. This has been termed symbolic interaction.

Becker makes the distinction between what he calls initial and long-range perspectives that he believes students bring with them to medical school and what he terms situational perspectives. Situational perspectives are derived from common issues that medical students encounter at medical school not any previous similar student background or characteristics. Medical students develop common perspectives through situations that involve students interacting with each other, as Becker illustrates:

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[1] George Herbert Mead alongside others, such as John Dewey, at the University of Chicago, first devised the concept of symbolic interaction (Mind, Self and Society, Chicago: University of Chicago Press, 1934).

"*But as they continued in school, all facing the same problems and subject to the same environmental constraints, the freshmen began to get to know each other and collectively develop a group perspective that solved the problems presented by their situation*" (Becker et al, 1961, p.107).

All medical students face the same problems when it comes to the formal curriculum as they all have to successfully pass the same assessments set for them by faculty. However what is not explored fully by either Merton or Becker is whether there are subsets of students, such as students from non-traditional backgrounds, who find this process more difficult and why this may be.

Simpson, similar to Becker, describes what she calls a "*reaction approach*" highlighting students' motivation, identities and commitments that encourage them to complete their studies. Simpson emphasises that by living, working and playing together nursing students reach their own defined goals rather than necessarily acquiring a professional role which is determined by the school (Simpson, 1979). This theme is further elaborated upon in the subsequent section which examines in more depth such a hidden curriculum.

In contrast Merton focuses on the organisation, the medical school, and the people who have roles within this structure. Merton defines medical socialisation as a process:

"…*by which people selectively acquire the values and attitudes, the interests, skills, and knowledge- in short, the culture -current in the groups of which they*

are, or seek to become, a member" (Merton, Reader and Kendall, 1957 p. 287).

Here the emphasis is always on the purpose of medical education and highlights the necessary processes for inducting medical students into the medical profession. Merton concludes that the social interaction between people holding significant roles within the medical school consolidates these roles and sustains the organisation. For medical students significant interactions would be with the faculty, other students and patients interacting within the medical school and its curriculum.

"…they (the students) also learn -and it may be most enduringly learn from sustained involvement in that society of medical staff, fellow students, and patients which makes up the medical school as a social organisation" (Merton, Reader and Kendall, 1957, p.42).

Merton is concerned with the functional structures that all medical students face, such as the formal organisation of the medical school, student selection strategies and the formal curriculum that successive cohorts of students process through. This induction approach that focuses on students acquiring a professional role recognises the faculty as controlling the socialisation process. In contrast symbolic interactionism describes students as having much more control over their behaviour and actively pursuing their own self defined objectives, which frequently deal with students' current situations rather than pursuit of a long term professional role. It follows therefore that

student autonomy is central to the development of student culture, as Becker states:

"*Students must have some autonomy – some freedom to determine what they will do and how they will do it – before such a phenomenon as student culture is possible.*" (Becker et al, 1961, p. 361).

Medical student culture shares many aspects of medical professional socialisation but Becker highlights that the central distinguishing feature of medical student culture is that medical students are students and therefore their viewpoint is also that of student, not doctor.

"*Students do not act as young doctors might act, but rather act as students. Medical students may organise their actions with reference to a medical future, but while in school, they are not doctors, and therefore do not face the same problems as doctors and consequently do not employ the perspectives and culture of doctors*" (Becker et al, 1961, p.46-7).

In fact Becker goes as far as describing medical students as "*institutionalised*" that is *"so engrossed in matters of concern within the medical school but which are irrelevant outside"* (Becker et al, 1961, p.432).

More recent confirmation of the institutionalisation of medical students is described by Sinclair (1997) who studied the experiences of medical students at one university in London in the late 90's. He considered that the demands placed upon medical students to succeed at their studies were so onerous that this set them apart from the world:

"Their unceasing need to work for unceasing examinations set by different professional segments will ultimately result in professional cognitive membership of the institution of which they are an inmate (that is the profession of medicine), a passage and a membership that may exclude the lay world just as surely as asylum walls" (Sinclair,1997, p.15).

Student culture is about how students get to grips with what concerns them most now, and for medical students this is frequently how they will pass their examinations, and how they can impress their teachers. Admittedly these hurdles allow students to progress to becoming doctors, but it is the hurdles themselves, rather than the finishing line, that Becker claims interest students most. Becker also claims that students will give up these concerns once they leave medical school because students will realise that they are of no lasting long term value. This illustrates an important difference between the views of Merton and Becker upon the processes of medical student socialisation. Merton would claim that medical students learn how to be doctors as students by becoming part of the medical institution and successfully transferring knowledge and skills learnt as students from one socialisation situation to another whereas Becker would claim that students in reality learn only the requisite knowledge and skills to graduate. These opposing views are further explored in the later professional socialisation section.

Influences on the socialisation of medical students

Having discussed some of the differences and commonalities between these two main views I now wish to examine in greater depth some of the issues

which both proponents, alongside more recent authors, consider significant in influencing medical student socialisation. The following section therefore explores what is meant by the "hidden curriculum" and how Merton, Becker and other more recent authors refer to its importance in the socialisation of medical students. Secondly both Merton and Becker have identified the vast amount of factual learning that medical students have to cope with as a source of tension affecting the social process. How students cooperate with each other to manage such a high workload and what is generally agreed to be a stressful course contrasts with medical students' tendencies to compete with each other for recognition of merit. These issues alongside student relationships with the teaching staff, which are also influential in determining the outcome of the socialisation process, are discussed. How these issues may influence the socialisation process of non-traditional students is highlighted as a prerequisite to more in depth study in later chapters.

Hidden Curriculum

The process involved in medical student socialisation emphasises the importance of the "hidden curriculum". This term has been defined as the:

"*Processes, pressures and constraints which fall outside of, or are embedded within, the formal curriculum and which are often unarticulated or unexplored*" (Cribb and Bignold, 1999, p.197).

The term "hidden curriculum" has been increasingly used in the medical education literature since first being outlined as an interpretative tool by Haas

and Shaffir (1982) who examined the "ritualized practices" of medical students associated with their socialisation. Both Merton and Becker have independently stressed key structural and cultural processes that can be identified as arising from a so defined hidden curriculum that are important in the professional socialisation of medical students (Cribb and Bignold, 1999). These social situations form part of the "hidden curriculum" by which students learn indirectly or even unintentionally strategies to successfully navigate the demands placed upon them by the medical school. The ways in which medical students are shaped, both by intent and by unplanned circumstances of their school environment, constitute a major part of the process of socialisation as stated by Merton:

"*Socialisation processes include direct learning through didactic teaching and indirect learning through example and sustained involvement with others in the professional subsystem*" (Merton et al, 1957, p.41-2).

However developing the "hidden curriculum" as a theoretical construct remains underutilised within medical education with a tendency to frame its conceptualisation in negative terms where students learn aspects not sanctioned by the official curriculum (Hafferty and Castellani, 2009).

A more detailed discussion of this unintended curriculum is undertaken by Sinclair (1997) who aims to describe in full the social processes involved in becoming a doctor. Sinclair whilst criticizing Becker for limiting his findings to medical student culture emphasises the importance of Becker's methodology

and emanates a similar method for his own study examining medical students from one London university from matriculation to graduation. Sinclair uses the analysis of Goffman (1959) of the social stage to describe and explain how medical students' social worlds are divided into front and back stage, the medical school institution being likened to a theatre. Front stage activities are determined by the official manifest curriculum but also by student activities which are not related to their official work but are in the public domain, such as team sports and club activities. The backstage is made up of both official and unofficial activities that prepare students for the front stage, such as private study and notoriously medical students' leisure activities. It is in considering the unofficial, though frequently faculty condoned, exuberant activities of medical students backstage that the participation of non-traditional students is questioned. If it is discovered that these students do not enter or have difficulty entering into the same activities as other students what effect may this have on their socialisation into the medical profession?

In summary both Merton and Becker describe a "hidden curriculum" where students importantly learn aspects that are not necessarily intended by the faculty but the outcomes of this process are conceived of differently. These outcomes generate a recurrent theme where Becker considers student socialisation to be mainly a means by which students equip themselves to succeed in getting through medical school, and then go onto professional practice, whereas Merton sees students taking on some of the attributes of a

physician and thereby developing their professional role whilst still medical students.

Coping with workload

Factual overload has long been recognised by medical educators as problematic but persists stemming from the continual advancement of medical knowledge and competition for curricular time between faculties despite the development of integrated curricula (General Medical Council, 1993). Medical students enter Higher Education following an intense period of study and selection. They are highly motivated, wishing to gain all the knowledge and skills necessary to be good doctors and make the lives of their patients better (Becker et al, 1961). The reported subsequent loss of such idealism once medical students begin their courses has been attributed to excessive workload and the subsequent adaptation to medical student life (Cribb and Bignold, 1999). This may be expressed in terms of increased cynicism, suppression of feelings and objectification of patients (Pitkala and Mantyranta, 2003).

Becker clearly articulates that the students' initial perspective is to "*learn it all*" and describes how students' idealism can be "*side-tracked*" to cope with the pressures of workload:

"*While it is true that they have other concerns, such as becoming accustomed to handling the cadaver, these problems are short-lived in comparison with their continuing concern about academic work*" (Becker et al. 1961, p.93).

However using the expression "*side-tracked*" and not lost, signifies how pre-qualifying students may go on to later regain their patient-centred attitudes and desires to be the best possible doctors that they can, long term perspectives, as they approach graduation and realise their imminent responsibilities for patients.

Situational perspectives are derived as a consequence of the commonality experienced by students facing the same difficulties within a specified context. Early in their studies students by interacting with each other collectively construct a provisional perspective out of necessity, driven by their need to cope with the workload and desire for affirmation from teaching staff by giving the "*faculty what they want*" (Becker et al, 1961, p.135). It is of interest to this thesis whether non-traditional students coming from lower socio-economic backgrounds, will share in this commonality to the same measure so that their perspectives match those of the main cohort of medical students.

What students perceive faculty want is determined by what appears in the examinations and students realising that they cannot learn all there is in the time select what they think will be examined, as shown by the following

description of what Becker calls "test-wise" students reasoning what they think will come up in their examination:

"*They* (the students: SN) *give four reasons for thinking something will be on the exam: it was in a lecture, on last year's exam, in Morris (their textbook), or if there is enough to say about a structure for it to appear as a discussion question*" (Becker et al, 1963, p.121).

Therefore the students Becker studied appeared cynical and to have lost sight of their initial concern for patients. However Becker showed that this development was temporary and these students did not lose their initial altruistic attitudes and values but put them to one side whilst they dealt with what they perceived to be the more pressing issues of passing exams.

"*Freshmen begin to get to know each other and collectively develop a group perspective that solves the problems presented by their situation*" (Becker et al. 1961, p.107).

However as students mature they return to the idealism that first brought them to medical school and the wish to gain knowledge for themselves to facilitate the care of patients, as was articulated by one of Becker's medical students.

"*I think it is going to be very different this year. I have an entirely different feeling about it. Last year we were working for examinations, but this year I have the feeling that when I go out and see a patient with diphtheria, I'm going to learn all about that for myself"* (Becker et al. 1961, p.184).

How today's medical students cope with their high workloads and balance learning to care for patients alongside their assessment requirements is a subject for my own enquiry, particularly so if non-traditional students may behave differently. The effect of this may well be some cynicism as students grapple with the tensions of behaving as they feel they have to rather than as they wish (Fox, 1979). Brainard and Brislen (2007) have commentated that medical students become "professional and ethical chameleons" in order to accommodate the harsh medical world with its incumbent observations of unprofessionalism as they make their way through medical school.

Merton reveals a different picture when discussing aspects of how students cope with such a high workload. Medical students need to make decisions in areas of uncertainty, such as how much they think they must know to be a doctor or precisely how much knowledge is required to pass examinations. These uncertain areas cause early student exploration. Merton says a student questions "*how much he ought to know, exactly what he should learn, and how he ought to go about his studies*" (Merton, Reader and Kendall, 1957 p.210). This shows the medical student evaluating what s/he thinks is required and what methods to use to learn and indicates the "self interaction" that Merton employs in his model of professional socialisation rather than previously accepted ideas of students being passive vessels of teaching.

"But because he has not yet developed the discrimination and judgement of a skilled diagnostician, a student is usually less sure than a mature physician

*about where to draw the line between his own limitations and those of medical science. When in doubt, a student seems more likely than an experienced practitioner to question and "blame" himself" (*Merton, Reader and Kendall, 1957).

Indeed many would argue that students are left without guidance as to what and how they should learn on purpose by the faculty so to prepare them for the uncertainty of the real medical world were there are many ambiguities and again far more opportunities to learn than time to take advantage of all of them. Design of modern undergraduate curricula has attempted to address this by reducing factual overload and explicitly stating the learning outcomes of the course. The effects of such changes are discussed in a later chapter.

Student cooperation and competition

Reminding ourselves of Becker's definition of perspective as a "*co-ordinated set of ideas and actions a person uses in dealing with some problematic situation*" helps us to understand that these perspectives involve students collectively agreeing and then going on to act in certain situations as they have agreed (Sinclair, 1997). Examples Becker gives are how students decide how much they need to know to pass exams, how much individual work students should contribute to group tasks, how students should help each other out and where necessary hide individual poor performance.

"*We see the student co-operation perspective at work when students co-operate to make each other's work easier, more educational, or less likely to make a bad impression on the faculty*" (Becker et al, 1961 p. 305).

Abiding by these agreed standards clarifies what students think are the most worthwhile activities, how many and which types of patients to see, when to turn up and when it's safe to not attend.

"*Students frequently co-operated in rearranging their assignments so as to be more convenient. For instance, a man[2] might agree to trade nights on call with another man for whom this would prove personally convenient*" (Becker et al, 1961 p. 305).

Becker describes incidences of deviance or non co-operation, such as a student shirking his share of work. The negative response of the student group to such deviant behaviour is seen as justification of the accepted student cooperation perspective by Becker. However Becker does not discuss any alternative explanations for why some students may not abide by the agreed group standards. Merton does not discuss these group phenomena, concentrating more on how individual students interact within their role set.

Medical students can be incredibly competitive. They have worked long and hard to secure places at medical school, facing fierce competition. There is no reason to suppose that once they have entered medical training they suddenly lose this competitive trait as medicine gives high achievers many opportunities to compete with each other. There are academic prizes, some accompanied by a financial reward, consultants to impress, additional

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[2] Becker and his colleagues were working at the University of Kansas Medical School, USA in the late 1950's. At this time the medical profession was overwhelmingly male and by virtue of acknowledging this Becker clearly states that he intended to omit studying the few women who were medical students at this time and that his work describes how "boys become medical men" (Becker et al, 1961, p.3).

degrees to apply for and postgraduate examinations that only admit comparatively small numbers of aspiring specialists (Sinclair, 1997). Therefore on the one hand students do cooperate with each other, possibly endangering their own performance or hiding peers' poor performance but also at times fail to cooperate and savagely compete with each other to ensure that they maintain their place in the medical world. Sinclair makes the observation that:

"*The tension between Cooperation and Competition continues for the remainder of the clinical years. Clinical students become increasingly segregated from the lay world, as they are drawn more closely into the exclusively medical environment, and the pressure of work has resulted in the gradual loss of their membership of representative teams, in which the more familiar forms of internal Cooperation and externally directed Competition exist*" (Sinclair, 1997, p. 239).

Therefore Sinclair advocates that both cooperation and competition between successful students occurs; cooperation to enhance the learning experience as similarly expressed by Becker, but also competition which aims to secure higher grades and faculty approval for individual students. Whether non-traditional students will struggle more balancing this tension is unknown.

Instances where students appear to cooperate and abide by the agreed group rules but privately, or only disclosing to their intimate clique, decide to follow their own route, are not frequently discussed by Becker. Becker's work found only minimal examples of such behaviour and by his own disclosure considers that such occurrences probably happened more often than was

recorded. However his findings conclude that this is only a "*marginal area in which such acts can be thought of as jokes or tricks that one student plays on another and in which they can be justified in this way if they are discovered*" (Becker et al, 1961 p. 311).

Sinclair however gives many examples of where medical students are clearly struggling with what he refers to as "*role-conflict*". This is where students often in teaching situations are attempting to both be "good doctors" by knowing and behaving as doctors would, thereby appeasing both themselves and their teachers, but also at the same time maintain the camaraderie between their fellow students, by supporting each other and not highlighting individual poor performance (Sinclair, 1997, p. 239). The competitive student is usually viewed poorly by fellow students and such behaviour threatens to break up the generated group cooperation. Competitive students possibly value academic success and clinical experience over sustaining cooperative relationships between their peers. This behaviour is dangerous because it threatens the "informal brotherhood" that has been collectively generated by the student group (Hughes, 1945). If discovered "the maverick" may well not be trusted again and be excluded from sharing the benefits of the group.

Hughes was interested in status and how society's expectations of a certain status are generated and agreed by people working in that defined community. For example, medical students interact individually and then as

subgroups or cliques to reach a consensus about how much work is necessary to pass the set examinations. This requires discretion which mediates the sharing of confidences between trusted students. These exchanges serve to clarify a common understanding of how much work is required, to what level and in which areas as the student exchange has agreed that it is not possible to know everything. Hughes having described these exchanges as "confidences" implies that discretion is necessary for such sharing and that only students who are "trusted" will enter into the dialogue. Trusted students will understand that they are not only signing up to the agreed code of conduct but they will not divulge information to outsiders. Trust is gained by displays of social gestures which if met by the correct anticipated response lead students to trust each other.

"*Part of the working code of a position is discretion; it allows the colleagues to exchange confidences concerning their relations to other people*" (Hughes, 1945, p.356).

Merton also describes this process of "*feeling each other out*" where the group first establishes the fact of shared uncertainty thereby reassuring students that their difficulties are not unique. Students are part of a "*little society*" of the medical school and Merton refers to them as a "*closely knit self regulating community*" with its own method of tackling difficulties and then generating shared solutions.

"Out of the casual joking, asking around and talking to others that constantly go on among students a set of standards for dealing with uncertainty gradually emerge that tend to coincide with those of the faculty."

"If he gets presumptuous about his knowledge, a student will be reproached by his classmates whereas an admission of ignorance on his part may evoke their approval. From their positive and negative reactions a student learns that his classmates like his teachers expect him to be uncertain about what he knows and candid about his uncertainty" (Merton, Reader and Kendall, 1957 p. 221).

Relationships with teaching staff

Becker describes an "*academic perspective*" which summarises the collective response of students to their teachers. Students come into contact with senior medical staff both for teaching and assessment. Both of these situations require students, at least in their own minds, to perform to the expectations of their teachers and therefore create a good impression. Becker's students were very concerned to make this good impression and felt that their progress through medical school was dependent on it. The medical students considered themselves as:

"….*as at the mercy of a capricious and unpredictable faculty which can, at its discretion, impede or halt their progress toward a medical degree and which, therefore, must always be presented with the best impression possible of the students' abilities and knowledge, however this impression be made*" (Becker et al, 1961 p. 292).

Medical students today are less insecure about their final progress but many still find their relationships with their teachers stressful. In her work Firth (1986) reported that 34% of students claimed that relationships with consultants were the most stressful events. In a further study 65% of

students felt that teaching staff were not sensitive to the personal needs of students and did not respond to students exhibiting stress quickly enough (Alexander and Haldane, 1979). Despite many recent advances in medical education there are still a significant number of doctors involved in teaching who use negative reinforcement supposedly to stimulate learning and the students themselves accept this as what can be expected from medical training (Huebner et al, 1981 and Firth, 1986). Becker describes several of these students' teaching experiences which he generalises as a "*feeling of subordination*". Becker says the students "*took it lying down*" and justified this with their conclusions that "*we will do anything that we really have to in order to get through (medical school)*" (Becker et al, 1961, p. 281).

The faculty often disapprove of choices that students make concerning their learning, as illustrated below:

"*Students spend much energy in learning things for what the faculty consider a totally wrong and misguided reason: to please the faculty and thereby get through school. Students using this perspective show no interest in learning the material they are dealing with for its own sake and concentrate instead on doing whatever is necessary to make a good impression*" (Becker et al, 1967, p. 295).

However the students' consensus is questioned and the "*tension and conflict as a revelation of unmet expectations*" raised when students who have signed up to these agreed standards fail examinations. Becker describes students' "*righteous indignation*" with the faculty (Becker et al, 1961 p.21). Merton

similarly queries whether corrective criticism from the faculty is accepted by students who are established in their own autonomous self evaluation.

The preceding comparison of two of the founding sociological texts on medical student socialisation has summarised several of the main aspects of how medical students learn what is necessary to qualify as a doctor. The subsequent section focuses on how medical students each develop a professional identity which is defined by assuming the values, attitudes and behaviours of the established medical profession. This theme is then continued in the next chapter when the sociocultural aspects of learning and the nature of professional learning itself are examined.

Professional Socialisation of Medical Students

Introduction

As outlined earlier what it means today to be a doctor and a member of the medical profession has greatly changed since Merton and Becker's key sociological texts were published. The professionalism of doctors has been challenged by the escalating expectations of patients, intense public scrutiny and the call for external regulation. Core professional values are being questioned and concern raised that the basic medical training of students will not prepare students sufficiently given the tensions of this new medical era (Relman, 1998).

Even so, both Merton and Becker describe a process of medical student professional development which forms part of the socialisation of medical students that is still relevant today. Both authors from different perspectives examine how the professional development of medical students, primarily through clinical experience and increasing medical responsibility, leads to the creation of individual professional identities and further more an allegiance to the medical profession itself.   The following section explores these views, alongside the views of another author, Simpson from nursing, a parallel healthcare field. Merton further emphasises the importance of the student doctor role during clinical encounters whilst Becker continues to stress the implications of the student's position. By summarising the main differences and commonalities identified by these different perspectives a comprehensive picture of what can be thought of as the professional socialisation of medical students is derived. How a medical student becomes a doctor involves not only acquiring medical knowledge and skills but also learning how to participate in the medical environment and develop a professional identity that upholds the values of the medical profession which the student has joined. These aspects of the professional socialisation of medical students lay the foundation for further examination of the professional development of students and are discussed in Chapter 3.

Neither Becker nor Merton considered what effect including non-traditional students from lower socio-economic groups might have on the professional

socialisation of medical students presumably because at the time of their work medical undergraduate cohorts were fairly homogeneous consisting of largely white, middle class male students. However it is the intent of the subsequent chapter of this thesis to explore whether the professional socialisation process of medical students is affected by the entry of non-traditional students and whether indeed such students find the process of socialisation itself distinctly different from their peers. It is necessary however to first summarise what we know, from Becker and Merton, about the professional socialisation process.

Professional socialisation

Merton clearly articulates that the professional development of medical students refers to the "*processes of developing the "professional self", with its characteristic values, attitudes, knowledge and skills which go on to govern deemed appropriate behaviour in professional and extraprofessional settings*" (Merton, Reader and Kendall, 1957 p. 287).

Additionally the sense of belonging to a profession and having a responsibility to uphold the values and standards laid down by that profession further defines the process of professional socialisation (Vollmer and Mills, 1996). It is this sense of belonging and responsibility to the medical profession, not only to oneself or one's patients, that clearly delineates the increasing

commitment of medical students to their profession and hence their own developing professional socialisation.

Simpson writing after Merton and Becker realised the necessity of including aspects from both their perspectives in her work describing the transition of student into professional nurse. She was particularly interested in whether the motivation developed in students to become nurses was retained by professional nurses. In considering what impact widening participation may have on the professional socialisation of medical students any evidence that motivation and commitment to the medical profession can be transferred from student to doctor would be pertinent.

Simpson outlined a three-dimensional model integrating education, orientation and relatedness to the occupation maintaining that all three components were necessary for full professional socialisation as expressed below:

"*The imparting of skills and knowledge to do the work of an occupation, of orientations that inform behavior in a professional role, and of identities and commitments that motivate the person to pursue the occupation*" (Simpson, 1979, p. 6).

There appears to be a consensus that the process by which medical students move from lay culture to status of practitioner involves more than acuminating adequate knowledge and practical skills but additionally the judgement and

authority to enact these acquired traits and the motivation to be a member of the medical profession upholding its values. These sentiments are acknowledged by Merton, Becker and Simpson who each illustrate that all three attributes appropriate knowledge, attitude and motivation are necessary for professional socialisation but where the differences in opinion lie is when and how these attributes develop.

For medical students the initial five year undergraduate degree is the beginning, albeit an important start, to their life long medical education. This expectation is not necessarily shared by medical students many of whom believe that following graduation they are at least qualified to "*start out in medical practice*" and that graduation marks the end of the most important phase of their education (Becker et al, 1961). Becker repeatedly emphasises that students see things from a student perspective and they can only really think and act as doctors when they become doctors. Merton however describes medical students as increasingly developing their professional roles as they mature through medical school. Simpson concurs that professional socialisation begins during professional education. These differences in opinion are explored by examining the processes by which medical students are principally thought to develop a professional identity and gain professional socialisation; clinical experience, increasing medical responsibility and role-modelling by the faculty. The proceeding discussion which explores these issues in more detail also introduces subsequent chapters which outline the

importance of the sociocultural aspects of learning. One author in particular; Luke (2003), uses a Bourdieuian perspective on medical student professional development to increase our understanding of the processes leading to professional socialisation of medical students.

Development of Professional Identity

Previously I have discussed that one of the main differences between Becker and Merton is the emphasis on the student's perspective and where Merton sees the development of the student into doctor as a continuum Becker clearly advocates that there is little evidence that any student values or attitudes are transferred into professional life. This section examines the difficulties these polarising arguments generate and how by describing the same apprentice style learning experiences and what students learn through the hidden curriculum common areas of professional socialisation can be identified as important by both authors.

In developing his argument Merton states that:

"M*edical students are encouraged to develop a professional self image primarily as medical students but as they successfully progress through their undergraduate studies their professional self image becomes more akin to that of doctor"* (Merton, Reader and Kendall, 1957 p.179).

Both Merton and Simpson clearly link this process to students' clinical training and meeting patients as Simpson's quote concurs:

"*Clinical-year students remain students in the formal structure of the school, but added to the student role are aspects of the professional role that associate the students in the eyes of others, including even the faculty, with a professional public identity. This shift toward professional status moves students from academic settings into settings more in keeping with the professional role*" (Simpson, 1979, p. 37).

In considering how a medical student's self image develops into a professional identity the roles that medical students play during their training and what opportunities arise for them to identify as doctors and take on the "doctor's role" in social interactions need further explanation. Merton discusses a "*role set*" which he describes as "*a complex of role relationships which persons have by virtue of occupying a particular status*" (Merton, Reader and Kendall, 1957 p.181). Medical students will act like medical students with each other and also with their teachers because that is what is expected of them but when medical students meet with patients, both patients and the students themselves expect the role of the student to change.

"*The tendency for individuals to live up to the role expectations of those with whom they are interacting and come to perceive of themselves in accordance with these expectations has long been recognised. First year students when interacting with classmates think of each other as primarily students. This is reflected in their self definitions. When students interact with instructors, further more the disparity between their own competence, experience and status and that of faculty members is apparent to both*" (Merton, Reader and Kendall, 1957 p.181).

And as Merton further adds:

"*It is with patients more than with any other status in their role set that medical students even as early as the end of their first year of training tend to see themselves as physicians*" (Merton, Reader and Kendall, 1957 p. 183).

Thinking of themselves as doctors, acting out the role, helps students to not only perform better at the clinical tasks asked of them but also to feel better, more motivated about becoming doctors. If students feel they have performed as a doctor, if only how a junior doctor would have done in clinical situations and this perception is reinforced by feedback from their patients, and perhaps teachers, then students will continue to act as "junior doctors". This is particularly pertinent when students interact with patients whose opinion is highly valued by students. Patient affirmation encourages students to develop their professional identities by acting as they believe they are expected to behave by patients and teachers.

However when patient-student interactions are detrimental and the student feels undermined for some reason then this may have the detrimental effect of the student questioning their professional identity. So, if students are given patients that have many difficult problems, of which the patient knows more than the interviewing student, then the student will not think of themselves favourably but will dwell on their lack of knowledge and question whether they will ever make a good doctor.

"*But where the task and their abilities seem to the students to be matched they are likely to feel they have handled the situation well- not very differently from the way a doctor would*" (Merton, Reader and Kendall, 1957, p. 186).

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Therefore the more positive clinical encounters students have that confirm these expectations of students' behaviour the more likely it is that students will begin to take on the role of doctor and think of themselves as student doctors or doctors rather than solely students. Alongside this developing professional identity students are maturing and gaining clinical knowledge which reinforces their new found confidence. Whether non-traditional students will find developing a professional identity more challenging or whether such a process conflicts with tightly held beliefs about who they are and how they should act remains to be discovered.

Becker too describes a shift in emphasis from the mainly academic pursuits of early medical training to a more apprentice-style of learning medicine when students start to meet with patients. Clinical experience and medical responsibility are highlighted as central to students' learning (Becker et al, 1961). In contrast however Becker reminds us of the "*peculiar problems of the student's position*" where he asserts that the main reason students engage in clinical activities is to ensure they learn what they perceive is relevant to their needs as students and this relegates developing a professional role and identity until later (Becker et al, 1961, p. 316).

"*The behavior of medical students is best understood by referring to their position as students in the complicated organization of the medical school, as occupants of a student status with its particular limitations and disabilities*" (Becker et al, 1961, p.339).

Medical Responsibility

As previously emphasized Becker explains that medical students are going to act like students even in clinical situations. This does not mean students will behave inappropriately with patients but that Becker has identified the "*particular limitations and disabilities*" of the student role as the paucity of authority, decision making capacity and ultimate medical responsibility compared with the doctor's role.

"*Although they (medical students) may at times "feel" like a doctor, they know perfectly well that they are not and cannot claim the authority of the medical role*" (Becker et al. 1961, p. 321).

Realising medical students lack authority, decision-making and responsibility in student-patient encounters reinforces Becker's concerns that these student experiences cannot facilitate the development of a professional role for students.

"*Students do not take on a professional role while they are students, largely because the system they operate in does not allow them to do so. They are not doctors, and the recurring experiences of being denied responsibility make it perfectly clear to them that they are not*" (Becker et al. 1961, p. 420).

Surely then for these formative clinical encounters to successfully facilitate students' development of a professional identity, like Merton and Simpson claim, the student's role must have some aspects of the authenticity of the professional role. For professional socialisation to begin to develop students must have the opportunity to demonstrate their orientation to their profession

by exercising a degree of authority and judgement within a clinical encounter. This requires both the student and the patient to believe that the student has some degree of medical responsibility, albeit in a supervised capacity, and it is possible that students from backgrounds where such authority and power are unfamiliar may struggle more than their middle class peers.

Becker illustrates this dichotomy further by explaining how students are encouraged by faculty to see patients and act as doctors gaining clinical experience but not taking on the full medical responsibility which may jeopardise patient safety. Students therefore struggle with their role and judge the value of their experience by how much responsibility they are actually allowed to have and feel they can manage.

"In the anxiety they (medical students) exhibit over how patients will receive them in their pseudomedical role, students draw on medical culture both for the definition of what constitutes a full-fledged physician and for the feeling that patients should respect incumbents of medical statuses" (Becker et al. 1961, p. 321).

Medical responsibility defined by expertise and authority held by doctors in caring for their patients is designated by medical professional bodies but pragmatically and ultimately by their consenting patients. Medical students observe doctors carrying out these responsibilities and begin to similarly engage in performing simple clinical tasks and considering the appropriate management of patients they have seen as student doctors. The subsequent chapter discusses in more depth the sociocultural processes occurring when

students engage in such a participatory manner of learning. Medical students are challenged both academically and developmentally by participating in such learning opportunities. Both Becker and Merton emphasise the value of students perceiving their self worth within clinical interactions, Merton because this process helps students develop a professional identity, and Becker more so because students value what they can learn from patients.

"*In the atmospheres of the clinical situation a student can feel his medical knowledge take root. The chance to see many of the things he has read about reinforces what he has previously learned and the fact that there is a patient lying in the bed proves to him that what he is currently learning is really important"* (Merton, Reader and Kendall, 1957 p. 225).

Becker, however, emphasises that the worlds of students and doctors are different and when students strive to gain clinical experience and be given responsibility it may well not be for the same reasons as their teachers. Students may wish to learn from patients in order to be the very best doctors that they can be but they may also need to complete their log books or impress consultants on ward rounds, which in the short term ensure their success primarily as students.

How Student Culture influences Clinical Experience

Following on from Becker's tenet that what concerns students most is their success explains why passing examinations, impressing medical faculty, and latterly applications for subsequent posts are very important to students. Furthermore Becker outlines perspectives from "student culture" which reveal

some student attitudes towards patients are not centred on patient care but about prioritising their needs as students to learn from their clinical exposures:

"*They (students) feel, in accordance with the clinical experience perspective, that the best patients are those who have a "real disease", a disease producing organic pathology from which the student can acquire the knowledge his books do not contain*" (Becker et al, 1961, p. 328).

Becker describes what medical students in his study called "crocks" (Becker et al, 1961, p. 317). These patients may have no definable disease or have multiple difficult pathologies often being non-compliant with the doctors' recommendations. These patients challenge the skill of qualified doctors but present to medical students as poor learning opportunities. Students therefore may be disparaging about them and try to avoid them. Students justify this dislike for such patients by their need to experience clinical pathology which they assert is the function of medical school.

This ideology again differentiates Becker and Merton. Merton emphasises the importance of the medical school organisation and how students fit into these structures, what Merton describes as the "role set", whereas Becker describes medical students as a collective group most interested in getting through medical school. Therefore whilst it may be important for students' professional development that they gain as much clinical experience as possible and act as doctors when they meet patients, students will abandon these requirements if they feel that their purposes are not being fulfilled. This

may explain why students' attendance at some clinical teaching may be poor, students preferring to study from books as they believe this will better help them pass their examinations. Alternatively some students will time their appearances at clinical attachments to appease and impress consultant staff thinking this will ensure their success.

This reminds us that medical students who have student status unsurprisingly behave as students within the medical school organisation and it is not until late in their studies that they really consider how they will behave as doctors once they have qualified. Becker reintroduces the concept of idealism within medical students who are close to qualifying illustrated by their expressions of the good standards of practice they will uphold when they begin to work, as phrased below:

"*He (the medical student) loses his concern with the immediate situational problems of medical school and once again openly exhibits those broad concerns with service to humanity that characterized him as an entering freshman*" (Becker et al, 1961).

What is of interest in regards to my thesis is whether all students irrespective of their backgrounds act similarly and collectively as advocated by Becker or whether as Merton's sociological framework highlights that sometimes other factors may come into play:

"Learning and performance vary not only as the individual qualities of students vary but also as their social environments vary, with their distinctive

climates of value and their distinctive organisation of relations among students, between students and faculty, and between students and patients." (Merton, Reader and Kendall, 1957, p. 63).

Whether the socio-economic class of medical students once they are enrolled onto the medical undergraduate degree programme affects their learning, integration and ultimately socialisation into the medical profession is unclear.

Conclusions

The aim of this chapter was two-fold: firstly to understand the processes of medical student socialisation and what effect medical student culture may have on this; and secondly to highlight any issues for students from non-traditional socio-economic groups within these social processes. What emerges is that the perspectives of both Becker and Merton continue to facilitate a conceptualisation of the socialisation of today's medical students. The processes of medical student socialisation exhibit a close relationship to the current medical student culture being both derived from and contributing to that culture. Medical students develop collective perspectives that encourage the development of attitudes, values and behaviours concomitant with being a member of the student body. These perspectives aim to ensure medical students cope with their studies and effectively learn what is necessary for them to successfully graduate.

What is unclear is whether these student perspectives only direct student learning to ensure the students' success at being students or whether student

perspectives also facilitate students' on-going professional development and learning that is needed in becoming a doctor ready to practice. How medical students see themselves, begin to develop a professional identity, and take on the role of a medical student is an important issue for their professional socialisation. The importance of some degree of clinical responsibility and interaction with patients for medical student learning also highlights the perceived differences between the roles of medical students and those of qualified doctors and the issues this raises for students' professional development and learning. Whether medical students remain within their role-set of medical student with its inherent limitations on their learning because of a lack of patient responsibility or how they overcome these obstacles remains obscured.

Furthermore how non-traditional medical students may affect the socialisation process and whether their experience of medical student socialisation is significantly different from their peers is as yet un-addressed. Non-traditional students may struggle in developing a professional identity as outlined by Merton which may conflict with already strongly held social class identities. Similarly non- traditional students may contest the collectively derived student perspectives as described by Becker because of alienation from the dominant student culture and consequently go on to develop different perspectives of their own.

Socialisation theories provide insight into how medical students learn to develop similar attitudes, values and behaviours that facilitate their membership of the student group and effectively taking on the role of a medical student. However neither Becker nor Merton exam in depth what Sinclair calls the "unofficial backstage" of the medical curriculum where he explains many aspects of what medical students learn to become doctors are "*constructed and contradicted*" (Sinclair, 1997, p.15). Sinclair is reminding us that becoming doctors is not simply a matter of gaining the requisite medical knowledge and clinical skills but also the expertise to enact them appropriately, which will for example entail decision making, working with colleagues, dealing with uncertainty and risk. So whilst Merton advances an understanding of medical student learning that pertains to establishing their role as future doctors and Becker highlights the importance of negotiated student perspectives neither explains how medical students learn what they need to know in order to practice as doctors. This highlights the as yet un-addressed issues concerned with medical student professional development.

This chapter has highlighted how medical students engage with the student culture and take on the role and identity of a medical student. Further understanding of what and how medical students learn in order for them to practice entails exploring how their professional development provides the means for them to go on to successfully engage with the medical culture associated with the medical profession. Becoming a member of the medical

profession hence involves learning how to appropriately engage with the

medical culture and these issues are explored within the next chapter

Chapter 3

The Professional Development of Medical Students

Introduction

Previous discussion has highlighted how the socialisation of medical students emphasises the importance of common values, attitudes and behaviours. Additionally a functionalist view focussed on how medical students are inducted by training into the medical profession. This particularly emphasises the importance of students developing a professional identity by interacting with patients and medical staff. In contrast student perspectives generated by the insights afforded by symbolic interactionism and derived from students' commonality are seen to facilitate the students' passage through medical school and its adversities. Both viewpoints contribute significantly to our understanding of the processes involved in students becoming members of the medical profession. Such professional socialisation focuses on the organisational aspects of becoming a doctor specifically, for example, how medical students engage with their teachers and patients during their curricular activities, acquiring both medical knowledge and expertise which permits them membership.

Hence while professional socialisation focuses on examining common pathways and shared student perspectives the professional development of medical students identifies how students learn to engage with the medical

culture to successfully become doctors. The professional development of medical students is in general concerned with their professional learning that does not exclusively focus on scientific or procedural knowledge and is as yet insufficiently explored. This also alludes to the sometimes perceived dual nature of knowledge and the consequences of this for medical education which are later examined in Chapters 4 and 5. Furthermore the relationships between institutional structures and medical student practice critical within the professional development of medical students requires further attention.

Therefore, what this chapter aims to describe is how a medical sociocultural model, Luke's theory of the medical habitus, based on Bourdieuian concepts, can expand our understanding of the sociocultural processes involved in the professional development of junior doctors and by extension also medical students. By balancing our understanding of the professional socialisation literature with a deeper analysis of the impact of medical culture on the professional development of junior doctors our view of doctors and also medical students, as being solely products of a system is curtailed and an examination of the doctor's role in their own development is advanced. Luke uses insights from Bourdieu's work to provide a means by which the roles of personal agency and institutional structures are more balanced and we can begin to "*think relationally*" about the social practice of doctors and medical students (Brosnan, 2010, p. 51.) Luke in developing her concept of the medical habitus relies on the concepts introduced by Bourdieu that highlight the relational nature of individual experience and the surrounding institutional

structures and politics. Such an approach facilitates exploring what affects the professional development of medical students, and those students from a non-traditional socio-economic background in particular.

Previous discussion has already confirmed that undergraduate medical education is more than the acquisition of medical knowledge and the ability to perform clinical skills. Luke, for example, talks about how "*a medical student is moulded into a clinician*" (Luke, 2003, p.11). Hence how students begin to see themselves as doctors, by interacting with patients and healthcare professionals in this capacity, and ultimately become one of the medical profession, involves more than knowing or even doing, but describes a transformation from lay person through medical student to doctor. Becker claims that students develop a common perspective that only helps them get through medical school which does not necessarily prepare them for the situations that they will meet as doctors. It has been argued that this both undervalues the strength of the insights that Becker gives about how students learn to cooperate to achieve common aims and also exaggerates the difference between medical school and the working world of the junior doctor (Sinclair, 1997).

Therefore if one is to understand how medical students develop, and in particular consider how students from non-traditional backgrounds may struggle, and hence possibly fail to become doctors, an emphasis on both the

process and activities involved in their professional development, including the structural and social environments in which these students engage, is required. This requires a critical examination of what has been termed the "hidden curriculum" which was introduced in the preceding chapter.

The term can be traced back to sociologist Philip Jackson (1968), was further developed by the physician Benson Snyder (1971), but appears more frequently in the medical education literature since the 1980's (Hafferty and Castellani, 2009). Simply, the hidden curriculum describes what students learn within their educational institution which is more than any explicitly taught curriculum. It has also been argued that the hidden curriculum is especially important in medical education because of the close and sustained interaction students have with the medical culture (Lempp and Seale, 2004). Experience of the medical culture highlights a critical commonality between junior doctors and medical students and this chapter explores how by using Luke's theory of the medical habitus may increase our understanding of the professional development of medical students and the sociocultural aspects of becoming a doctor (Luke, 2003).

Introducing Luke's model of the medical habitus

Luke has attempted to summarise the problem of over emphasising professional socialisation theory and hence neglecting the sociocultural aspects of becoming a successful doctor.

"It is key to use innovative ways to see how junior doctors are not simply products of the organised nature of medical school or part of a professional subculture. This is a key problem with professional socialisation theory because it emphasises reproduction, locus of control, role strain, work satisfaction, values and role identity. It is too much of a traditional focus using psychological literature looking at the social through old theories of attachment or learning. This literature also often constructs an "over socialised "view of the doctor" (Luke, 2003, p.20).

Luke goes on to explain how some of the concepts developed by Bourdieu facilitate analysing her findings of the processes involved in the maturation of recent medical graduates from one Australian medical school once they enter the medical culture as junior doctors and begin the rapid professional education and enculturation into the medical profession. Her particular focus being on the medical practice, specifically the experiences, attitudes and changes in junior doctors during their first two years in a teaching hospital (Luke, 2003).

As this chapter goes on to describe Luke's approach differs from the previously outlined theories of socialisation as espoused by Merton and Becker who were chosen as key authors in this area of previous research. Central to Luke's analysis is the use of Bourdieu's sociological concepts and in particular habitus which highlight how Luke views the process not simply as one of simple inculcation of the values and attitudes of the medical profession by the passive socialisation of junior doctors into similar versions of their seniors. As Luke explains:

"*Previous research on junior doctors has focused on professional socialisation as simply an internalisation of values, beliefs and behaviours that stem from medical school*" (Luke, 2003, p. 20).

Luke views the transformation more dynamically and considers the context in which the transformation takes place.

"*By contrast, here we are looking at the holistic perspective of cultural development and experiences of junior doctors, and how other components (e.g. relationships with seniors, coping with stress) make up a professional development experience beyond socialisation and internalisation of values*" (Luke, 2003, p. 20-21).

Luke urges us to consider using the term "*professional development*" rather than professional socialisation which may over emphasise the passive role of medical students and the inevitability of a common trajectory (Luke, 2003, p.49). Instead Luke describes the process of becoming a doctor where:

"*Doctors organise themselves as key players within the social system of the hospital, how they use specific characteristics (e.g. various capitals according to Bourdieu) to learn how a situation works, how it can work for them and how they work within that context to attain further social standing*" (Luke, 2003, p.21).

Luke specifically rejects ideas that lead us to consider junior doctors as simply products of medical school but continuing with her concept of professional development she outlines the social process incorporating changes pertinent to the maturation of junior doctors.

"*At this point we can conceptualise that junior doctors develop and are affected by a range of influences, but they are not simply products of the*

structured and organised nature of medical school, which produces an "arrival" as a pre-registered junior doctor. Medical culture is central to this because we can see characteristics and aspects in hospital medical rituals, markers and events appear to have influence in the development and reproduction of medical culture" (Luke, 2003, p. 49).

Furthermore such a model of professional development has sufficient sophistication and flexibility to capture the sociocultural paradigm that also engages medical students during their clinical training. Hence whilst professional socialisation theories may introduce several important general concepts a more detailed analysis of the underlying sociocultural aspects of medical student professional development is required to study any possible effects of widening participation on this process.

The central tenet in the model devised by Luke is the "*development, modification and enactment of the habitus as a significant means to describe a process of professional development*" (Luke, 2003, p. 21).

"*Using Bourdieu's conceptualisation of the habitus and the incorporation of junior doctor medical culture, this opens for analysis those conditions that shape the motivation, learning and enactment of particular rules of social life and junior doctor medical culture*" (Luke, 2003, p.22).

Hence incorporating Luke's conceptualisation of professional development that allows the relations between institutional structures and personal agency facilitates a more nuanced approach in exploring the professional development of medical students. This being the case it is necessary to

outline and expand on the core Bourdieuian concepts of habitus, field and capital that are used by Luke.

Bourdieu's concepts of habitus, field and capital

Bourdieu has written extensively on sociocultural topics but principally in relation to this thesis I have drawn on Grenfell and James who have particularly highlighted Bourdieu's contribution to the field of education (Grenfell and James, 1998). Such an overview of his seminal work introduces insights into both educational theory and practice and is of particular interest because of its focus on class, power, and status in pedagogic contexts (Bourdieu, 1977). The forthcoming discussion of Bourdieu's concepts sheds light on how Luke has developed her theory of the medical habitus and the ensuing professional development of junior doctors.

Grenfell and James (1998) comment on Bourdieu's work by concluding that he proposes a fresh approach to educational research which may overcome the dichotomy of the subjective and objective being (Grenfell and James, 1998).

"…robust enough to be objective and generalizable, and yet accounts for individual, subjective thought and action. Moreover, the intention is to do so in a way that not only explains the logic of a range of social activities, including education, but also guides the practice of research into such activities" (Grenfell and James, 1998, p.10).

This illustrates why Luke found many of Bourdieu's concepts so very useful in her attempt at analysing from a holistic perspective the cultural development

of the junior doctors that she studied. Luke's model includes the study of medical practice and hence her analysis considers the embodiment of junior doctors' daily routines and activities but also both the cognitive and cultural aspects (Luke, 2003).

Such an overview of Bourdieu's perspectives on education sheds light on how educational theory and knowledge can inform practice and how practice can then be instrumental in developing theory. This illustrates how Bourdieu described the direct relationship between theory and practice which is central to his theory of practice. Grenfell elaborates:

"..*a continual dialectic between objectivity and subjectivity. Social agents are incorporated bodies who possess, indeed, are possessed by structural, generative schemes which operate by orientating social practice. This, in a nutshell, is Bourdieu's theory of practice. Practice, the dynamic of which is probably better captured by the word praxis, is a cognitive operation; it is structured and tends to reproduce structures of which it is a product*" (Grenfell and James, 1998, p.12).

Bourdieu himself goes on to say:

"For me, theory is not a sort of prophetic or programmatic discourse which originates by dissection or by amalgamation of other theories for the sole purpose of confronting other such "theoretical theories… Rather, scientific theory as I conceive it emerges as a program of perception and of action – a scientific habitus if you wish –which is disclosed only in empirical work which actualises it. It is a temporary construct which takes shape for and by empirical work" (Bourdieu and Wacquant, 1989b, p. 50 in Grenfell and James, 1998).

Further more:

"Practice and theorizing are not regarded as separate activities, displaced in time and place during the research process, but mutually generative of the ways and means of collecting data, analysing it and developing explanations which lead to an understanding of the object being investigated. By contrast,

*common forms of ethnography and ethnographic theorizing can be seen to be
quite static and lacking in dynamism in a way that Bourdieu's approach is not*"
(Grenfell and James, 1998).

It can therefore be easily seen why Luke found Bourdieu's work so useful in
her analysis where practice and theory are intimately linked and also bound in
the context in which they are generated.

Central to Bourdieu's theory are what have been termed "*conceptual
metaphors*" namely habitus and field, but also capital. Bourdieu called them
"*thinking tools*" and it is these concepts which characterise Bourdieu's work
and facilitate an approach which negotiates both objectivism and subjectivism
(Grenfell and James, 1998, p. 156). Habitus emphasises individual behaviour
and disposition representing subjectivity, whilst field reflects the influence of
the structures both organisational and hierarchical operating within a system
that focus on objectivity. Capital can be viewed as a resource that operates
between field and habitus and has a role in generating the self-sustaining
relationship between these three concepts of Bourdieu.

"*Capital, whether it is financial, social or cultural mediates positional standing
in a social field*" (Luke, 2003, p. 59).

Bourdieu claims that the mediation between paradigms where the interplay
between habitus and field is negotiated, never fixed, allows for the reflexivity
associated with his Bourdieuian framework. However before considering how
such "*thinking tools*" may help us understand aspects of medical student
culture it is necessary to look in more depth at how Bourdieu and authors who

have studied his work define each of these central concepts and later how

Luke goes on to use them.

The concepts of habitus, field and capital: Definitions and relationships

Bourdieu defines habitus as:

"*An acquired system of generative schemes objectively adjusted to the particular conditions in which it is constituted*" (Bourdieu, 1977, p. 95).

Habitus thus defined combines both behaviour and thought patterns so that

without deliberation people think as they ought and go on to act as they

should in particular circumstances, as expressed below:

"*Habitus ensures the active presence of past experiences, which, deposited in each organism in the form of schemes of perception, thought and action, tend to guarantee the correctness of practices and their constancy over time, more reliably than all formal rules and explicit norms*" (Bourdieu, 1977 quoted in Grenfell and James, 1998, p.14).

Habitus has also been described by Wacquant as a "*structuring mechanism*"

(Bourdieu and Wacquant, 1992, p.18). Habitus both structures the field by

having an impact on the social environment of people and also is affected by

the organisation in which it operates and hence the confusing term of both a

"*structured structure and a structuring structure*" (Grenfell and James, 1998,

p.14).

"*Habitus is a structuring mechanism that operates from within agents, though it is neither strictly individual nor in itself fully determinative of conduct. Habitus is the strategy generating principle enabling agents to cope with unforeseen and ever changing situations…a system of lasting and transposable dispositions which, integrating past experiences, functions at every moment as a matrix of perceptions, appreciations and actions and*

makes possible the achievement of infinitely diversified tasks" (Bourdieu, 1977 quoted in Bourdieu and Wacquant, 1992, p.18).

Hence the habitus is active at both the objective and subjective paradigms, enforcing structure and structuring at the same time ensuring agents can cope with unforeseen and dynamic situations as well as responding unconsciously to routine practices (Grenfell and James, 1998, p.13).

Bourdieu's definition of field highlights what he sees as the relational aspect of field:

"*Field is therefore a structured system of social relations at a micro and macro level. In other words, individuals, institutions and groupings, both large and small, all exist in structural relation to each other in some way*" (Grenfell and James, 1998, p.16).

Bourdieu emphasises the pivotal relation between field and habitus and how on one hand field structures the habitus but also inevitably how habitus plays a major role in evolving the surrounding field.

"*The relation between habitus and field operates in two ways. On the one side, it is a relation of conditioning: the field structures the habitus, which is the product of the embodiment of imminent necessity of a field (or a hierarchically intersecting set of fields). On the other side, it is a relation of knowledge or cognitive construction: habitus contributes to constituting the field as a meaningful world, a world endowed with sense and with value, in which it is worth investing one's practice*" (Bourdieu and Wacquant, 1998 quoted in Grenfell and James, 1998, p.16).

Therefore Grenfell and James argue that the field and habitus are "*mutually constituting*" (Grenfell and James, 1998, p.16). This is also a major feature of Luke's model as we shall go on to examine.

The field also delineates the area of social activity or what Bourdieu refers to as "*the game*". Each field and it's constitute subfields will have their own norms and ways of going about things. These ways of going about things are not necessarily conscious decisions but behaviours and depositions which belonging to the field are handed down to successive players of the game. What helps some players to win the game is the nature and amount of social capital that they bring with them and may further generate.

"*…many of the rules and principles of the game go on in a way that is not consciously held in the heads of those playing it. It is played out in terms of forces of supply and demand, of the "products" of the field – the symbolic capital*" (Grenfell and James, 1998, p.20).

Bourdieu outlined three types of capital: economic, cultural and social. Economic capital is simply financial wealth and all the advantage in terms of education and social standing that this buys. Cultural capital is depicted by the educational background of an individual and is classified by individual disposition, educational qualification and possessions and connections to and hence familiarity with specific types of institution. Hence cultural capital has a tendency for "*domestic transmission*" (Lauder, 2006) and clearly where families may lack such capital this may prejudice their children's chances.

The most privileged students do not only owe the habits, behaviour and attitudes which help them directly in pedagogic tasks to their social origins; they also inherit their knowledge and savoir-faire, tastes and a "good taste" (Bourdieu and Passeron, 1964, p.30).

Social capital is determined by an individual's "*sphere of contacts*" (Grenfell and James, 1998, p.21) and the social contacts that they may call upon to facilitate social movement but also increase their capital in other ways.

Therefore the capital one possesses or is perceived to lack can be assessed in terms of its practical and very real consequences. We do not know we have or lack capital until we enter a field where the value of what capital we have is assessed (Grenfell and James, 1998). Medical students from lower socio-economic backgrounds are disadvantaged in terms of application, success at entering medical school and once at medical school where both financial and weaker cultural capital may mean that these students have specific barriers to achieving that may be difficult to overcome.

The relationship between capital and the field with habitus is specifically explored by Luke, particularly highlighting their self-sustaining nature.

"*Cultural capital also refers to the ease or lack of ease with which individuals approach and relate to certain cultural objects and practices of high status and regard. With cultural capital, society values or devalues aspects that people bring with them to certain situations. For junior doctors, the time working in a field to embody valued goods (capital) is also time invested in the development towards gaining cultural capital*" (Luke, 2003, p. 57).

Bourdieu was concerned with power and hierarchy and part of the value of his work is in how these insights further the study of the structural relations between agents holding positions within organisations. The usefulness of Bourdieu's conceptual tools habitus, field and capital in analysing the culture

of organisations is recognised and intuitively we can see, as did Luke, the value of his work in analysing the interactions of the structural relations between agents holding positions within a medical setting. By using Bourdieu's conceptual tools habitus, field and capital Luke studied the acquired depositions and ensuing medical culture of junior doctors.. It is therefore to Luke's model of the medical habitus that we turn to next to examine in more depth to judge what possible insights may be relevant to medical student culture.

The conception of the medical habitus: Luke's perspective on the professional development of junior doctors

We can see from the above discussion that Bourdieu's concepts have much to offer in understanding medical culture. Capital, field and habitus are core interacting concepts used by Luke to develop her model of a medical habitus. Luke's argument is that the medical habitus is key to fully understanding the professional development of junior doctors.

"*The concept of the habitus is a dynamic set of principles useful for examining culture, particularly medical culture as it is manifest in medical practice. Bourdieu's theory of the habitus is critical because it is my assumption that through junior doctor medical practice, the habitus develops specifically within particular medical structures or within the medical field, to use Bourdieu's language. More particularly, I argue that a medical habitus emerges*" (Luke, 2003, p.55).

As an initial working definition medical habitus can be thought of as a scheme or way of medical professionals going about things. Luke defines medical habitus more comprehensively as:

"*The medical habitus includes how doctors practice and how they act in their jobs and in themselves as individuals. It refers to the way doctors work and the ways they act in their lives. In this research early professional development at a non clinical level was researched. That is, in terms of the medical culture, habitus became a tool of investigation which showed how in learning about the non clinical aspects of being a junior doctor, doctors began to internalise ways of acting, negotiating and attainment of success in the medical culture and field. Learning these social and cultural aspects, were central to doctors being able to practice. This is learning well beyond that of clinical practice*" (Luke, 2003, p.144).

This definition clearly articulates that professional development entails more than the accumulation of knowledge and clinical skills but also successfully changing oneself to become, what Luke calls a "*social doctor*" (Luke, 2003). Consequently it is also paramount that for medical students the medical habitus is something that they must engage with if they wish to become successful doctors.

Luke identified that this process requires junior doctors to learn and assume several characteristics and behaviours from their early postgraduate working lives, what she terms the "*embodiment of cultural experiences and social group processes*" (Luke, 2003, p. 150).

"*These junior doctors quickly learn that particular characteristics, dispositions and skills are needed to gain success as a doctor in the wider profession of medicine*" (Luke, 2003, p. 146).

These central tenets of Luke's model of medical habitus, essential for the professional development of junior doctors, emphasise that junior doctors recognise their place and role in the perceived medical hierarchy, increasingly dress and behave to fit in with accepted medical practices, and act to increase their chances at securing sought after training programmes. This is known as "*playing the game*" which reminds us of Bourdieu's conceptualisation of aspects of social activity which he called "*the game*".

Luke discusses "*patterned activities*" in a field where roles and activities are governed by expectations, hierarchical position and relations between social structures (Luke, 2003, p.60). Struggling for position within the field or "*playing the game*" illustrates how Luke uses Bourdieu's concepts to analyse how junior doctors act to impress their seniors to gain prestigious training posts. Similarly medical students quickly learn that during their clinical training there are times when they are very visible, conversely sometimes by their absence, and they feel the need to create a good impression so that the faculty responsible for assessing them will appraise them favourably. Often there is a common method for doing this; students prepare comprehensively for consultant led ward rounds which are not missed so that they can "play the game" and appear, maybe quite genuinely so, interested, motivated and knowledgeable in front of people they think matter and can influence their success at medical school. Students compete with each other for sought after clinical attachments and techniques for appearing knowledgeable and

prepared in front of consultant staff such as dominating the questioning time and not permitting other students opportunities to answer questions are common place (Lempp and Seale, 2004).

"Within a field, how knowledge is constructed through objective relations and struggles for social distinction is a fundamental aspect to social life" and Luke also emphasises that, "*the field is a place to shape behaviour based on struggle or conflict over cultural capital*" (Luke, 2003, p.61). Therefore intuitively habitus operates in relation with both the field and capital. Indeed Luke argues that it is the self-sustaining relationship between capital and field that generates and perpetuates a habitus:

"*The systematic relationships between capital and field allow us to look at how habitus is the graduate of the forces within the field and a product of cultural capital*"
and she goes on to conclude:

"*Each field produces and reproduces a particular logic of practice which is manifested in a particular habitus*" (Luke, 2003, p.61).

Hence successfully "*playing the game"* ensures that the dispositions of the junior doctor's medical habitus are durable and once embodied difficult to change.

Hence, a further core theme defining Luke's model of junior doctors' professional development is the interaction between capital and field to form

the medical habitus. Capital is used by Bourdieu to describe the positions of

people, or as he called them agents, in their interactions in society.

"*Primarily, the use of capital is to improve one's social standing and position which is negotiated by capital in a social field and mediated by the habitus*" (Luke, 2003, p. 56).

Luke describes how the capital a junior doctor brings with him or her not only

facilitates their position within the medical setting but also negotiates the

likelihood of an increase in their status by acquiring more capital. It is the

capital a doctor possesses and uses that helps negotiate the challenges of

the field, and in this case taking on the responsibilities of a junior doctor. If

these recently graduated doctors successfully achieve all that is required of

them in their daily routines they will then progress and acquire more standing.

Playing the game involves junior doctors negotiating their position in the

medical culture and Luke describes how junior doctors use their cultural

capital to achieve this:

"*Cultural capital which drives this course of action, is achieved through moving into the appropriate field of medical culture with particular social ease, command of appropriate behaviours and attitudes. This will bring him specific cultural advantages and may even assist him in becoming somebody or what he will think at that point is "somebody"*" (Luke, 2003, p. 138).

Further more Luke adds:

"*The game played by the doctors is about control of a situation or knowledge of how to work within the requirements of the field*" (Luke, 2003, p. 132).

One of Luke's central tenets, the medical hierarchy, is an important structure

that not only reinforces the professional identities of both students and junior

doctors but also requires them through their habitus to negotiate it. This according to Luke then perpetuates the negotiated medical hierarchy.

"Categorising the dispositions starts with the structures of power in the hospital and how the organisational field connects with the habitus of junior doctors. This begins to develop unconscious, unacknowledged cultural capital and reinforces the stratified hospital structure and power bases within the medical field" (Luke, 2003, p. 125).

The concept of field refers to both the physical environment and the social structures that students act in. Luke highlights Bourdieu's view that:

"*The concept of the field is based on the assumption that social interaction and practices are mediated by certain embodied dispositions to enhance social distinction. Bourdieu uses the concept of field to examine how cultural socialisation engages individuals and groups in a competitive manner*" (Luke, 2003, p.60).

In short "*the field operationalises interaction based on structural relations, power and hierarchies"* (Luke, 2003, p.60).

This is very familiar territory to both doctors and their predecessors; medical students. Medical staff recognise the power and hierarchical structures running through medical school and the hospital workplace constituting the medical field and its subfields. Luke declares that it is the relations between positions and how they interact that define these fields and conflict and competition are common themes amongst and between medical staff and medical students (Luke, 2003, p.60). Interestingly we recall that areas of conflict were central to Becker's development of student perspectives but the areas of conflict Becker highlighted were between the faculty and students rather than between the students themselves.

Previously we have seen how Luke's conceptualisation of Bourdieu's perspectives of the relationship between structures and habitus and how people or agents and of particular relevance, medical students, can negotiate these areas generating an emerging culture. However it is the medical habitus, described by Luke as a tool to help understand how junior doctors internalise particular dispositions and preferences from the medical field, which Luke singles out to be the most influential factor in characterising medical culture.

"*The habitus connects a person within structured fields, to contribute to and develop culture and capital laden ways of seeing, being and participating in the social world. In Bourdieu's work, he prevents a lot of the problems with "oversocialised" traditional socialisation theory because he demonstrates that culture is capital. Culture is a part of social reproduction allowing for a more recursive relationship between structure and agency*" (Luke, 2003, p.61).

Understanding how the medical habitus of junior doctors and medical students influences what and how they learn is of the utmost importance if we are to further understand how students become doctors.

Medical student culture: the interaction of capital, field and habitus

Previously I have argued that the insights gained from Luke's study of the professional development of junior doctors that uses Bourdieuian concepts can similarly be applied to medical student culture. It is likely that such an approach can equally inform us about medical student culture because of the

commonality students and junior doctors' experience in their professional aspirations and constraints in achieving these. One of the major influences being the persistent nature of the medical hierarchy which affects both postgraduate and undergraduate experiences. Luke herself claims that the concept of habitus is "*durable and transferable*" and has been applied in many empirical studies from varying academic fields (Luke, 2003, p.54).

Hence medical student culture can be examined by studying the experiences, social practices and the institutional structures affecting medical students during their undergraduate education. Understanding the sociocultural aspects of the professional development of medical students may highlight some of the possible reasons and processes why some non-traditional students struggle and then we can consider ways of helping them more appropriately. Therefore if we wish to examine medical culture, and further explore the professional development of medical students, it is imperative that we engage with the inter-relational concepts of capital, field and habitus. It is important that we understand the dynamics between these concepts which Luke explains are responsible for the creation and continuation of a medical habitus, which in this context I contend contributes to the successful professional development of medical students.

"*The useful component to this concept is it allows us to look at social behaviour as being structured on the one hand and structuring on the other. The dispositions that allow the habitus to produce a change in the person and their social behaviour also become reasons for change. When structures*

within the field change, this is reflected in a changed habitus" (Luke, 2003, p. 126).

Previous discussion has included the importance of how students see themselves and how they may perceive their professional identity. Accepting that students do successfully, what Luke calls "*play the game*", then their habitus is responsible for contributing to an actuation of not only their place in the field but others' place too. How non-traditional students see themselves, their peers and their professional identities, and how they go on to "*play the game*" and whether this is significantly any different to the perceptions of the main cohort of medical students is unknown.

Luke contends that the Bourdieuian concept of habitus can in fact explain most aspects of the professional development of junior doctors and their medical practices. Certainly from the point of this thesis an account of the habitus of medical students and how it is derived is pertinent to examining the experiences of non-traditional students. Grenfell similarly confers by describing "*profession*" as a field which portrays a "*structured space of forces and struggles into which individuals along with their habitus-specific dispositions enter. The outcome of this encounter, both for the profession and the processes of professionalization for the individual, is the product of the interaction between them*" (Grenfell and James, 1998, p.161). Therefore in studying the culture of medical students it is necessary to examine their

capital, the structures of the field in which they engage and the means by which they do this; the habitus.

Usually categorised into three main types: cultural, economic and social, capital clearly has resonance with widening participation issues (Bourdieu, 1997). Economic capital implies more than just financial wealth but also the potential educational benefits that being wealthy may incur or realistically the educational disadvantage that students may experience coming from poorer families. Social and cultural capitals are linked and refer to the ability agents have to access and maintain relationships which advantage individuals and lead to what Luke refers to as "*legitimate, valued and applicable knowledge, skills and attributes that an individual brings to a social field*" (Luke, 2003, p.57). Medical students from lower socio-economic backgrounds are disadvantaged in terms of application, success at entering medical school and once at medical school both financial and weaker cultural capital may mean that these students have specific barriers to achieving that may be difficult to overcome.

"*Cultural capital also refers to the ease or lack of ease with which individuals approach and relate to certain cultural objects and practices of high status and regard. With cultural capital, society values or devalues aspects that people bring with them to certain situations. For junior doctors, the time working in a field to embody valued goods (capital) is also time invested in the development towards gaining cultural capital*" (Luke, 2003, p. 57).

Grenfell clearly agrees that for some students with the right kind of capital and ability to use it success is just easier:

"*However those pupils with habitus which most resembles the structural dispositions, and hence, values through which the school seeks to work (the legitimate), are more likely to be disposed to a certain type of practice through a process of elective affinities*" (Grenfell and James, 1998, p. 21).

It has been argued that Bourdieu uses the concept of field to explain how individuals and groups engage in a competitive manner in order to enhance their social position (Luke, 2003). Capital and habitus therefore engage with the field and it is their relational nature that is highlighted as being important in the professional development of medical students. Equally important in considering the relational nature of capital, field and habitus is that these concepts embody time, social practices and the physical environment. If a medical student habitus is the outcome of interactions between structures pertaining to the field and capital that students possess then it is pertinent to examine what specifically may constitute the structures making up this field.

The field for medical students is complex and multidimensional and requires a macro or structural definition that encompasses not only the medical school institution but its relationship to healthcare systems (NHS structures), regulatory bodies such as the General Medical Council, and not least recent significant changes in healthcare and patient expectations (Brosnan, 2009). By exploring how medical students develop a habitus, or means for successfully navigating through this field, helps us understand how students' professional socialisation is dependent on their adept adaptation to any organisational structures. This process explores the "hidden curriculum" of

medical student education and usefully links their socialisation with organisational structure (Brosnan, 2009). Furthermore within a field how varying individuals occupy positions of power, and are deemed to struggle to gain more power by virtue of their increasing capital, must cause us to reflect on the positioning of non-traditional students. These students by nature of their assumed possession of lesser social, cultural and financial capital may struggle more to develop a successful medical student habitus or indeed may develop a differing habitus. It has been highlighted that Bourdieu himself indicated that:

"*The dispositions required for success within a professional group are learnt less by educational apprenticeship than by previous and external experiences*" (Brosnan quoting Bourdieu, 1988, p.56).

This thought provoking conclusion leads me onto the final section of this chapter which examines the tensions around how such a medical habitus may be learned and also the implications of the arguments that at its very core the generation of the habitus is no more than a replication of society's hierarchical social structures.

Medical habitus: Its derivation and limitations

Previous discussion highlights how the medical culture plays an important unofficial part in ensuring medical students are prepared for the tasks that they will be assessed on and importantly required to perform as doctors. Professional socialisation theories emphasise the importance of role

identities, self-perceived autonomy and professional attitudes. Induction theories of professional socialisation encourage us to consider medical graduates as outcomes of a medical curriculum focusing sharply on the end point of medical student training. Symbolic interactionism highlights what aspects of medical student life are most difficult and how students reach a consensus on how to cope with these challenges. However neither approach addresses specifically how medical students learn what is required of them to know and do as doctors. Whilst socialisation theories may contain an implicit understanding of what it means to learn by virtue of describing processes that students undergo which ensure they become professionals these theories do not fully encompass the dynamic practices and the context in which students learn medicine.

Students' activities, daily routines and the context and structures that impact upon these have been neglected and this omission draws our attention to the importance of sociocultural theory. Luke's model of the medical habitus which heavily draws on Bourdieuian concepts facilitates our understanding of the professional development of junior doctors, particularly highlighting the non-clinical or social aspects of medical culture contained within the hidden curriculum, which are essential for doctors to grasp to enable them to effectively practice. This also highlights the importance of the tacit everyday knowledge alongside the theoretical medical science that medical students are required to learn in order to practice. The notion that professional

knowledge has a dual nature is debated but the consequences of students failing to learn either the theory or the everyday aspects required of doctors is that they will not be regarded as competent.

However returning to the habitus what Luke, and indeed Bourdieu, do not fully explain is how the habitus is generated. If the medical habitus is central to medical student professional development then it is necessary to not only describe the habitus of medical students but also how it is derived. Luke describes junior doctors as:

"… *having or seeking to attain a certain medical habitus, which they are also implicitly learning.*"

"*Junior doctors are never being told directly about these cultural aspects; rather it is through interacting and working with people in the medical workplace that allows for informal learning through a hidden curriculum*" (Luke, 2003, p. 127).

And further more:

"*Habitus appears to be acquired through incidental learning, although Bourdieu does not provide an account of "habitus learning". The habitus is also an internalisation of external rules or behaviours.*" (Luke, 2003, p.62)

What may be meant by these phrases of "*implicitly learning", "informal learning through a hidden curriculum" and "incidental learning*" and what processes may be occurring in the maturation of the junior doctors studied, and also importantly the medical students yet to be studied, requires further examination. Indeed some critics of Bourdieu's ideas, and I go on to use Alexander as a leading example, have described what has been termed

Bourdieu's "*reductionist portrayal of the formation of habitus*" and claim that in effect what constitutes the internalisation of these external rules and norms merely represents the hierarchical structures of society, and this at the very basic level amounts to only fundamental economic differences (Alexander, 1995, p. 156). This interpretation of the habitus leads us to question whether the habitus can be "learned" or whether it is so ingrained within a person representing what Alexander terms "*sociologized biologism*" (Alexander, 1995, p.144). This describes the embodied habitus as subconsciously determining behaviour relegating the influence of individual thought and even cultural practice. Hence whilst we can appreciate the insights Bourdieu's conceptualisation of the self-reinforcing nature of the relationship between structures and habitus gives, admirably operationalised by Luke, it is also necessary to note the limitations of such an approach, again Alexander helps us consider these by describing Bourdieu's theories as:

"*…a materially reflective rather than culturally mediated conception of socialisation and family life* (Alexander 1995, p. 137).

This interpretation of habitus leads to the conclusion that the habitus cannot function independently of the social structures that define it and that this binding relationship may severely limit any autonomous influence that habitus could exert on the professional development of doctors, specifically in the areas of self-identity and professional behaviours, as further explained by Alexander.

"*Habitus does not lead us to a social psychology or to the issues of identity, character, conformity and independence. What it initiates, instead, is an endless and circular account of objective structures structuring subjective structures that structure objective structures in turn*" (Alexander, 1995, p. 138).

However Luke comments that:

"*Through the lived workplace junior doctors "pick up" certain social practices of the medical structure, culture and the habitus. It is my assumption, that residents through workplace practices begin to adopt particular habitual practices while being socialised into certain forms of desired medical practice and structures. The link here is between workplace practices of professional development, Bourdieu's concept of habitus and the professional development of junior doctors"* (Luke, 2003, p.67).

Hence examining how junior doctors or medical students "*pick up*" certain social practices may present challenges within a Bourdieuian conceptualisation which Luke has used. In particular what part agency or self plays in determining practice and also the understudied workplace and the influence of its practices themselves need further exploration. Also how students pick up or learn how to do the everyday tasks required of them again encourages us to consider the nature of the knowledge formed and by which processes. These issues are considered in more depth in the subsequent two chapters.

I introduced earlier Alexander's claim that Bourdieu presents the habitus as an "*unconscious motivational structure*" believed to form early in family life and be strongly influenced by material hierarchical structures but unaffected by any prevalent subjective social values (Alexander, 1995, p.137). This view highlights the dichotomy between scholars who favour "*institutionalised*

expectations" over those who consider "*any particular individual act*" (Alexander, 1995, p.139). Alexander goes on to explain that:

"*The habitus does not have its own emergent properties, its own logic, its own internal complexity. Because it does not possess any real independence, it cannot provide a vehicle for establishing a true micro-macro link*" (Alexander et al, 1987, p.257)

If this is so, one has to again question the validity of solely adopting Luke's approach in delineating the medical habitus as the means to fully describe the professional development of junior doctors or for my purposes medical students. Luke's model reinforces what Alexander has called the "*unconscious strategization*" of the habitus where, in this case, the habitus can be thought of as innately directing the successful professional development of junior doctors by their unconscious engagement with the prevalent medical culture (Alexander, 1995, p.152). This is illustrated by Luke who describes the medical habitus of junior doctors as:

"*The strategies of the habitus then comprise primarily a physical representation of internal cognitive structures or mental maps, which are displayed or expressed in behaviour, speech and physical ways of behaving. The physical representation of the internal set of rules allows the junior doctor a certain path of professional development or success in specific/certain medical fields*" (Luke, 2003, p.145).

However this also concurs with Alexander's assertion that "*the invisible theoretical fulcrum of Bourdieu's macrosociology is the ingenious but impoverished version of the micro-macro link*" which reduces action into solely "*practice as profit-seeking*" which is again illustrated by Luke's model

where the successful outcome of the junior doctors' practice as described is the reward of being allocated attractive training posts (Luke, 2003, p. 156).

Furthermore whilst Luke's model is most helpful in facilitating our understanding of certain aspects of the professional development of junior doctors and similarly medical students other areas such as the relationship between gaining theoretical knowledge, and in this case medical scientific knowledge, is unexplored. This highlights the deliberate absence of "self" within such a Bourdieuian conceptualisation and also to some extent the community in which medical personal work and learn.

In contrast Alexander highlights the importance of the self by establishing learning as a change in the individual such that they can rethink the rules which govern a particular social practice, as he explains below:

"*Individual development depends upon a shift within the actor's cognitive and moral framework – in the actor's capacities to think, to feel, and to evaluate - from concreteness to increasing abstraction. This movement involves changing the cognitive and moral reference from things and persons to rules, to rules about rules, and finally to the possibility of some form of real individuality and independence that involves the actor's ability to rethink the very rules that, according to tradition and group constraint, must be applied to the social situation at hand*" (Alexander, 1995, p. 143).

This perspective moves us away from the possibly over-governing influence of a medical habitus towards considering more thoroughly the role of agency in defining social practice. In prescribing "*what a multidimensional social theory actually requires*" Alexander continues with describing:

"*How individual action and its social environments can be interrelated without reduction; how ideal and material dimensions can be brought into play without sacrificing their autonomy and reducing one to the other; how macro can be linked to micro without committing the fallacy of assuming that the fit between them is entirely neat*" (Alexander, 1995, p. 193-4).

Therefore a more expansive examination of the professional development of medical students is required that encompasses sociocultural theory that has at its heart the intention to define learning as a change in knowledge and action which is viewed both in practices and in the context in which learning takes place (Chaiklin and Lave, 1996). Such an examination aims to highlight connections between the macro and micro aspects that Alexander describes and in particular the contribution situated learning models can make to our understanding of how medical students may learn in a clinical setting. Exploring the notions of how sociocultural theory clarifies learning as a process of increasing understanding, participation in activity and involvement in the relations between the structures of the learning environment reminds us very much of the context of medical students learning in clinical settings. Furthermore such an exploration facilitates examining the debated dual nature of knowledge and what implications such an understanding may hold for medical knowledge, pedagogy and the practice of medical students.

Conclusions

By elaborating on Luke's theory of the medical habitus, based on Bourdieuian concepts, our understanding of the sociocultural processes involved in the professional development of medical students is expanded. What emerges is the important influence of the medical culture both officially and unofficially upon medical students' professional development. A major and necessary feature of what medical students need to learn in order to successfully become doctors appears to involve an engagement with the unofficial medical hidden curriculum (Simpson, 1999 and Sinclair, 1998). The medical habitus appears to have a key role in negotiating this contested field by encompassing the cultural, social and economic capital of students. One of the issues that remains unexplored is the transition students make from engaging with a student culture to that of the medical culture. The meaning of this will become transparent when the views and experiences of medical students, including those from a non-traditional background, as they engage in the medical field are later examined during the empirical component of this thesis.

This chapter has illuminated how Luke's conceptualisation of the medical habitus of junior doctors, and by extension medical students, presents an opportunity to examine the relational aspects between social structures involved in their professional development and social practice. However what remains un-addressed is how a medical habitus develops or is learned and

this requires a more nuanced examination of the possible micro-macro links involved in medical student learning. Of particular interest will be the differences, if any, of the practices of non-traditional students. This highlights the absence of any detailed examination of how medical students actually learn either within the preceding discussion or within the medical educational literature in general. Closely related to this contested area is an explanation of what is also necessary for medical students to know in order to practice. If we have a better understanding of what professional knowledge means for medical students then a more informed examination of what students need to learn and an appropriate critique of the medical pedagogy can be undertaken.

Such a focus opens up the discussion to examining how sociocultural theories that emphasise participatory ways of learning may shed light not only on how students learn but also what constitutes legitimate medical knowledge within undergraduate medical education. This discussion highlights the contested area of the nature of knowledge and its debated polarised perspectives that concern theoretical scientific compared with everyday tacit knowledge. In addition any non-dualistic conceptualisation of medical knowledge may present many pedagogic issues for medical education and the practice of medical students which require further examination.

Hence the following two chapters that deal with these issues are closely linked. Chapter 4 explores what is meant by legitimate medical knowledge

and the practices by which medical students learn whilst Chapter 5 examines the effect of these perspectives on the design of undergraduate medical curricula in terms of their pedagogic processes. Chapter 4 initially introduces the on-going debate concerning the nature of knowledge and the conceptualisation of learning from the perspectives of whether students learn by acquiring knowledge or by participating within the contexts of their learning. By exploring what medical students do in their daily practice may inform us how and what it is that they learn. Such a process contributes to our understanding of how professional knowledge and competence are defined and develop in relation to medical students' practice which is better conceptualised from the position of considering how a theory of learning has its basis in social interaction.

Whilst the insights gained from Luke's adaptation of Bourdieu's concept of habitus shed light on the professional development of medical students further understanding of the learning processes of medical students is hindered by the absence of an appropriate contribution from sociocultural theories of learning. Junior students clearly follow their more senior counterparts as they progress towards graduation and mix not only with these older students but also with who they aspire to be, that is qualified doctors, who themselves were once medical students. This combination of novice, senior and graduated medical students learning and working together in a clinical context also alongside other healthcare professionals requires a

sophisticated model of learning that moves beyond solely the medical habitus in examining the issues involved in successful student learning.

Furthermore attempting to describe the learning of individuals without understanding the context in which they live and learn, or worse attempting to purposely separate their learning from the real world, is akin to divorcing the mind from the body. Such a view of learning reveals an incomplete picture of what and how medical students learn to become doctors. Hence the subsequent two chapters explore how theories of learning that encompass both the mind and the lived in world provide a more thorough and complete understanding of learning processes and in particular ways of learning that embrace participatory approaches.

Chapter 4

Medical Knowledge and Medical Student Learning

Introduction

This chapter explores within a medical context how we define what medical students are required to know to become doctors and how we can better understand how best they accomplish this. There is an ongoing general debate in education surrounding the polarisation of how learning and knowledge are conceptualised. This chapter opens with a section that aims to summarise this debate and illustrate the relevance of such discourses for both curricula in general and medical undergraduate curricula in particular. I have chosen Sfard to lead our discussion as she clearly elicits two metaphors, acquisition and participation, which introduce these competing aspects of learning theory (Sfard, 1998). Furthermore the participation metaphor has particular resonance in conceptualising how medical students learn within a clinical context, their on-going professional development and identity formation.

Further detailed exploration of what is meant by professional knowledge and learning in general with reference to the implications of this for medical students is undertaken. It is by studying what and how students learn that a clearer picture of what constitutes professional knowledge within an

undergraduate setting is gained. This is necessary because despite its importance what is meant by professional knowledge has not reached a consensus. Eraut explains that many aspects that define a professional's competency may be process-related rather than easily defined by propositional knowledge, any definition of a professional knowledge base therefore must include domains that cover both "knowing that" and "knowing how to" (Eraut, 1994). This is important for medical students who are required to learn how to use medical knowledge in decision making as doctors.

The debate surrounding the perceived dual nature of knowledge is further examined in order to clarify these issues and how they may relate to medical student learning. This is illustrated by the work of Bernstein (2000) and Young (2008) which is used to explore in more detail the acquisition model whereas the work of Lave (1995) and Brown et al, (1989) contributes to our understanding of the participatory model. By further exploring how learning occurs a more nuanced understanding of what determines the legitimacy of the knowledge required by medical students is achieved. This is of importance as current tensions exist within medical curriculum development as to what constitutes legitimate medical undergraduate knowledge (Morris, 2012).

This chapter introduces the genre of sociocultural learning theory which has the sophistication to more fully examine the influence of context on learning

and in particular vocational education. The role of sociocultural theories of learning within medical education is emphasised by Bleakley, an example of an educationalist working within medicine, who considers that a greater understanding of how and what students learn whilst on their clinical attachments is required if we are to better prepare students for their clinical experiences:

"*We need to know not only how established knowledge is constructed and reproduced, but how new knowledge is produced and held collaboratively in inherently unstable, complex systems. Socio-cultural learning theories are more powerful than those orientated to individual cognition when it comes to explaining how learning occurs in such systems*" (Bleakley, 2006, p.156).

Appreciating how such knowledge is formed is essential if the relationship between what and how medical students learn is to be fully examined. A more thorough appreciation of the central elements of sociocultural theories of learning and their highlighted perspectives upon participatory practices may better elucidate medical students learning. This facilitates a more insightful position from which we can more appropriately later critique current undergraduate medical curricula and advise further innovation in both curriculum design and delivery. During this chapter the relationship between theory and practice is repeatedly explored highlighting the problems with separating the mind from the world and ultimately arguing that for learning to occur an interdependent relationship between theory and practice is required (Guile, 2006). Sfard's uses her metaphor model of acquisition and

participation to argue for a combined theory of learning that relies on both concepts. This chapter further explores these issues and also introduces a tentative link between Sfard's model of learning and the previously outlined developing medical habitus of junior doctors and students in advance of the empirical data.

The polarisation of the view on learning and knowledge

Traditionally learning particularly in medicine has been conceptualised from a very positivist stance. From this view learning is considered as mentalistic processes occurring within individual learners without any significant reference to either the context or environment in which learning takes place. Naturally following on from this the learner and his or her cognitive processes are assumed to be central to the understanding of learning and therefore it is easy to comprehend how knowledge, the product of learning, is perceived to be a possession to be acquired by the learner. The difficulty that this framework produces is in understanding how people learn within the world and also perhaps more significantly go on to use what they have learned from formal teaching in their daily practice. This difficulty highlights the theory-practice gap where academics have struggled to conceptualise a mechanism whereby learning in one context can be successfully transferred and used in other situations. This dilemma is articulated by Brown who says:

"*The breach between learning and use, which is captured by the folk categories "know what" and "know how," may well be a product of the*

structure and practices of our education system. Many methods of didactic education assume a separation between knowing and doing, treating knowledge as an integral, self-sufficient substance, theoretically independent of the situations in which it is learned and used" (Brown, Collins, & Duguid 1988).

Jerome Bruner elaborated further on this when he described two opposing views of how the mind works, one he named computational and the other cultural (Bruner 1996). The computational view is concerned with information processing whereas culturalism emphasises the symbolic nature and shared meanings inherent within individuals belonging to communities. Furthermore the computational view considers how the mind's working is governed by specific rules that facilitate the management of coded information whilst culturalism highlights the importance of context and the significance of "cultural situatedness" on meaning making.

"*Although meanings are "in the mind," they have their origins and their significance in the culture in which they are created. It is this cultural situatedness of meanings that assures their negotiability and, ultimately, their communicability*" (Bruner, 1996, p.3).

Computationalism therefore is interested in individual information, organisation and use whereas culturalism is specifically concerned about creating and transforming meaning within a community. However what Bruner very clearly articulates is that there is no advantage in accepting one view over the other in considering how knowledge is formed. It is the purpose of this section to not only reinforce this perspective but to further explore how our understanding of "the nature of knowing" within medical education can be enhanced by equally valuing both perspectives. Indeed in exploring why

some students may struggle to learn what is required to practice as doctors it may be essential to examine both these perspectives to fully understand.

Bruner's psycho-cultural approach to education deals with "…*questions about the nature of mind and about the nature of culture, for a theory of education necessarily lies at the intersect between them*" (Bruner, 1996, p. 13). This conceptualisation is very different from the narrowly confined definition of learning which emphasises the acquisition of knowledge and skills by individuals usually as a result of formal teaching but equally neglects the world in which the learners operate. The role of personal agency in learning has dominated educational theory; medicine in particular, and explains why theories of andragogy, defined by aspects of cognitive psychology, have become so mainstream. Here the view is that the world and the mind are separate and learning theory has concentrated on understanding what happens within the mind, with a preponderance of time spent examining how teaching methods might be improved to aid learning. With the mind comes theory, and with the world comes practice, and neglecting the world in conceptualising learning has meant that practice and the context for learning have also been historically neglected. This also has implications on how we view and define knowledge.

Bruner claims that our Western pedagogical tradition severely limits our understanding of how knowledge is formed with its emphasis on transmitting usually "subject matter" and goes on to claim that:

"…*one of the most important gifts that a cultural psychology can give to education is a reformation of this impoverished conception. For only a very small part of educating takes place on such a one-way street – and it is probably one of the least successful parts*" (Bruner, 1996, p.21).

However recently, including in medical education, there has been a greater focus on the world in which the learner is placed and what learners gain from being engaged in practice. Models of situated learning and apprenticeship have offered alternative viewpoints of learning that take into account distributed knowing, learning through time as well as space, and learning from people (Bleakley, 2006). As Bruner concurs:

"..*in most matters of achieving mastery, we also want learners to gain good judgement, to become self-reliant, to work well with each other. And such competencies do not flourish under a one-way "transmission" regimen. Indeed, the very institutionalization of schooling may get in the way of creating a subcommunity of learners who bootstrap each other*" (Bruner, 1996, p.21).

It is therefore of central interest to this thesis to explore Bruner's concepts, alongside other socioculturalists, such as Sfard with her two metaphors of learning which are outlined below, who highlight the limitations of only examining learning from a positivist paradigm. This debate can illuminate further what and how medical students learn in order to practice, and may

also importantly facilitate our understanding of why some students may academically struggle.

Therefore it is with interest that we now turn to study a further articulation of these opposing views on learning by Sfard. Sfard explains by illustrating by metaphor the tensions in current educational discourse and important to this thesis how both views are required to create a coherent understanding of how people learn (Sfard, 1998). Sfard chooses to use metaphors because they facilitate our scientific thinking but also because she wishes to make explicit their underlying meanings and assumptions which may not always enlighten and help learners.

"*On the one hand, as a basic mechanism behind any conceptualisation, they (metaphors) are what make our abstract and scientific thinking possible; on the other hand, they keep human imagination within the confines of our former experience and conceptions. In the process of metaphorical projection, old foundational assumptions and deeply rooted beliefs, being tacit rather than explicit, prove particularly inert. As such, they tend to travel from one domain to another practically unnoticed*" (Sfard, 1998, p.5).

By examining the underlying meanings and assumptions of metaphors, which Sfard calls *entailments*, we can attempt to avoid an uncritical understanding of how we learn.

"*Such an uncontrolled migration of metaphorical entailments is not always to the benefit of new theories. It may bar fresh insights, undermine the usefulness of the resulting conceptual system, and above all perpetuate beliefs and values that have never been submitted to a critical inspection*" (Sfard, 1998, p.5).

The two leading metaphors that Sfard uses in discussing learning are the *acquisition metaphor* and the *participation metaphor* (Sfard, 1998, p.5). The acquisition metaphor, similar to Bruner's "*transmission model*" concurs with the previous discussion of how learning is perceived to be acquiring a possession, Sfard states:

"*The language of "knowledge acquisition" and "concept development" makes us think about the human mind as a container to be filled with certain materials and about the learner as becoming an owner of these materials*" (Sfard, 1998, p.5).

The notion that learning is acquiring knowledge is very strongly held in many educational discourses and has generated a variety of proposed mechanisms by which new knowledge and concepts are gained, for example the development of models of learning such as constructivism or experiential learning. What these models have in common is the view on the supremacy of the role of individual learners in the process of learning. By default this means the place and context in which the learner is learning as well as the people with whom the learner is placed are neglected. Sociocultural models of learning have challenged these notions and brought to educators' attention the contribution that engaging in practice, being in the world, brings to learning. Bleakley, a frequent commentator on medical education, explains that:

"*Such a notion of personal agency is challenged in sociocultural models of learning, where the learner is viewed as subject to social and historical discourse, and cognition is described as distributed across people and*

artefacts making up a community of practice, rather than situated "in" persons" (Bleakley, 2006, p.151).

Sfard therefore introduces her participation metaphor to illustrate how the learner can be viewed as "*a person interested in participating in certain kinds of activities rather than in accumulating private possessions*" and also how "*learning a subject is now conceived of as a process of becoming a member of a certain community*" (Sfard, 1998, p. 6). Similarly Bruner's "*interactional tenet"* introduces these concepts moving from a simple model of transmission of knowledge from teacher to pupil to the "*intersubjectivity*" between the learners themselves sponsoring mutual learning (Bruner, 1996, p.20-21).

These sentiments strongly remind us of how it is necessary for medical students to acquire the requisite medical knowledge to practice but also in parallel to strive to become like doctors and do the things they do. Whilst the acquisition metaphor highlights the importance of the individual learner the participation metaphor focuses our thoughts on the interactions between learners and the people they comes into contact with whilst learning. This mode of thinking emphasises the engagement of the learner in the meaningful activity of the group of people of which the learner wishes to become a member. Hence whilst the acquisition metaphor associates identity with what the learner possesses the participation metaphor illustrates that it is the function and activity of the learner that makes him or her part of the group and bestows identity.

"*Whereas the acquisition metaphor stresses the way in which possession determines the identity of the possessor, the participation metaphor implies that the identity of an individual, like an identity of a living organ, is a function of his or her being (or becoming) a part of a greater entity*" (Sfard, 1998, p. 6).

The participation metaphor as described has parallels with the previously outlined model of professional development by Luke (Chapter 3). Luke describes how by developing a medical habitus junior doctors facilitate their membership into specialised groups of the medical profession. The perceived commonality between some of Sfard and Luke's insights that shed light on the issues pertaining to medical students also striving to become members of the medical profession are explored following the data collection. Similarly the debate concerning the paradigmatic assumptions of both the acquisition and participation metaphors highlights several implications for experiences of medical students who come from non-traditional backgrounds:

"*The new metaphor (participation metaphor) replaces the talk about private possessions with discourse about shared activities. This linguistic shift epitomises the democratic nature of the turn towards the participation metaphor*" (Sfard, 1998, p. 8).

It is argued that non-traditional medical students classically enter university with less cultural capital than their peers. Bourdieu, amongst others, contends that it is the degree of cultural capital which in part ensures that students go on to enhance their personal knowledge which in turn generates further capital. The effect of Sfard's participation metaphor with its collaborative nature is to challenge such a dominant adherence to the acquisition metaphor

with its excessive attention on what people have rather than on what people can do (Sfard, 1998).

Sfard's metaphors of acquisition and participation were introduced because of the insights that both perspectives can bring to how we learn. Her model highlights the inter-relatedness of the processes associated with "knowing that" and "knowing how". The mutual dependence of these learning metaphors is key to understanding Sfard's discussion of the complexities and difficulties surrounding knowledge transfer and the theory-practice gap.

"*Our ability to prepare ourselves today to deal with new situations we are going to encounter tomorrow is the very essence of learning. Competence means being able to repeat what can be repeated while changing what needs to be changed*" (Sfard, 1998, p. 9).

Sfard successfully argues that learning cannot be understood without the use of the acquisition metaphor. How learning occurs requires consideration of the personal knowledge of the learner alongside the context and activities in which the learner engages.

This leads us to conclude that if education in general, and specifically medical education, is not a simple process of managing information, or applying "learning theories" then we must entertain the ideas proposed by Bruner that:

"*It is a complex pursuit of fitting a culture to the needs of its members and of fitting its members and their ways of knowing to the needs of the culture*" (Bruner, 1996, p. 43).

It is with this insight that the next section examines in more depth what is meant by professional knowledge and how together the metaphors of acquisition and participation may facilitate our further understanding of how such knowledge is formed.

Professional knowledge –its acquisition and development

This section aims to further outline both what is meant by professional knowledge, and in particular its acquisition and development. This discussion highlights the intimate connections between knowledge, how we learn and what it is we do in our everyday working lives. This is particularly important in undergraduate medical education where much of what students learn is required in order to for them to be able to practise as doctors.

Having previously introduced the debate concerning the dual nature of the conceptualisation of knowledge and learning the following paragraphs explore in more depth each perspective. Two authors, Young and Bernstein, facilitate our understanding of the objectivity of knowledge and its possible routes of acquisition whereas Lave and Brown et al highlight the insights afforded by sociocultural models both on the process of learning and the development of new knowledge. Following further exploration it is argued that a unification of

these perspectives is required to thoroughly and more meaningfully examine how medical students experience their undergraduate curriculum.

The traditional assumptions about knowledge and its production are increasingly challenged by both economic market forces and political agendas (Friedson, 2001). Even what it means to be a professional and the uniqueness of a profession's knowledge base is contested. The definition of profession and what distinguishes a profession from other occupations is contested but length of training, license to practice, code of ethics and self-regulation are some of the features that delineate a profession (Eraut, 1994). Similarly the differences and shared concepts between professionalism, professional development and professionalisation have also been debated, both for professions in general and specifically in the field of medicine (Eraut, 1994, Howie, 2002, and Hilton, 2004). Eraut claiming that professionalism is an "ideology" and professionalisation the process by which it may be attained (Eraut, 1994, p.100). Within the field of medicine Hilton outlines six domains of medical professionalism, where individual mature medical professionals have through professional development achieved three personal or intrinsic attributes, ethical practice, accountability and self awareness and three interpersonal attributes, respect for patients, team working and social responsibility (Hilton, 2004). Despite these discussions what is clear is the importance and degree of exclusivity of the knowledge and expertise that professionals possess which gives them their status and often wealth.

"*Both apologists for, and critics of, the professions have been united in stressing the importance of a profession's knowledge base. The power and status of professional workers depend to a significant extent on their claims to unique forms of expertise, which are not shared with other occupational groups, and the value placed on that expertise*" (Eraut, 1994, p.14).

However despite its importance what is meant by professional knowledge has also not reached a consensus. Schön describes the professional knowledge base as "*specialised, firmly bounded, scientific and standardised*" (Schön, 1983, p.23). Eraut further explains that because many aspects that define a professional's competency may be process-related rather than easily defined by propositional knowledge, any definition of a professional knowledge base must include domains that cover both "knowing that" and "knowing how to" (Eraut, 1994). This differentiation reminds us of the preceding discussion on the polarisation of the views on learning. The previous sections of this chapter introduced the debate surrounding the sometimes perceived dual nature of the conceptualisation of knowledge and learning and I now wish to explore in more depth each of these perspectives.

To fulfil this aim two authors, Young and Bernstein, facilitate our understanding of the objectivity of knowledge and its possible routes of acquisition. Whereas Lave, Brown and colleagues, proponents of sociocultural models of learning, are used as exemplars of the models that conceive learning and developing new knowledge from the perspective of the learners' interaction with professionals and participation in the professional's

work place. Following this further exploration this section concludes with the argument that a unification of these perspectives is required to thoroughly and more meaningfully examine the professional development of medical students during the medical undergraduate curriculum.

Young's model of social realism and the objectivity of knowledge

Young (2007) emphasises the value of discerning the objectivity of knowledge and laments the lack of a theory of knowledge within educational sociology and curriculum development. In determining and analysing the medical undergraduate curriculum much can be deduced from Young's model of social realism. This clearly sets out the value of an epistemology of knowledge indicating both its inherent objectivity and origins in social practice (Young, 2007).

However before we turn to Young's model of social realism it is useful to summarise why he feels such a model is required. Young describes two opposing views about knowledge and the curriculum: "*neo-conservative traditionalism and technical-instrumentalism*" (Young, 2007, p. 18). The first view is concerned with how specialised knowledge preserves both the authority and power of individuals and organisations whilst the second is more interested in training workers to fulfil society's economic needs (Young, 2007, p.20). However neither view is interested in knowledge itself nor informs us how knowledge is gained or further developed by learners. This

gap is not plugged by postmodernist critics who according to Young whilst

denigrating both views also subsequently:

"..*fail to provide a way of discussing what must be central to any serious curriculum debate –the question of knowledge –the critiques from social theory fall into the same trap as the views they oppose*" (Young, 2007, p.22).

Young emphasises the postmodernist notion of the importance of experience

in both defining and acquiring knowledge and therefore negating its

objectivity.

"*However, because they have no theory of knowledge as such, they can do little more than expose the way that curriculum policies always mask power relations. Furthermore by depending on an irreducible notion of experience, they neglect the uneven distribution of the experiences that the curriculum needs to take account of if students from diverse backgrounds are to have opportunities to acquire knowledge that takes them beyond their experience*" (Young, 2007, p.22-23).

A postmodern epistemological approach to knowledge, according to Young,

therefore does not enhance our understanding of how knowledge comes

about. Postmodernism considers knowledge as from each person's points of

view and experience and so embraces relativism whilst ignoring any claims

for justifying knowledge as truly objective.

"*The first is the claim that there can be no epistemology or theory of knowledge because fundamentally, it is only experience, not knowledge, science or expertise that we can ultimately rely on in judging whether something is true*" (Young, 2007, p.4).

This position unfortunately has potentially severe consequences for

subordinate groups such as medical students from non-traditional

backgrounds as they are denied the possibility of gaining objective knowledge

which could be a resource for overcoming their subordination. Young claims

that:

"*There is no knowledge for voice discourses, only the power of some groups to assert that their experiences should count as knowledge*" (Young, 2007, p.5).

Young further argues that social constructivism in considering that all

knowledge is the product of social practices again condemns knowledge to be

solely from a standpoint or perspective. Young concludes that:

"*The epistemological reductionism of social constructivism in effect does away with knowledge as something distinctive in its own terms*" (Young, 2007, p.145).

Young argues that there is fundamentally more to the conceptual framework

encompassing our understanding of what knowledge is and how it is gained

than by only experience. This is his reasoning behind his development of his

theory of social realism that at the same time both denigrates relativism and

realigns an epistemology of knowledge with both its origins in social practice

and its inherent objectivity. Critically for my work Young specifically analyses

a possible way forward that examines the role of knowledge, the processes

by which it is formed and propagated within the curriculum and how practice

may be affected by these concerns.

"*In denying a distinctive role for knowledge that transcends specific social practices, interests and contexts, these approaches remove the grounds for a*

critical relationship between theory and curriculum policy and practice" (Young, 2007, p. 82).

The model of social realism endeavours to connect the tacit knowledge that is embedded in practice and the codified knowledge that is associated with theoretical school-based learning. Social realism embraces the concept that the sociology of knowledge is inseparable from the sociology of learning just as the study of the curriculum is inseparable form the study of learning and pedagogy (Young, 2007, p.13).

Furthermore he claims that:

"*It will be the nature of the connections between the codified knowledge of the college-based curriculum and the tacit and often un-codifiable knowledge that is acquired in work places that is the basis for what is distinctive about vocational knowledge*" (Young, 2007, p.144).

My interest is to further explore these connections between the theoretical knowledge and the practical know-how gained by medical students through clinical experience. This is highlighted by Lyon (2009) as particularly important in subjugating the body-mind dualism that hinders our deeper understanding of how medical scientific knowledge is used by students in medical practice.

"*To ignore the conceptual foundations for the integration of basic and clinical sciences is to risk reinforcing the body-mind dualism that characterizes so much of medical thinking*" (Lyon, 2009, p.208).

In summary, Young's social realist model heeds the historical and personal agency involvement in the production and acquisition of knowledge but also equally highlights the context-dependent characteristics, the rules, codes and values of established knowledge, as he expresses:

"*Whereas recognising the sociality of knowledge without its reality can lapse into relativism or dogmatism, a focus on its objective reality without recognising its sociality can become little more than a justification for the status quo. A curriculum of the future needs to treat knowledge as a distinct and non-reducible element in the historical process in which people continue to strive to overcome the circumstances in which they find themselves*" (Young, 2007, p.63).

In addition to Young, in terms of understanding the objectivity of knowledge and the social processes that underpin how such knowledge is defined and gained, Bernstein's work can contribute much and has been quoted as providing:

"*..inspiration for theoretical work in a variety of disciplines and the conceptual framework for robust and sensitive sociological empirical research on cultural and particularly pedagogic practices and their effects*" (Bernstein, 2000, p.197).

It is therefore with this in mind that I next turn to the insights that Bernstein provides.

Insights from Bernstein's theory of symbolic control

Bernstein (2000) tackles the issues of professional identity. This is an important link to my earlier discussions about medical socialisation and professional development and facilitates our further understanding of how

medical students come to see themselves as members of the medical profession. In particular Bernstein's work can deepen our understanding of how political and cultural changes have affected UK medical education and curriculum change, and specifically how medical students may see themselves.

Through Bernstein's theory of symbolic control he describes how pedagogic practices, which he names modalities, can influence and ultimately determine "*consciousness, identity and desire*" (Bernstein, 2000. p. 201). Considering Bernstein's view of pedagogy encourages a more sophisticated stance whereby pedagogy is seen to generate by way of what he names the "*pedagogic device"* cultural production and reproduction (Bernstein, 2000. p. 201). The pedagogic device collectively made up of processes, rules and arenas is the mechanism through which the struggle for power is enacted. This defines Bernstein's theory of symbolic control and its generated pedagogic discourses.

However it is how Bernstein clearly articulates the distinction between official and local pedagogic modalities generating pedagogic discourses and the possible conflicts between them that is of particular interest to my thesis. Official modalities originate from an institutional level whereas local modalities are concerned with peer, family and community regulations. Furthermore Bernstein also refers to three basic forms of pedagogic relation "*explicit,*

implicit and tacit" (Bernstein, 2000, p. 199). Explicit and implicit pedagogic relations refer to:

"..*purposeful intention to initiate, modify, or change knowledge, conduct or practice by someone or something which already possesses, or has access to, the necessary resources and the means of evaluating the acquisition. Explicit or implicit refers to the visibility of the transmitter's intention as to what is to be acquired from the point of view of the acquirer*" (Bernstein, 2000. p. 199-200).

From this description it can be clearly interpreted that Bernstein views knowledge as an "acquisition" that is gained by the learner and transmitted by the teacher. Bernstein's explicit and implicit terms confirm whether the learner is aware of this relationship and perceives its outcome. Interestingly tacit pedagogic relations are where neither transmitter nor acquirer is aware of the processes underlying any knowledge transmission.

Bernstein goes on to further categorise knowledge into horizontal and vertical discourses. Horizontal discourses are "*local, segmental and context-bound*" such as work-based or on-the-job knowledge which is acquired experientially whereas vertical discourses are "*general, explicit and coherent*" and acquired during classroom type activities requiring the "*principles of recontextualization and strict rules of distribution associated with specific subjects and academic disciplines*" (Young, 2007, p.148).

Whilst Bernstein clearly views knowledge as a commodity, his theory of conceptualising knowledge, particularly vocational knowledge of which

medicine partially can be claimed as an example, is based on his descriptions of recontextualization and the relevant pedagogic strategies to which this process highlights (Young, 2007). This conceptualisation of knowledge and in particular its relevance to the articulation of professional knowledge is helpful in clarifying the differences between everyday or horizontal knowledge and objective vertical knowledge. Both types of knowledges are required by professionals and it is important that the curriculum reflects this both in terms of content and the processes by which these knowledges are attained. What both Young and Bernstein argue is that where modern professional curricula disrupt this balance by replacing vertical knowledge attainment with further horizontal learning what has not been recognised is that the two kinds of knowledge cannot be derived from each other.

"*The horizontal or tacit cannot be made explicit because of its tacitness – its immediacy in relation to everyday or working life –that gives it its power. Similarly it is not possible to apply vertical knowledge directly to specific everyday workplace realities where knowledge is needed that is sufficiently flexible to deal with immediate practical problems*" (Young, 2007, p. 149).

Bernstein would consider the traditional undergraduate medical curriculum to be strongly classified and have many powerful symbolic boundaries. This means that the curriculum is made up of a series of clearly demarcated knowledge-domains (Atkinson and Delamont, 2009). Modern medical curricula aim to merge the boundaries between the knowledge-domains forming what Bernstein termed an "*integrated*" code (Atkinson and Delamont, 2009, p.39). How this process of curriculum development influences what and

how medical students learn, and in particular their understanding of the need of theoretical scientific medical knowledge as well as every-day tacit learning, are issues examined in the next chapter.

However, for now I wish to return to Bernstein's views on the relationship between the knower and their knowledge for he claims that this relationship is central to the very concept of education itself. Bernstein claims that the current secular conception of knowledge is that it is dehumanised and therefore separated from the inner being of the knower. This separation reduces the knower's commitment and dedication to the knowledge and also from Bernstein's view reduces the legitimacy and integrity of the knowledge itself (Bernstein, 2000). This highlights concerns surrounding how knowers may see themselves and the development of their professional identity. Young commentating on Bernstein's view states:

"*He (Bernstein) locates the idea of a profession, and more broadly the idea of knowledge, in the dislocation between our inner relationship with our self and our outer relationship with the world, which together constitute our identity as social beings and members of society and, more specifically for some, as members of professions*" (Young, 2007, p. 157).

This discussion highlights the importance of what we as individuals perceive we know, as well as how others also perceive what we know, as being significant in determining our personal identities and positions in society. For medical students what they know, and also importantly what they don't know, influences both how they see themselves and how others view them. The

issues concerned with knowledge formation and becoming "knowledgeable" are therefore central to understanding what medical students perceive as legitimate medical knowledge and its relationship with their developing professional identity.

The social nature of learning as espoused by Lave and Brown

In contrast to the above discussion I now wish to examine in more detail the developing theoretical perspective on the social nature of learning identified as "social practice theory" by Lave (1995) and similarly as "cognitive apprenticeship" by Brown et al (1989) who I plan to use as exemplars of writers in this field. Lave specifically highlights the limitations associated with perceiving learning as a by product of teaching and how by examining both the participation of teachers and learners in socially situated practices this process can enrich our understanding of how learning occurs. Lave's assertions about the robustness of informal learning gained from her research on apprenticeship leads her to question established conceptions of formal educational practices (Lave, 1995).

"*We have challenged assumptions that decontextualization is the hallmark of good learning and have questioned the abstract and general character of what constitutes "powerful" knowing. Learning transfer is an extraordinarily narrow and barren account of how knowledgeable persons make their way among multiply interrelated settings*" (Lave, 1995, p.5).

These views indicate that from Lave's perspective knowledge is not seen as objective but instead subjective to a learner's experience. Indeed the context and learning environment are paramount to what is actually learned. Knowledge is therefore not perceived as a commodity to be owned by individuals and from this perspective the previously discussed distinctions between everyday and vertical learning also become blurred. Instead Lave contends that learning can be considered as an aspect of changing participation within a community of practice and is not reliant on any formal teaching or "*intentional transmission*" of knowledge (Lave, 1995, p.5). Furthermore Lave considers that learning derived from informal apprenticeship educational models can produce knowledge as well as reproduce existing practice and this has important implications for how medical students may best learn to become doctors (Lave, 1995).

Therefore in this context learning can be conceptualised as a "*process that takes place in a participation framework, not in an individual mind*" and in wishing to further engage in this argument I have in the subsequent chapter specifically discussed the model of legitimate peripheral participation, espoused by Lave and her colleague Wenger. Such a discussion highlights the value of situated learning within the pedagogic processes of medical education but prior to this it is necessary to also examine how such sociocultural participatory practices affect the nature of what medical students learn (Lave and Wenger, 1991, p.22).

Situated learning decreases the importance of isolated factual knowledge and does not encourage the concept of viewing knowledge as being owned by individual persons but indicates how learners can develop their professional identity and learn how to participate in professional practice appropriately. Lave and Wenger define situatedness as:

 "*an emphasis on comprehensive understanding involving the whole person rather then "receiving" a body of factual knowledge about the world; on activity in and with the world; and on the view that agent, activity and the world mutually constitute each other*" (Lave and Wenger, 1991, p.33).

Lave through her admiration of apprenticeship models encourages us to look again from a fresh, non-dualistic perspective on what makes any educational model, whether it be formal or informal, effective. Considering learning not teaching as the basic concept in the development of knowledge reinforces Lave's analysis of learning as participation in changing practices and also again highlights the importance of the situatedness of knowledge production.

"*Examples of apprenticeship which do not mystify and deny the situated character of learning offer an easier site for the understanding and theorizing of learning than do schools. For the latter institutionalize and are predicated on widespread beliefs about learning that are called into question by views of learning as situated activity*" (Lave, 1995, p.13).

Lave further challenges traditional views of learning theory by outlining an analytical tool which consists of three questions to be asked of any presumed learning theory: what is the telos or direction of change for the learners, what are the relations between the subject and the social world, and finally what

learning mechanisms are responsible for the learning that occurs? (Lave, 1995, p.15).

"*The notion of telos seemed useful in turning the focus away from a vista of educational goals set by societal cultural authorities which would make teaching the precondition for learning. It encourages instead a focus on the trajectories of learners as they change*" (Lave, 1995, p. 15).

This methodology encourages a more in depth social examination of the way people may learn and concentrates on the learners' journeys rather than the specific learning goals or teaching methods. This perspective also challenges traditionally accepted learning priorities and what is most important to learn. Having the ability to exam afresh the processes by which medical students learn to become doctors would seem pertinent to my study. Lave comments that the telos of the apprentices she studied was not towards gaining more abstract knowledge but "*becoming a respected practicing participant*" among their profession and this view strongly contrasts with the previous section that discussed both the objectivity of knowledge and its acquisition (Lave, 1995, p. 16). What is of parallel interest here is whether the learning priorities and telos of medical students are also about becoming respected practising participants i.e. doctors and similarly gaining specialised medical knowledge is of less importance. What matters most for medical students; what they know or how they are perceived?

Lave describes what she defines as "identities in practice" where learners and the world in which they are engaging mutually constitute each other, as described below:

"..*becoming a respected practicing participant among other tailors and lawyers: becoming so embued with the practice that masters become part of the everyday life of the Alley or the mosque for other participants and others in turn become part of their practice*" (Lave, 1995, p. 16).

This perspective on learning highlights how Lave's learners also become members of a community which contrasts with the previous discussion which highlighted the importance of the learner's relationship with their personal professional knowledge which both legitimised the knowledge and also contributed to the learner's identity. Lave views the formation of learners' identities differently and as a social process and says:

" *"What you know" may be better thought of as doing rather than having something --"knowing" rather than acquiring or accumulating knowledge or information. "Knowing" is a relation among communities of practice, participation in practice and the generation of identities as part of ongoing practice*" (Lave, 1995, p.17).

So this perspective challenges the nature and sequence of the relationships between the learner, what they know and their participation in practice. The learner's identity may be more readily established because of the recognition of appropriate participation in practice rather than any acknowledgement of what they know per se.

"*Crafting identities is a social process and becoming more knowledgably skilled is an aspect of participation in social practice. By such reasoning who*

you are becoming shapes crucially and fundamentally what you "know" "
(Lave, 1995, p. 17).

The relevance of Lave's perspective on "*becoming more knowledgably skilled*" highlights Sfard's emphasis on the participation metaphor and challenges traditionally held beliefs within medical education that scientific theoretical knowledge is most important and is the main determinant of who you become. Obviously medical students are required to learn medical science and use this knowledge in the care of patients but it is which aspects, how this is emphasised within the taught curriculum and how students prioritise what and how they learn that is of further interest. These issues are explored in the next chapter by using Lave and Wenger's theory of legitimate peripheral participation.

However before we come onto Lave and Wenger's theory there are aspects of Brown et al's theory of "cognitive apprenticeship" which also highlight the importance of Sfard's participation metaphor and situated cognition where the activity or situation in which learning is occurring is viewed as integral to what is learned.

"*The activity in which the knowledge is developed and deployed, it is now argued, is not separate from or ancillary to learning and cognition. Nor is it neutral. Rather, it is an integral part of what is learned. Situations might be said to co-produce knowledge through activity*" (Brown et al, 1989, p.32).

On this basis it is essential that the pedagogy employed within undergraduate medical education appropriately considers the environment in which students

are placed to learn so that the knowledge gained in these situations facilitates students' practice. How medical students view their clinical placements is explored within the empirical data and specifically the relevance of what they know already, what they think is most important to learn, and how they go about it.

"*By ignoring the situated nature of cognition, education defeats its own goal of providing useable, robust knowledge. and conversely, we argue that approaches such as cognitive apprenticeship that embed learning in the activity and make deliberate use of the social and physical context are more in line with the understanding of learning and cognition that is emerging from research*" (Brown et al, 1989, p.32).

Brown and his colleagues discuss how conceptual knowledge can be thought of as a set of tools. This analogy is particularly helpful in illustrating how knowledge is derived and then further developed by use ensuring its validity. This analogy also depicts how learning can be unused as the learners whilst possessing the knowledge do not know how to use "the tools". Brown explains by saying:

"*People who use tools actively rather than just acquire them, by contrast, build an increasingly rich implicit understanding of the world in which they use the tools and of the tools themselves. The understanding, both of the world and of the tool, continually changes as a result of their interaction*" (Brown et al, 1989, p.33).

Furthermore the context and community in which the tools are used are emphasised as it is not possible to appropriately use the conceptual knowledge divorced from the culture in which it was derived.

"*The culture and the use of the tool act together to determine the way practitioners see the world; and the way the world appears to them determines the culture's understanding of the world and of the tools*" (Brown et al, 1989, p.33).

This has many implications for medical education not least in that educators are challenged to ensure that learners are provided with authentic opportunities to use the tools as practitioners use them and by this process learners are encouraged to begin to see the world as practitioners see it. The emphasis is beginning to change from being less about what people may learn and more about whom learners are aspiring to be which Brown calls a "*process of enculturation*" (Brown et al, 1989, p. 33). Given the appropriate opportunities to practise authentic activities within the everyday setting of the culture learners become knowledgeable about the practices associated with that culture. In particular Brown's comments below resonate with the activities of medical students placed in a clinical setting:

"*Students, for instance, can quickly get an implicit sense of what is suitable diction, what makes a relevant question, what is legitimate or illegitimate behaviour in a particular activity. The ease and success with which people do this (as opposed to the intricacy of describing what it entails) belie the immense importance of the process and obscures the fact that what they pick up is a product of the ambient culture rather than of explicit teaching*" (Brown et al, 1989, p. 34).

Whereas the sense of this argument may be theoretically appreciated many prevailing pedagogic practices do not encourage students to effectively engage in authentic activities. The legacy of such unauthentic pedagogic

practices may be learning which is simply not useful in real-life situations or cannot be effectively used by learners.

"*Learners need to be exposed to the use of a domain's conceptual tools in authentic activity- to teachers acting as practitioners and using these tools in wrestling with problems of the world*" (Brown et al, 1989, p.34).

This kind of pedagogy defines Brown's concept of cognitive apprenticeship as expressed below:

"*Cognitive apprenticeship supports learning in a domain by enabling students to acquire, develop, and use cognitive tools in authentic domain activity. Similarly, craft apprenticeship enables apprentices to acquire and develop the tools and skills of their craft through authentic work at and membership in their trade. Through this process, apprentices enter the culture of practice. So the term apprenticeship helps to emphasize the centrality of activity in learning and knowledge and highlights the inherently context-dependent, situated, and enculturating nature of learning*" (Brown et al, 1989, p.39).

Brown et al therefore argues for the centrality of activity both within learning and knowledge. The participation of medical students in authentic activity and the issues arising from their intention to seek membership of the clinical teams with whom they are temporarily attached are further highlighted by Lave and Wenger's theory. The next chapter reflects on how Sfard's understanding of the participation metaphor enacted by Lave and Wenger's work facilitates a more nuanced critical analysis of the medical undergraduate pedagogy.

Conclusion

This chapter extends our understanding of how professional knowledge can be defined and goes on to introduce the issues that frame what constitutes the legitimacy of undergraduate medical knowledge. Inherent within this discussion is the debate about the nature of knowledge, specifically its contested objectivity and the means by which it is produced. This debate acknowledges the persistent conceptual dichotomy within educational discourses on whether knowledge is acquired or generated by participation.

Such an on-going polarised view of how knowledge is formed is challenged by the conceptualisation of medical student learning that highlights the relationship between every-day tacit knowledge associated with practice and theoretical science often learnt outside of its context of use. Furthermore whilst there may be conceptual differences between everyday knowledge and theoretical scientific knowledge both are required in developing professional knowledge that emphasises the importance of both objectivity and context.

This chapter also introduces a more nuanced conceptualisation of learning by exploring the theoretical underpinning of what and how medical students learn. In particular Sfard's participation metaphor facilitates a more sophisticated conceptualisation of both what and how medical students learn what is required in order to practice. Medical students' participation is illustrated by taking part in authentic activities associated with the practice of

doctors and occurs within the context of medical teams of which they wish to become members. This view of participation therefore considers learning as being closely related to the students' developing professional identities. Such a perspective on learning is more concerned with the trajectories of learners and who they wish to become and how they will achieve their aims rather than solely increasing their theoretical knowledge.

Whilst the preceding discussion facilitates our understanding of what professional knowledge may mean for medical student learning and in particular highlight the insights from sociocultural models of learning there remain unexamined areas. Presenting the argument for a non-dualistic concept of knowledge production has serious implications for vocational medical education inherent in defining the legitimacy of medical knowledge and subsequently undergraduate curriculum design and delivery. Hence the subsequent chapter further examines the interdependency of knowledge, pedagogy and practice specifically within modern medical undergraduate curricula. The nature of the relationship between tacit and codified knowledge within medical student learning requires further exploration.

Sfard's participation metaphor is highlighted as an analytic tool with which to critique the undergraduate medical curriculum by focussing on the work of Lave and Wenger. In this way a more enhanced and sophisticated view of how medical students learn what is required is gained. Furthermore by

examining how medical students participate in learning may shed light on any differences between the learning of traditional and non-traditional medical students coming from lower socio-economic backgrounds.

Chapter 5

Medical knowledge, Pedagogy and Practice

Introduction

The previous chapter has outlined how knowledge has been conceptualised from polarised positions emphasising either theoretical or everyday perspectives. In addition medical education has been criticised for neglecting the epistemological foundations of medical knowledge and practice with the subsequent consequences of reinforcing such a body-mind dualism (Lyon, 2009). Medical education has historically emphasised the importance of scientific knowledge featuring associated pedagogic principles of personal agency and adult learning whilst undervaluing the contribution from sociocultural paradigms to student learning. However portraying a non-dualistic conceptualisation of knowledge formation and medical student learning presents many issues for undergraduate medical education. This chapter explores these issues examining the epistemology of undergraduate medical knowledge and its associated pedagogy. The earlier prefigured understanding of what contributes legitimacy to undergraduate medical knowledge in Chapter 4 facilitates now taking a fresh look at the undergraduate medical pedagogy and medical student learning. This better prepares us to then explore during the empirical part of the study how such processes may affect medical students from non-traditional backgrounds.

The evolving medical knowledge base of medical students is re-examined in the light of what has been said about the polarising perspectives of how knowledge is produced. In teasing out these issues I have organised my writing around some of the central ideas from the earlier work of Eraut on professional knowledge and competence (Eraut, 1994). Eraut's definitions of knowledge, and specifically what characterises professional knowledge, both reflect the acquisition model of learning and challenge the absence of participatory perspectives that contribute to medical student learning. This discussion aims to provide a more sophisticated understanding of what medical students need to learn in order to practice initially as medical students and then later as doctors.

What constitutes legitimate medical knowledge for medical students is contested. This is highlighted by tensions within the pedagogy of undergraduate medical curricula resulting from medical schools' institutional resistance to change that reflect an over-emphasis on scientific learning, personal agency and andragogy. A critical reflection on the underlying philosophy and design of modern undergraduate medical curricula that examines the implications of these assertions is therefore required to fully understand the practice of medical students.

By examining both the content and the neglected context of medical students' learning a more nuanced description of the knowledge required by students to

practise and how they achieve this is gained. This is facilitated by examining in more depth the insights offered by the participation perspectives highlighted by sociocultural models of learning. In particular what and how medical students learn through participating in clinical settings is explored by critiquing the undergraduate curriculum focusing on perspectives from Lave and Wenger's theory of Legitimate Peripheral Participation (Lave and Wenger, 1991). Such a critical analysis of the medical undergraduate curriculum provides further insight into the practice of medical students and what medical students do that ensures they learn what is required of them. By examining the tensions exhibited within undergraduate medical curricula concerning the balance between acquisition and participatory stances a more authentic and multifaceted conceptualisation of how medical students learn may be appreciated. This then facilitates a better understanding of the issues that may affect the learning of students from non-traditional backgrounds.

The conceptualisation of undergraduate medical knowledge

Sfard's model which examined the polarised metaphors of acquisition and participation can be used to now focus on exploring how medical students learn. In considering how students may learn by the "acquisition of knowledge" Eraut's work towards outlining a map of professional knowledge is helpful in clarifying the domains of an undergraduate medical education that define competence. By consequence potential areas where medical students may find themselves struggling to acquire the knowledge necessary

to practice can also be elucidated. How non-traditional medical students consider the nature of knowledge in this context and how best to use newly acquired knowledge are areas in which significant differences between themselves and their traditional peers may exist.

Eraut describes the frequently cited triumvirate – knowledge, skills and attitudes, familiar to all medical educators, as an illustration of how academics whilst considering all three areas essential for professional competence also perceive each area as distinct and separate. Eraut clearly makes the claim that this diminishes the meaning of "knowledge" denigrating it merely to what we would understand as propositional knowledge only and that the broader definition of knowledge as both "*theoretical and practical understandin*g" is more accurate in terms of professional competence (Eraut, 1994, p.16).

Professional knowledge, as described by Eraut, is therefore made up of differing types of knowledge, principally propositional, process and personal (Eraut, 1994). From previous discussion (Chapter 4) Bernstein (2000) similarly advocated what he called "*official and local modalities*" to reflect the codified objective and everyday process knowledge described by Eraut. What both authors agree upon is that both types of knowledge are required for professional practice. By describing each of these areas of knowledge as relevant to medical education a fuller understanding of how medical students acquire and use such knowledge may be gained.

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Propositional knowledge is what is most commonly thought of as "knowledge" and includes the codified public knowledge associated with a profession as well as the generalisations and principles which are required to perform as a professional. It can be thought of as "knowing that" and for medical students it will consist of a vast body of medical scientific facts, concepts and related literature that facilitates students' understanding of the how the human body works, becomes diseased and how as doctors they may investigate, diagnose and treat patients. Such codified knowledge has been identified by Young (2007) as non-reducible and objective. Whereas process or 'knowing how' knowledge is concerned with how students gain the abilities to perform the skilled tasks or procedures, which Eraut calls the "*skilled behaviours*", required of a doctor, which also include the deliberative processes of decision making, planning, problem solving, analysing, and evaluating (Eraut, 1994 and Maudsley and Strivens, 2000). Therefore process knowledge is concerned with both the knowledge of "how to" and the "skill to do" procedural techniques but also tacit knowledge where professionals cannot specifically describe how they know to do something because their behaviour has become so ingrained through practise as to be almost subconscious (Eraut, 1994).

"*A further problem arises from the implicit nature of much professional know-how. Though analyses of such activities as problem solving, decision making and communication can be found in books, such codified knowledge is clearly*

different in kind from the experienced-derived know-how which professionals intuitively use" (Eraut, 1994, p. 42).

The nature of the connections between codified and tacit knowledge and how these are appreciated and thereby learnt by medical students have been highlighted by Young as important facets of professional knowledge.

The last of the areas of knowledge to describe is personal knowledge. Eraut distinguishes personal knowledge gained through both formal and informal experiences from propositional and process knowledge describing it as unprocessed remaining at the "*level of simple impressions*" (Eraut, 1994, p.104). As previously discussed in Chapter 3 the cultural capital of non-traditional students as they enter medical education is varied. It is not unreasonable to assume that similarly the personal knowledge of such students may also possibly disadvantage their undergraduate medical studies.

"*People naturally develop some constructs, perspectives and frames of reference which are essentially personal, even if they have been influenced by public concepts and ideas circulating in their community*" (Eraut, 1994, p. 106).

What part personal knowledge plays in professional activity is debated but it has been highlighted as being important by scholars such as Schön (1983) who consider that propositional knowledge alone is unable to justify the

intricacies of professional practice. Personal knowledge gained through experience, reflected on and evaluated, and then either incorporated into a scheme or framework of looking at the world afresh is thought to facilitate learning, and such experiential learning is defined by Eraut as:

"Situations where experience is initially apprehended at the level of impressions, thus requiring a further period of reflective thinking before it is either assimilated into existing schemes of experience or induces those schemes to changes in order to accommodate it" (Eraut, 1994, p. 107).

Medical educators associate experiential learning with Kolb who considered that knowledge is created through actually transforming experience. Kolb's cycle describes an original concrete experience followed by a period of reflection, abstract conceptualization and active experimentation all of which are features compatible with Eraut's definition of experiential learning above (Kolb, 1984). However what appears to be essential for sucessful experiential learning to take place are opportunities for learners to fully value and engage with meaniful experiences and also to then have the ability and opportunity to reflect upon them (Boud, 1985). Examples of both formal and informal learning opportunities can be found in undergraduate medical curricula which maximise upon such models but do not necessarily ensure sucessful learning outcomes for students due to lack of curriculum time and expert facilitation.

Reflection is key to the theories of Schön who argues that the established model of "Technical Rationality" based on a positivist epistemology describing how professionals solve problems with predetermined rules cannot justify the

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"*artistic, intuitive practice which some practitioners bring to situations of uncertainty, instability, uniqueness and value conflict*" (Schön, 1983, p. 49). What is pertinent about Schön's model is the description of the process of "reflection-in-action" as opposed to "reflection-on-action" which better describes the reflective process associated with experiential learning. Reflection-in-action is precipitated when a professional, and this for our purposes also refers to medical students engaging in clinical patient scenarios, meets a situation which does not fit with routine expectations. This may be because the situation itself is particularly complex, or the initial outcome is unexpected, or the situation generates an "*intuitive feeling of unease*" within the professional (Eraut, 1994, p. 144). For whatever reason the situation is now perceived as problematic and the routine tacit knowledge and consequential automatic skilled behaviours, described in the previous section, usually applied to similar situations are deemed inappropriate. Schön claims it is reflection-in-action which is operating in these situations and is recognised as conscious and critical, and also dictates immediate action (Schön, 1987).

Clinical medical students observe clinicians exercising their professional judgement which involves both an interpretative use of knowledge and what Eraut calls a "*wealth of professional experience*" (Eraut, 1994, p. 49). The implication of this statement is that clinicians have learned significantly from their experience of treating patients and Broudy advises that the mode in

which professionals gain such knowledge is by association. This involves an intuitive recollection of past patient encounters which facilitates future problem solving. Eraut quotes Freidson:

"*Dealing with individual cases, he cannot rely solely on probabilities or on general concepts or principles: he must also rely on his own senses. By the nature of his work the clinician must assume responsibility for practical action, and in doing so he must rely on his concrete, clinical experience*" (Freidson, 1971 in Eraut, 1994, p. 53).

It would therefore appear imperative for medical students themselves to see and interact with patients in a clinical setting to build up sufficient clinical experience so that they can apply their technical knowledge appropriately. Such experiential learning however is about more than just the "experiences" or procedures involved in seeing patients but also the reflective processes that Kolb and others have described in association with a meaningful experience that encourages significant learning.

This significant contextual learning will be pivotal in the development of a medical student's professional judgement or decision making. Schön called this process 'professional artistry', Benner 'expert performance' and Eraut refers to it as both the process and personal components of professional knowledge (Schön, 1983, Benner, 1984 and Eraut, 1994). Maudsley indicates the usefulness of such experiential learning by highlighting their following definition of such learning.

'…the process whereby people individually and in association with others, engage in direct encounter and then purposefully reflect upon, validate, transform, give personal meaning to and seek to integrate their different ways of knowing. Experiential learning therefore enables the discovery of possibilities that may not be evident from direct experience alone' (Maudsley & Strivens 2000).

However whilst an experiential learning model facilitates our understanding of how students may learn more effectively from their clinical attachments such a model favours personal agency. This emphasis on the acquisition of knowledge by the individual learner encourages the ideology that knowledge is "..*an integral, self-sufficient substance, theoretically independent of the situations in which it is learned and used*" (Brown et al, 1989, p.32). Furthermore this objective view of knowledge reinforces the notion that individual learners can take ownership of newly acquired learning in such a way that it forms part of their personal identities without connection to the context in which it was learnt. In contrast the perspectives associated with Sfard's participation metaphor instead focus on the situated nature of learning and consider how, we can consider knowledge as part of the "*activity, context and culture in which it is developed and used*" (Brown et al, 1989, p.32). Such a participatory model of learning also favours developing the professional identity of the learner but has at its core the context and people learners are alongside in framing the processes underpinning what it means to be knowledgeable. This requires further examination and Lave and Wenger's model of Legitimate Peripheral Participation provides a means by which to

analyse the medical undergraduate curriculum. However before we turn to considering how the participatory practices of medical students may facilitate their learning it is necessary to explore the issues that such a non-dualistic conceptualisation of student learning may present for medical pedagogy.

The pedagogy of undergraduate medical curricula

It was Samuel Bloom who commented in 1988 that twentieth-century attempts to innovate the traditional medical curriculum had amounted to "*reform without change*"" (Bloom, 1988 in Brosnan and Turner (eds), 2009, p. 11). This rather damming indictment of medical education refers to medical schools' institutional resistance to change highlighted by their time-honoured hierarchical structures, persistent power struggles and traditional curriculum philosophy. In terms of relevance to this thesis it is useful to explore the underlying tensions that help to maintain medical education's status quo as it is likely that these tensions also impact on medical students' learning. The changes that have occurred in undergraduate medical education in the last 20 years which reflect responses to insights from mainstream teaching and learning theories are summarised. It is my intention to highlight the ways in which these curricular changes were introduced to help all medical students including those from non-traditional backgrounds learn effectively. This is particularly important as the Chief Medical Officer and the General Medical Council have both advocated innovation in undergraduate education that both motivates and prepares students to work in complex, changing environments

and instils an ethos of life long learning and improvements in health care standards (Department of Health 2004). This in effect means both a change in curricular content and pertinent to this chapter pedagogy.

The leading documents Tomorrow's Doctor 1993, 2003 and most recently 2009 provide definitive guidance on the content, delivery and proposed outcomes of medical undergraduate curricula (GMC, 1993, 2003 and 2009). All UK medical schools have to a greater or less extent reviewed and modified their curricula in response to these proposed changes in syllabus, structure and delivery as advocated by these documents. A leading article in the Lancet in 2001 outlined the way forward taken by many medical schools with its paper entitled the "Changing Face of Medical Education". It introduced a significant change in the philosophy of curriculum development of many schools as follows:

"*The focus of health care has shifted from episodic care of individuals in hospitals to promotion of health in the community, and from paternalism and anecdotal care to negotiated management based on evidence of effectiveness and safety. Medical training is becoming more student centred, with an emphasis on active learning rather than on the passive acquisition of knowledge, and on the assessment of clinical competence rather than on the ability to retain and recall unrelated facts. Rigid educational programmes are giving way to more adaptable and flexible ones, in which student feedback and patient participation have increasingly important roles*" (Jones et al, 2001, p. 699).

Furthermore this article continues to advance the argument that medical students need to be able to use what they learn and have early opportunities to integrate and apply newly acquired knowledge appropriately.

"*These changes have significant implications for educational institutions. Learning has moved the concept of teaching from "know all" to "know how", with an emphasis on active learning rather than the passive acquisition of knowledge, and of problem solving rather than transmission of information without context*" (Jones et al, 2001, p. 699-670).

Following this clear and direct challenge many UK medical schools have reduced the amount of factual knowledge and replaced didactic teaching where possible with more student-centred methods. However this has not always been met with enthusiasm by some more traditional medical educationalists with cries of "*dumbing down the curriculum*" frequently still heard (Williams and Lau 2004 and Lyon, 2009). However by the late 1990's several UK medical schools had developed problem-based learning curricula and most schools had made significant advances in integrating basic medical science and clinical teaching.

"*Most medical schools now have curricula which integrate learning around body systems and, through early clinical experience, provide a practical, patient-centred context for learning*" (Department of Health 2004).

Such an integrated medical curriculum reflects the earlier discussed Bernsteinian model where a loss of discipline boundaries causes a shift from a collection code to an integrated code. This shift also indicates a weakening

in the pedagogical framing which facilitates a move away from closely regulated learning encounters where the learning outcomes are firmly set to learning activities with overarching themes with more loosely designed learning goals and more expansive pedagogical processes such as small group work (Atkinson and Delamont, 2009). Furthermore Atkinson and Delamont explain that the curriculum changes specified by "Tomorrow's doctors" not only imply a shift in pedagogy, with a weakening in the framing, but also stipulate areas of learning such as the students' professional identities and personal qualities as becoming part of the formal pedagogy (Atkinson and Delamont, 2009, p.46).

One of the main tensions in undergraduate medical education has been the repeated pressure to reduce the amount of factual knowledge which has been handicapped by fierce debate over the appropriate balance of science teaching versus "soft topics" and the control over the timetable by powerful basic science disciplines. The General Medical Council was not the first authority to recommend a reduction in factual knowledge. Cries as far back as 1863 have advocated that the amount of information medical students are required to remember should be reduced. In Tomorrow's Doctors (1993) the GMC quotes Thomas Huxley:

"*The burden we place on the medical student is far too heavy, and it takes some doing to keep from breaking his intellectual back. A system of medical education that is actually calculated to obstruct the acquisition of sound knowledge and to heavily favour the crammer and the grinder is a disgrace*" (General Medical Council 2003).

However the GMC in its first version of Tomorrow's Doctors also solemnly reminded medical educators that:

"*Notwithstanding these repeated exhortations, there remains gross overcrowding of most undergraduate curricula, acknowledged by teachers and deplored by students. The scarcely tolerable burden of information that is imposed taxes the memory but not the intellect. The emphasis is on the passive acquisition of knowledge, much of it to become outdated or forgotten, rather than on its discovery through curiosity and experiment*" (GMC, 1993, p.5).

Therefore whilst central to the GMC's recommendations that the burden of factual information should be substantially reduced, medical students should also be encouraged to learn by methods other than simply factual recall and that they will also need to attain learning that is more than simple facts.

"*The GMC recommends learning through curiosity rather than by rote, and stresses the importance of encouraging appropriate attitudes of mind and behaviour*" (Jones et al, 2001, p.270).

Much of this rhetoric reminds us of the preceding discussion that emphasises the necessity of evoking the participation metaphor when considering how best to facilitate the learning of medical students. Hence these sentiments have in part been responsible for the current spawn of vertically integrated undergraduate medical curricula which aim to introduce relevant clinical knowledge, and also the appropriate means by which to learn such knowledge, such as meeting patients, into the early years of medical student education. This curricular innovation also necessitates that the underpinning

medical science is also learned alongside students' more clinically orientated experiences in the latter components of the curriculum. Similarly horizontal integration has successfully facilitated the reduction of factual overload by ensuring the taught basic science centers around body systems and clinical scenarios rather than respecting discipline boundaries.

A further aim of the vertical and horizontal curriculum integration as described above has been in part to reduce what has been termed the theory-practice gap. The legacy of such a theory-practice gap has far reaching consequences highlighting possible reasons for poor student motivation and undergraduate performance and ultimately concerns around postgraduate competence. Knowledge of how expert clinical doctors make decisions and whether and how this very valuable information is learnt by novice medical students requires further exploration. Eraut clearly argues that divorcing the delivery of significant amounts of propositional knowledge from the context in which it can be used creates problems in both the development of such knowledge and the actual use of the original knowledge appropriately (Eraut, 1994).

"*Using propositional knowledge in practical situations requires considerable intellectual effort and learning how to use concepts and ideas is usually a more difficult cognitive task than simply comprehending them and reproducing them. In curriculum terms, this implies that as much time and effort should be allocated to enabling and supporting the use of propositional knowledge as is currently devoted to its acquisition*" (Eraut, 1994, p. 120).

This raises several very contentious issues concerning medical education.

Despite concerted efforts to reduce factual overload in undergraduate curricula the burden of medical knowledge deemed essential for students to acquire before graduation is still considerable and the time required to do this therefore directly conflicts with any proposed curriculum time for learning how to use such knowledge. Eraut elaborates:

"*Deliberative processes such as planning, problem-solving, analysing, evaluation and decision-making lie at the heart of professional work. These processes cannot be accomplished by using procedural knowledge alone or by following a manual*" (Eraut, 1994, p. 112).

Further illustrations of the ways in which medical students need to use knowledge are presented by Broudy's typology which describes four modes of knowledge use replication, application, interpretation and association (Broudy et al, 1964). Knowledge replication forms a significant part of higher education, according to Eraut, and certainly medical students are required even in current undergraduate curricula, despite recommendations for a reduced factual overload and improved assessment techniques, to memorise considerable amounts of the syllabus and reproduce these facts unchanged for assessment (General Medical Council 2003).

Application describes situations where knowledge is used in settings different to the environment in which the knowledge was first learnt. Eraut defines application as the ability to "*translate knowledge into prescriptions for action*

on particular situations, and it is normal to describe their use as "right" or "wrong"" (Eraut, 1994, p.48).

These points are illustrated by medical students' clinical education. Medical students spend the majority of their curricular time from years three to five, until they graduate, allocated to clinical attachments. Traditional medical educational theory espoused that this was the time that medical students would "apply" or in other words actually begin to use the scientific theoretical knowledge they had previously gained during their earlier pre-clinical training. The theoretical knowledge of the basic scientific facts and principles underpinning disease is to be used by medical students so that they can successfully outline patient management plans that facilitate disease diagnosis and treatment. However there is anxiety in many medical education quarters over this traditional approach which emphasises a significant time interval between the acquisition of theoretical knowledge and the opportunity for students to practise what they have learned. Maudsley, for example, who clearly argues for further insights from contemporary education theory to be incorporated into modern medical education and highlights, by quoting Schön, the futility of frontloading curricula:

"Schön argued for professional education programmes to incorporate only knowledge that can be applied to a professional context and purpose within the programme, soon after acquisition; and he was therefore against frontloading discipline-based knowledge" (Maudsley and Strivens 2000, p.537).

The main complaint being that students do not and in fact cannot, according to Eraut, transfer learning from one context to another and so have to learn over again any theory which they are required to use in a new setting.

"*Therefore it is inappropriate to think of knowledge as first being learned and then later being used. Learning takes place during use, and the transformation of knowledge into a situationally appropriate form means that it is no longer the same knowledge as it was prior to it being first used. It also follows that learning to use an idea in one context does not guarantee being able to use the same idea in another context: transferring from one context to another requires further learning and the idea itself will become transformed*" (Eraut, 1994, p.20).

Hence modern medical undergraduate curricula need to have time appropriately apportioned and sequenced to both deliver knowledge and give students the opportunities to practise using it. Curriculum designers need to review again what the minimal core knowledge required to graduate is and to advise postponing any additional knowledge acquisition to postgraduate training where it is likely to be more readily used.

In summary, the successful reduction of factual overload has largely been achieved by the appropriate integration of the relevant medical scientific syllabus; much student learning is now delivered by student-centred models, but the important message of providing students the necessary opportunities to practise applying new knowledge and ensuring learning takes place in context still remains absent from many medical undergraduate pre-clinical

curricula. Furthermore the pedagogy employed to facilitate medical students' learning whilst on clinical placements requires further exploration. These clinical placements surely provide an excellent opportunity for situated learning and the means for students to become knowledgeable by participating in the clinical activities going on around them. The next section considers in which ways modern medical curricula have evolved to take into account the value of sociocultural models of learning.

Medical student practice

One of the main aims of this thesis is to examine what medical students are required to learn in order to become doctors and how they achieve this. Much of this chapter has considered how undergraduate medical knowledge is conceptualised and how the perspectives on knowledge formation and the pedagogical processes within the curriculum contribute to this understanding. It is postulated that Sfard's participation metaphor presents an opportunity to address the imbalance within undergraduate medical curricula that continues to favour the acquisition of scientific knowledge whilst neglecting understanding how students learn the everyday professional know-how essential for practice. The undergraduate medical curriculum can therefore be critiqued using Sfard's participation metaphor as an analytic tool by focussing on the work of Lave and Wenger to examine the participatory practice of medical students and how this contributes to their learning.

Sociocultural theories of learning give medical education new ways of conceptualising how students can learn and become knowledgeable. Situated learning theory, as described by Maudsley and Scrivens,

"*provides particularly powerful models of how professionals learn to apply technical knowledge and solve problems in context. Crucially, the context they outline involves other people who are experienced at solving similar problems*" (Maudsley and Scrivens, 2000).

Following on from this assertion further discussion considers the importance of the people medical students learn and work with and the setting in which this occurs rather than dwelling excessively on either the cognitive processes or teaching methodology. From this perspective learning is thought about as a "*process that takes place in a participation framework, not in an individual mind*" (Lave and Wenger, 1991, p.22). Such learning decreases the importance of factual knowledge and does not encourage ownership of knowledge by individual persons. This process indicates how learners can develop their professional identity, learn how to participate in professional practice and in parallel generate appropriate and relevant knowledge. Lave and Wenger define situatedness as:

 "*an emphasis on comprehensive understanding involving the whole person rather then "receiving" a body of factual knowledge about the world; on activity in and with the world; and on the view that agent, activity and the world mutually constitute each other*" (Lave and Wenger, 1991, p.33).

Situated learning illustrated by Lave and Wenger's model of Legitimate Peripheral Participation describes:

"*A way to speak about the relations between newcomers and old-timers, and about activities, identities, artifacts and communities of knowledge and practice. It concerns the process by which newcomers become part of a community of practice*" (Lave and Wenger, 1991, p.29).

This process reminds us about the preceding discussion, specifically in Chapter 3, that concerns the professionalisation of medical students and so it is pertinent to examine Lave and Wenger's model more closely as it offers further insights into how meducal students become knowledgeble and what this means for the underlying processes of learning.

From their 3rd year medical students begin their clinical training in earnest and their educational experiences are mainly situated within a clinical context. Medical students take part in the work of the ward and care of patients even though they are always supernumerary and fully supervised. The interactions that they have with the staff and patients are similar to those which they will have when qualified. However their participation in clinical activities is peripheral not because it is unimportant, but because as according to Lave and Wenger, it is not full. For medical students the most significant difference in their participation compared with doctors whose participation is full is the degree of responsibility for patient care. Medical students' primary concern is with their own learning. Peripheral participation leads to full participation

which is the daily professional practice of competent professionals who take full responsibility for patient care within their communities. Medical students hope to become doctors. Lave and Wenger emphasise the peripherality of the learner's position as in no way denigrating the legitimacy of their position.

"*The partial participation of newcomers is by no means "disconnected" from the practice of interest. Furthermore, it is also a dynamic concept. In this sense, peripherality, when it is enabled, suggests an opening, a way of gaining access to sources for understanding through growing involvement*" (Lave and Wenger, 1991, p. 37).

However for this to have maximum contribution to the learning of medical students they need to be confident that they do have legitimate access to both the activities of the ward based team and the expertise and time of the team members. Often this is not the case and anecdotally it is the most vulnerable and weaker students who find access to clinical teaching and learning opportunities the most threatening. Lave and Wenger's so termed "enabled peripherality" conceptualises ways in which medical students may appropriately participate in the activities and daily routines of their clinical placements in order to learn what is required to practice.

Stressing the importance of legitimate peripheral participation as a means of further understanding the role of situated, authentic, clinically-based learning for medical students which also facilitates their sense of professional identity, does not in any way promote legitimate peripheral participation, as espoused by Lave and Wenger, as a teaching method in itself. Lave and Wenger

explain that legitimate peripheral participation is "*an analytical viewpoint on learning, a way of understanding learning*" (Lave and Wenger, 1991, p. 40). This viewpoint may be very helpful in facilitating our understanding of how medical students learn, particularly when that learning whilst essential to practice, does not result from any specific planned instruction. Much of the learning by students on clinical attachments is informal but is nevertheless an important means by which knowledge required both to graduate and practice is learned. These issues again reflect the balance and possible further tensions generated from conceptualising much of medical student non-scientific learning as being derived from either a sociocultural perspective or from a theory of socialisation.

Swanick writing from a medical perspective states:

Informal learning then is a complex and heterogeneous concept, but it is generally agreed to be central to any form of learning that takes place predominantly at work (Swanick, 2005, p.860).

Furthermore, he goes onto define informal learning as:

"..*leading to context-specific forms of knowledge and skills" and whilst the learning opportunities may not be specifically timetabled the learning outcomes may well be determined but the opportunity to gain them left open and flexible*" (Swanick, 2005, p. 860).

This is synonymous of Eraut's "reactive" learning which is unplanned but has intentional goals. Lave and Wenger give examples of learning through apprenticeship analysed by legitimate peripheral participation where there

was "*very little observable teaching*" but that the community practice itself constructed a curriculum with learning opportunities which were catalysed by apprentices learning in relation with other apprentices.

"*In apprenticeship opportunities for learning are, more often than not, given structure by work practices instead of by strongly asymmetrical master-apprentice relations. Under these circumstances learners may have a space of "benign community neglect" in which to configure their own learning relations with other apprentices*" (Lave and Wenger, 1991, p. 93).

Lave and Wenger's model provides many examples of how medical students learn how to appropriately participate in clinical arenas ensuring that they learn what is necessary to progress to practice or in Lave and Wenger's terms full participation. This process involves engaging not only with doctors, so called full practitioners, but also other members of the community of practice, such as nurses, patients and more experienced medical students learning about their routine activities and practices, as outlined below:

"*This uneven sketch of the enterprise (available if there is legitimate access) might include who is involved; what they do; what everyday life is like; how masters talk, walk, work, and generally conduct their lives; how people who are not part of the community of practice interact with it; what other learners are doing; and what learners need to learn to become full practitioners. It includes an increasing understanding of how, when, and about what old-timers collaborate, collude, and collide, and what they enjoy, dislike, respect, and admire. In particular, it offers exemplars (which are grounds and motivation for learning activity), including masters, finished products, and more advanced apprentices in the process of becoming full practitioners*" (Lave and Wenger, 1991, p. 95).

Legitimate Peripheral Participation as a model of reviewing how learning may occur helps us to further understand the processes medical students undergo in becoming full practitioners and how some students may infact not become full members of the community of practice and why this may be so. Such an example of a sociocultural model of learning therefore presents a view of how medical students may become knowledgeable that does not emphasise the ownership of propositional medical knowledge. An important condition of legitimate peripheral participation is that the learner becomes a member of the community in which he or she is learning. Being accepted and feeling like a true member is critical to the development of both professional identities of the learners themselves and also the on-going development of the community of practice (Lave and Wenger, 1991). Here again we are reminded of some of the discussion in earlier chapters pertaining to the development of a medical student culture and the importance for students of developing an appropriate medical habitus. How these issues reflect tensions beween theories of socialisation and sociocultual models of learning that embue a participatory framwork are later examined further in connection with the empirical data.

Medical pedagogy and medical student practice

The preceding discussion has examined how the legitimacy of undergraduate medical knowledge is contested and the issues in accepting a non-dualistic perspective on learning presents for both medical pedagogy and medical student practice. This chapter's final section explores how medical students

learn by participating in a clinical setting as envisaged by Lave and Wenger and the implications of such pedagogic approaches for medical student practice. This discussion therefore also prepares the reader to consider the rationale for the forthcoming empirical data. The majority of clinical education for today's medical students still occurs in the latter part of their curriculum and what remains critically unclear is by which processes students best achieve the outcomes required for graduation. The following discussion emphasises how medical students not only require opportunities to learn in authentic clinical environments but also require the facilitated understanding of how real doctors practise. Maudsley and Strivens clearly indicate the importance of this:

"Novices learn best to apply the technical knowledge within skilled actions (e.g. clinical decision making) in rich, relevant contexts. This context reinforces the developing professional identity of the learner (this is how real professionals::schoolteachers/doctors) behave with real (clients:children/patients) and is therefore highly motivational. Nevertheless, learners can access, for conscious reflection, only some aspects of this process; much is subliminal ('the hidden curriculum')" (Maudsley & Strivens 2000, p. 537).

Therefore much of what has been described concerning situated learning theory and the insights from Lave and Wenger's model of Legitimate Peripheral Participation may be able to help us better understand how medical students can learn how medical professionals use their technical knowledge in clinical settings.

'*Situated learning' theory provides particularly powerful models of how professionals learn to apply technical knowledge within infinitely varied social contexts. This perspective claims that 'learning to do' (closely related to 'knowing how') takes place through solving problems in context. Crucially, the context contains other people who are experienced at solving similar problems*" (Maudsley & Strivens 2000, p.537).

Hence the sentiments of Maudsley and Strivens indicate the value of sociocultural models of learning, in particular the context and people students learn from and alongside, such as described by Lave and Wenger. Furthermore following the publication of Tomorrow's Doctors, 2003, and recognising the deficiencies in current medical educational practices, some medical educators have questioned the dominant influence of cognitive psychology in developing our teaching and learning programmes (Howe, 2002 and Swanwick, 2006). Bleakley, for example claims that "*sociocultural learning theories are notable by their absence in mainstream medical education and research*" (Bleakley, 2006, p.151). It is argued that adult learning theories on their own fail to fully address how medical students learn in the context of their clinical settings which are diverse and constantly changing. Bleakley refers to the clinical team on the hospital wards where students are attached as "*dynamic, complex and unstable*" (Bleakley, 2006, p.150). Models of learning that move away from the concepts of one-to-one transmission of knowledge and consider distributed knowing where all members of the clinical team affect the learning of medical students are more accurate in reflecting actual learning practice occurring in clinical settings. Models where the significance of learning through time and space and include

the relationships between people are essential in the clinical setting where currently medical students are attached for relatively short periods of time on a variety of diverse placements.

Models of apprenticeship learning have been largely ignored within medical educational research possibly due to a desire to move away from historical learning patterns and a desire to introduce evidence based teaching modes that reflect the changes in NHS practice. However this neglect has left a gulf in both current educational practice and its research (Lave and Wenger, 1991). Learning theories that focus on the individual learner and encourage the view of personal agency are favoured, such as experiential learning with its main tenet of reflective practice. However there are critics of such models with Bleakley claiming that *"reflective practice has, paradoxically, been employed unreflectively"* and paraphrasing Norman as describing the basis of adult learning as "*a flimsy association of educational strategies that fails to gain the status of a theory open to empirical investigation*" (Bleakley, 2006, p151). Therefore whilst medical education still emphasises the acquisition of theoretical knowledge through primarily a one-to-one transmission model favouring adult learning cognitive models there are alternative complementary views.

Medical educational advocates of sociocultural learning perspectives, such as Maudsley and Strivens, encourage us to value "*perception and action over*

memory and retrieval" (Maudsley and Strivens, 2000). Additionally the role of other people in how medical students effectively learn is acknowledged. This is well illustrated by a further medical educationalist, Dornan (2007) who describes a sociocultural model of learning, so named "*experience-based learning*", that focuses on what he calls "*supported participation*". Dornan likens the clinical setting to a "theatre" with students either passively or actively "observing", or becoming "actors" who either rehearse the roles doctors play, or more importantly participate in patient care.

"The workplace is where competence has eventually to be applied; it is the theatre for much of a doctor's undergraduate and postgraduate education; workplace education is self-evidently important" (Dornan et al, 2007, p.84)

Dornan claims that such positive outcomes as a sense of identity, confidence, motivation and practical competence are increasingly achieved by students as they mature through the medical curriculum provided they are supported by medical staff when challenged by new learning. The support that Dornan advocates is appropriate role modelling by medical staff but also facilitating students to learn what is required to practice independently, as explained below:

"The educational climate and behaviour of individual practitioners – nurses as well as doctors – has great power to enable or disable workplace participation that brings students closer to their ultimate goal of helping patients. As they progress through the curriculum, the outcomes students achieve and the activities through which they achieve them became closer to those involved in the role of a practitioner. An effective workplace teacher is someone who can

simultaneously support students and challenge them in a way that builds practical competence and a positive state of mind" (Dornan et al, 2007, p.88).

Dornan's model of "experience-based learning" highlights a parallel view of medical student learning that conceives of learning not as a one-to-one transmission of knowledge embracing adult learning theory but encompasses features of a sociocultural model of learning. "Supported participation" as outlined by Dornan indicates the critical importance of the situatedness of the students' learning and the roles of the people medical students learn alongside and from. These aspects illustrate the importance of both sociocultural models of learning and previously discussed theories of socialisation in exploring how and what medical students learn in order to practice.

Conclusions
-issues for empirical exploration

This chapter set out to explore the epistemological basis of undergraduate medical knowledge, its associated pedagogy and the effects these have on what and how medical students learn. The non-dualistic conceptualisation of knowledge and medical knowledge in particular is controversial presenting several important issues for both medical pedagogy and medical student practice. The continuing emphasis on medical students learning medical science with a high factual overload favours perspectives that accentuate the role of personal agency and the features of adult learning. Additionally

medical undergraduate curricula have historically neglected the contribution that sociocultural models of learning can make towards better understanding the processes of medical student learning. It is argued that such a pedagogic approach originates from and goes on to influence how the relationship between theory and practice is perceived. For medical students the requirement to know increasing amounts of medical scientific knowledge is high but is tempered by the need to also know how to use this information and be able to practice as a doctor by the time they graduate. This emphasises the interdependency of the relationship between theory and practice which underpins learning (Guile, 2006 and Sfard, 1998). Unfortunately examining the medical pedagogy reveals many examples of where this is not so and the relationship between codified and everyday knowledge for medical students may be a source of tension.

Highlighting the importance of sociocultural models of learning in the clinical education of medical students would in part begin to address the debated theoretical imbalance between learning models that favour cognitive adult learning through one-to-one transmission of knowledge rather than participatory models. How medical students understand themselves as being "knowledgeable" and the learning processes that underpin the expansion of a student's knowledge base are issues for further exploration within the later empirical data. In particular how the components of professional knowledge

are perceived and valued by both the students and medical school sheds light on the established pedagogic practices within medical education.

Historically medical scientific propositional knowledge has been favoured over "softer" disciplines such as psychology and public health. Areas of professional practice such as team working have been traditionally poorly taught or simply neglected. The role of knowledge in securing students' professional identities and how students go on to use newly learned knowledge cannot be fully explored using only models of learning by acquisition. Following on from this stance how medical students from non-traditional backgrounds learn new knowledge, begin to use it and how it may contribute to their developing professional identity may shed light on any differences between themselves and their traditional peers. The next section therefore indicates how by using Sfard's participation metaphor and focusing on insights from the work of Lave and Wenger the learning of medical students can be better conceptualised during the empirical data collection.

Exploring what medical students understand by professional knowledge and how they learn what is required of them to practice is part of the empirical component of this study. Further discussion subsequent to the analysis of the empirical work will explore these issues in particular the relationship between students and medical knowledge as advocated by Atkinson and Delamont who echo the sentiments of Tommorrow's Doctors, 2009.

"The ideology of medical education in contemporary Britain thus presupposes a new and different relationship between students and medical knowledge. It also models a different kind of practitioner" (Atkinson and Delamont, 2009, p. 46).

This "different kind of practitioner" is modelled to better fit with the evolving world of medicine and the NHS. The significant changes in patient care and doctors' professional accountability alluded to in earlier chapters require a critical review of how medical students learn to be the doctors that society expects. The empirical data analysis provides an opportunity for a more informed interpretation of what current medical students' participation in clinical activities and the daily routines of the wards may mean for their learning and how their professional identity may be constituted. The implications of student participation are better understood following the work of Lave and Wenger (1991) that identified that both developing expertise and an identity associated with the experts that learners wished to emulate were important for learning. How these processes possibly intersect with theories of socialisation which specifically highlight the importance of professional identity formation and the interaction of social structures that contribute to the professional development of students requires further examination. Furthermore how clinical exposure and medical students' experience of increasing clinical responsibility as they progress towards graduation may contribute to an enhanced understanding of practice; and the differences between the practice of students as opposed to the practice of doctors are highlighted as additional issues to consider. Analysis of the empirical data will

shed light on whether clinical exposure, assuming medical students participate in authentic activities taking on aspects of an authentic medical role, can facilitate the generation of what has been termed "rarefied knowledge" that is specific medical knowledge peculiar to doctors that medical students are required to know and use on graduation. Hence the relationship between participatory models of learning and how medical students develop a professional identity seems to be an important issue for later examination.

Acknowledging that theories of socialisation (Chapter 2), professional development (Chapter 3) and participatory models of learning (Chapters 4 and 5) are concerned with the development of a professional identity this study also presents an opportunity to examine whether any conceptual rapprochement between these perspectives can be drawn bearing in mind previous authors have contested this position (Alexander, 1995 and Lave, 1995). Tensions between participation within a community of practice and medical student socialisation theories are highlighted by whether a model of learning can take into account the developing habitus of medical students and the habitus of non-traditional medical students in particular. Both socialisation theories and participatory models of learning indicate that learning is relational whether this is the interaction of social structures within a learning field to generate a habitus or learners using each other and the context in which they are learning to gain the necessary knowledge and skills to

practice. However if learning is accepted as relational how students from non-traditional backgrounds learn to participate effectively alongside their peers requires exploration. This brings us on to the introduction and setting up of the empirical component of the study which follows.

PART 2: Methodology

Chapter 6

Researching the academic experience of non-traditional medical students

Introduction

This thesis aims to describe and better understand students' transition from lay person to medical graduate from the students' perspective by gaining a more comprehensive view of the learning processes involved in successfully becoming a doctor. In discovering whether these processes differ for students from non-traditional backgrounds, curriculum development and policy decisions can be better informed in supporting the academic needs of these students. This chapter sets out the justification for my choice of methodology indicating initially the theoretical perspectives drawn from earlier discussions that I have taken into account in designing my study and its research processes. I argue that these theoretical perspectives, initially seen from a sociological, moving to a professional development, and latterly a sociocultural learning stance, offer opportunities to examine the interplay between medical students and institutions and also medical student practice and its clinical context. The processes of socialisation as understood by Becker and Merton, and deepened by Luke's insights on professional development, help conceptualise the learning experiences of medical students that occur within a hospital or other clinical settings. Similarly the

previously discussed sociocultural models of learning highlight how students learn by participating in appropriate activities that are contextualised by their setting and the daily work of the clinical team of which students wish to become a member. These perspectives allow me to consider the structural relationships between medical students and the institutions, in which they study, and also, what they are required to learn and the context in which they do this. This encourages me to think as Brosnan terms "relationally" about what medical students learn, medical student practice and the effect of institutional structures and the context of their learning. Such an approach has been highlighted as lacking in medical educational sociology and hence has lead to an underdeveloped understanding of the relationships between students, student practice, and medical institutions and the context of their learning (Brosnan, 2009). It therefore follows that my methodological approach takes account of this within its design. A description of the methods followed by a subsequent justification and description of the approach to data analysis is detailed. The development of a conceptual framework and how the research questions were initially generated is also outlined. However first I give a short description of the setting to the study subsequently named the Medical School.

The Medical School

Part of the Medical School dates back to 1123, and is formed of principally two major teaching hospitals, which amalgamated in 1995 alongside a local

university. The Medical School has therefore a long established tradition of providing both undergraduate and postgraduate medical education. The university is situated in the East End of London, and the two main hospitals and the university's associated NHS Trusts provide healthcare to a very ethnically diverse population, serving some of the most socially deprived areas in the North-east Thames region.

The Medical School has an annual intake of 320 medical undergraduates with an approximate total cohort of medical students of over 1600. The majority of these medical students are school-leavers on enrolment with approximately a quarter of our students beginning their medical studies following a first university degree. Hence most students are aged between 18-21 on admission. There is an even split between the sexes with a high proportion of non-White ethnicities compared to some other UK medical schools, e.g. approximately 40% of students state they are from an Asian background. This is unsurprising as many of the Medical School's students come from local areas and schools. Some students therefore choose to live at the parental home and may also have significant family responsibilities.

Medical students spend a minimum of 5 years studying with an option of an additional intercalated degree for 1 year. The undergraduate curriculum was extensively revised in 1999 when a problem-based (PBL) curriculum was introduced, and modified in 2008, to produce a systems-based spiral

structure, that is more theoretically science-based for the first two years with the last 3 years devoted to clinical practice. However there is a significant amount of vertical integration with students meeting with patients in the first week of term and regularly throughout their first two years. Students also learn clinical and communication skills early on. Following graduation students usually enter their Foundation Year training within a UK hospital full time as part of the National Health Service.

The Medical School has an excellent student support service and the Students' Union, with its associated clubs and societies, is very active. Recent national student surveys report a high degree of student satisfaction with the course and the Medical School's facilities.

Developing a Conceptual framework

A conceptual framework (Fig.1 p.174) which represents the inter-relationships between the significant concepts designating the boundaries of my enquiry and data analysis was developed. This involved exploring and outlining the relationships between the theoretical perspectives previously discussed in chapters 2, 3, 4 and 5, namely aspects associated with students' socialisation, professional development, and learning. Such a process facilitates further examination of these key concepts, such as the importance of participation, student culture, and Bourdieu's thinking tools (habitus, field and capital) which offer further opportunities to explore the interplay between

medical students and institutions, and also medical student practice and its clinical context. Overall such a conceptual framework was designed to enable issues to be explored that both require a sociological stance but also aspects that emanate from a sociocultural learning perspective. Taking such an approach identifies the relationships between key areas that are to be explored during the empirical data collection, such as the role participation plays in what and how students learn and the development of an appropriate medical habitus. By identifying the structural relationships between important concepts such an approach also provides opportunities to explore any disadvantage that students from non-traditional backgrounds may experience, and what the consequences of this may be.

Conceptual framework determining what and how medical students learn (Fig.1)

Student Culture

Student socialisation (How are students perceived?)	Sociocultural models of learning (What and how do students learn?)

Medical habitus formation (What are the issues pertaining to students' professional development?)

Participation

Student capital	Medical field
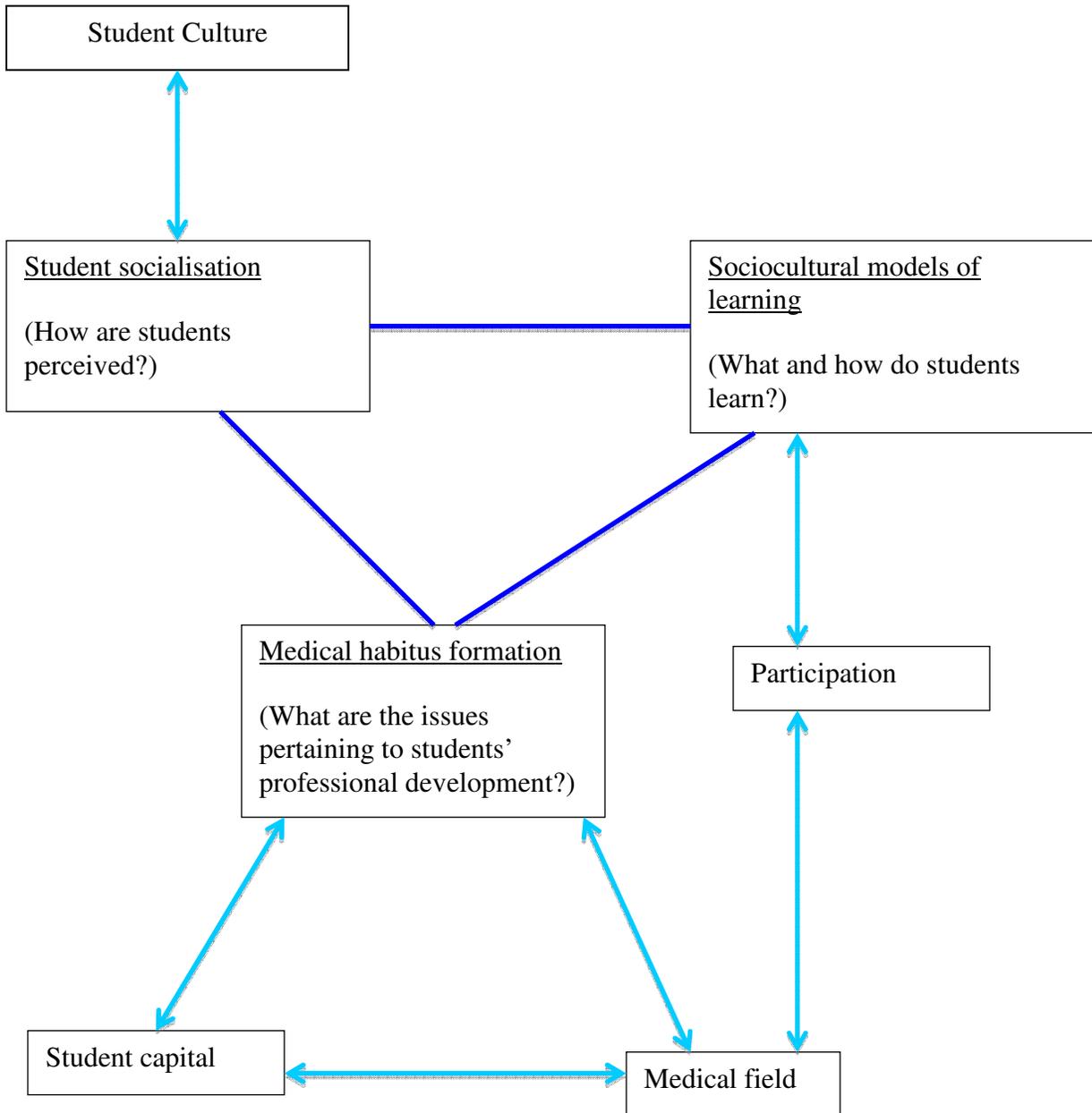
Developing such a conceptual framework was also instrumental in delineating the research questions as early draft questions are depicted in the central boxes within the conceptual framework figure (Fig. 1 p. 174). The final overarching research questions, stated below, were therefore developed in an iterative way resulting from a review of the sentinel theoretical concepts from the relevant literature, personal experience and knowledge of the research field, and the on-going collection and early analysis of my own data.

- What perceptions do current medical students have of students who come from non-traditional lower socio-economic backgrounds?

- Are the patterns of socialisation within this medical school different for non-traditional students (NTS) from lower socio-economic backgrounds? If so, how may this affect their learning?

- 'What' and 'how' do medical students learn as they progress through the undergraduate curriculum? Are there any significant differences for non-traditional students?

- Considering any subsequent findings what implications are there for future research and policy making concerning the medical undergraduate curriculum and widening participation?

The first draft research questions that reflect the significant concepts from the conceptual framework were used to generate the initial prompts for both the focus and early individual interviews and were also pivotal in early data analysis. This approach facilitated the generation of a set of "analytic categories" that reflected the conceptual framework and its inherent inter-relationships between the key areas that I wished to explore (Mishler, 1990). These areas highlight issues pertaining to who becomes a doctor, the social processes underpinning medical student learning and how and what students learn in becoming doctors. This initial clarification ensured that as the researcher I understood the nature of the enquiry and that I could also be explicit in describing the aims and direction of the enquiry to others including the participants. However as Wolcott (1982) explains there is also a need for flexibility when entering the research setting ensuring that the structuring of the fieldwork is not so constrictive that the researcher ignores important issues that have not been previously thought about.

The reviewed medical education literature indicates that criteria defining widening participation for medicine have not been universally accepted. Hence it is unclear how non-traditional students may be identified and their experience studied. Therefore in order to further study the academic experiences of such medical students my methodology needed to take into account this uncertainty. The first research question was re-drafted many times and reflects a consensus from the medical literature and also medical

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student opinion that medical students from the lower socio-economic classes, irrespective of gender or ethnicity, are uncommon and therefore non-traditional. It is these students in comparison to their peers from the higher socio-economic classes that I am interested in understanding.

Furthermore previous discussion has highlighted that little is known of the experience of non-traditional students once they enter medical school. In particular, whether the socialisation process of non-traditional students is significantly different from their peers? Non-traditional students may struggle to develop a professional identity which may conflict with already strongly held social class identities (Merton et al, 1957). Similarly non-traditional students may contest the collectively derived student perspectives, described by Becker, because of possible alienation from the dominant student culture and consequently go on to develop different perspectives of their own (Becker et al. 1961). Hence the professional socialisation of medical students emphasises the importance of common values, attitudes and behaviours and the development of both medical knowledge and expertise which permits them membership to the medical profession. However further work which expands our understanding of the sociocultural processes involved in the professional development of both traditional and non-traditional medical students is required.

There is a dearth of educational research that examines how medical students learn what is required of them to practice as doctors. This study aims to qualitatively examine students' educational experiences from a sociocultural perspective so that an understanding of how their professional knowledge base is defined and the pedagogical processes by which it is achieved can be gained. Examining how medical students perceive how and what they learn in order for them to practice as doctors will enable me to reflect on what institutional and curricular changes would facilitate the success of the few but increasing numbers of non-traditional students entering medical schools.

In setting out to explore the views of today's medical students concerning their medical education and professionalisation it is imperative that I design a methodology of enquiry that is congruent with my stated research aims. It is the purpose of this next section to briefly outline the rationale and underpinning philosophy in choosing my methodology. Firstly I will discuss the theoretical perspectives from the preceding chapters that together present a coherent argument that influences the research design and also justifies the methodological choices within the research process.

Research considerations

Theoretical approach and its implications for research design

Examining the socialisation of medical students, and specifically what and how they learn in becoming doctors, indicates that the methodology needs to take account of the social practice elements of their transition from student to doctor (Lave and Wenger, 1991). Such an aim requires the approach of a qualitative research methodology that both depends upon and examines well the interactive participatory nature of the students' learning. A methodology that explores the "*lived experiences*" of medical students is required (Van Manen, 1977). I also wanted to explore the students' transition from lay person to doctor from their perspectives, and where appropriate examine in depth any differences between traditional and non-traditional students' experiences. This facet of my enquiry is crucial if the academic experience and professionalisation of non-traditional medical students are to be studied.

This implies that the principles and models taken from my early introductory chapters that highlight important insights into the educational and professional development of medical students are helpful in forming an epistemological view that facilitates undertaking my own empirical work. Insights gained from reflecting upon the work of both Merton and Becker further my understanding of what constitutes medical student socialisation and the norms of medical student behaviour. Luke's model of the medical habitus derived from Bourdieu's "thinking tools" of habitus, field and capital presents possible ways

of examining the processes underpinning the transformation from medical student to doctor. Whilst both areas contribute to my exploration of students' conformation to professional attitudes, values and codes of behaviour Luke's use of Bourdieu's thinking tools gives me the language and structures to explore any possible disadvantages some students may have in their professional development. However this approach lacks the finesse to fully examine the means by which medical students become knowledgeable and ready to practice as doctors by neglecting the areas of theoretical knowledge production.

By using a holistic approach that examines both theoretical and practical knowledge making I aim to take a fresh look at how medical students learn medical scientific theory and its clinical application. This process questions the frequently uncontested conceptualisation of the nature of students' learning that relies too heavily on a theoretical one-way teacher to pupil mode of knowledge transmission and explores the value of sociocultural models of learning that highlight student participation. A focus on sociocultural models allows exploration of both the content and process of medical students' learning. Hence insights from my earlier chapters contribute to a more holistic methodology that explores how knowledge production takes place alongside students' socialisation and professional development. An initial exploration of what characterises non-traditional medical students helps identify how these processes may differ compared with their traditional peers. The next

paragraphs elaborate how these earlier chapters contribute to such a holistic methodology.

The initial chapter outlining the differences and commonality between the conceptualisation of medical student socialisation by the authors Merton, and Becker et al, who define in turn functionalism and symbolic interactionalism, sets the scene for my study. This forms a basis from which to explore medical students' perceptions of their own and that of their peers' processes of socialisation. This includes exploring from a functionalist approach students' developing a professional role with its inherent skills, knowledge and appropriate attitudes which contrasts with the examination of student perspectives concerning motivation, student identity and survival that sustain students through medical school which are derived from a symbolic interactionalism approach. Within this context functionalism helps examine roles and identity within a medical school institution whereas symbolic interactionalism prioritises exploring what concerns students most and what therefore most frequently caused conflict between students and other significant persons within the medical school. Both of these conceptualisations can shed light on the appropriate stance to take in examining the academic experiences of medical students.

Using the concepts of symbolic interactionism Becker wished to examine the "*more conscious aspects of human behaviour and relate them to the*

individual's participation in group life". Here human behaviour is not thought of as a cause and effect mechanism but more as a "*process in which the person shapes and controls his conduct by taking into account (through the mechanism of "role-taking") the expectations of others with whom he interacts*" (Becker et al. 1963, p.19).

Therefore following Becker's lead I too wished to explore the perspectives of today's medical students with the specific purpose of identifying how these students change their behaviour to adapt to the expectations of other medical students, the medical faculty and not least patients. Symbolic interactionalism by means of examining what concerns students most may also facilitate highlighting which aspects of student life non-traditional students may struggle with more then their peers in conforming to others' expectations.

Similar to Becker it is my intention to identify the group perspective or collective experience of medical students which also facilitates exploring any views of students that do not fit with this group perspective. This can be achieved by both focus group interviews and later interviews with individual students to explore in more depth the perspectives raised during the focus group discussions. However discussion of this methodological approach occurs in the next section but currently I wish to remain focussed on theoretical matters. Counselled by Becker's conclusions I am similarly interested in exploring the group process which defines and sustains student culture as a "*body of collective understandings among students about matters*

related to their role as students" (Becker et al, 1961 p.46). Becker describes

initial and long-range student perspectives but also situational perspectives

used to develop coping strategies for dealing with day to day student issues.

Exploring such perspectives within my focus groups will enable me to better

understand the social practices of being a medical student and furthermore

facilitate my enquiry into whether there are subsets of students, such as those

from non-traditional backgrounds, who find this process more difficult and why

this may be. For example are the situational perspectives of non-traditional

medical students different?

Returning now to consider the contrasting view of Merton who emphasises

the importance of the organisation, in this case the medical school, and the

roles people assume within this social structure. He in particular stressed the

requirement of medical students to develop a professional role and therefore

described his conceptualisation of medical socialisation as a process:

"…*by which people selectively acquire the values and attitudes, the interests,
skills, and knowledge- in short, the culture -current in the groups of which they
are, or seek to become, a member*" (Merton, Reader and Kendall, 1957 p.
287).

By stating this Merton highlights the purpose of medical education as the

necessary processes for inducting medical students into the medical

profession. He also concluded that the social interaction between people

holding significant roles within the medical school consolidated these roles

and sustained the organisation. For today's medical students significant interactions would be with the faculty, other students and patients interacting within the medical school and its curriculum. Merton's earlier work therefore informs me of the importance of exploring these significant relationships, the roles students take and how medical students go on to develop a professional identity.

Merton's induction approach which focuses on students acquiring a professional role recognises the influence the faculty has in controlling medical students' professionalisation whereas Becker's symbolic interactionism highlights student autonomy. In determining the factors and processes involved in the socialisation of medical students I recognise that both perspectives are required and that the balance of each perspective in influencing the socialisation of medical students requires further exploration. For example when considering how a medical student's self image develops into a professional identity the roles that medical students play during their training and what opportunities arise for them to identify as doctors and take on the "doctor's role" in social interactions need further explanation. Whether non-traditional students will find developing a professional identity more challenging or whether such a process conflicts with tightly held beliefs about who they are and how they should act remains to be discovered. What is of interest in regards to my thesis is whether all students irrespective of their backgrounds act similarly and collectively as advocated by Becker or whether

as Merton's sociological framework highlights that sometimes other issues may come into play:

"*Learning and performance vary not only as the individual qualities of students vary but also as their social environments vary, with their distinctive climates of value and their distinctive organisation of relations among students, between students and faculty, and between students and patients.*"(Merton, Reader and Kendall, 1957, p. 63).

Therefore the tensions generated by taking on a professional role as opposed to a student role require examination. As discussed in Chapter 2 a further author, Sinclair (1997), gives examples of where medical students struggle with what he refers to as "role-conflict". This is the disharmonious effect created by situations which challenge medical students' roles and in particular highlights the friction between "student" and "doctor" roles. As students mature they will increasingly come across situations that require them to think and act as doctors which challenge their previously held student role.

In examining the professional development of medical students it is necessary to consider the processes and activities involved in the structural and social environments in which these students engage. Luke's theory of the medical habitus derived from a study of junior doctors, discussed earlier in Chapter 3, increases our understanding of the sociocultural aspects of the professional development of doctors (Luke, 2003). Central to Luke's analysis is the use of Bourdieu's conceptual tools of habitus, field and capital. Luke's particular focus is on the medical practice, specifically the experiences,

attitudes and changes in junior doctors during their first two years in a teaching hospital (Luke, 2003). Many of the aspects Luke describes in her study of the transformation taking place in junior doctors are also common to clinical medical students. Luke identified that junior doctors need to learn and assume several characteristics and behaviours from their early postgraduate working lives, what she terms the "*embodiment of cultural experiences and social group processes*" (Luke, 2003, p. 150). It is the purpose of my enquiry to similarly elucidate the comparable experiences and social processes leading to the professional development of medical students.

In considering what is required for a medical student to become what Luke calls a "*social doctor*" it is paramount that medical students engage with what she defines as the "*medical habitus*" (Luke, 2003). Hence whilst professional socialisation theories may introduce several important general concepts, such as commonality, role-taking and professional identity formation, my methodology must also consider a more detailed analysis of the underlying sociocultural aspects of medical student professional development. Following on from this the core interacting concepts of capital, field and habitus, originating from Bourdieu's Theory of Practice and called by him as his "thinking tools" (Bourdieu, 1977), are used by Luke to develop her model of medical habitus. Hence both Luke's model of the medical habitus and her use of Bourdieu's thinking tools are instrumental in facilitating my own exploration

of the professional development of medical students. Luke expresses her methodology as follows:

"That is, in terms of the medical culture, habitus became a tool of investigation which showed how in learning about the non clinical aspects of being a junior doctor, doctors began to internalise ways of acting, negotiating and attainment of success in the medical culture and field". (Luke, 2003, p.144).

Luke goes on to call this process "*playing the game*" which reminds us again of Bourdieu's Theory of Practice where he defines the area of social activity as "*the game*" (Bourdieu, 1977). Discovering how medical students both understand and play their own game in order for them to learn how to be doctors is crucial to my understanding of their professional development and hence where differences between students and difficulties can arise.

Luke discusses "*patterned activities*" in a field where roles and activities are governed by expectations, hierarchical position and relations between social structures (Luke, 2003, p.60). I would want to explore these patterned activities and what determines them for medical students, and in particular whether they are the same for non-traditional medical students and if there are any differences when students struggle.

Examining what part a student's capital plays in the cultural socialisation of medical students is of particular interest in exploring the experiences and perspectives of non-traditional medical students. Previously I have outlined

how students develop a common perspective but areas of conflict and competition within a field also reveal how medical students go on to play the game and by doing so develop a medical habitus. Luke explains that:

"*The game played by the doctors is about control of a situation or knowledge of how to work within the requirements of the field*" (Luke, 2003, p. 132).

Certainly using Luke's model facilitates my further exploration of how medical students move from a student culture to effectively participate in a medical culture; how they do this and the social processes involved. This approach encourages a more detailed examination of the social practices of medical students and therefore any possible differences between traditional and non-traditional medical students in developing a medical habitus.

However whilst Luke's model is most helpful in facilitating our understanding of certain aspects of the professional development of junior doctors other areas such as the processes involved in gaining theoretical knowledge, and in this case medical scientific knowledge, are purposefully left unexplored. Accepting this premise one has to question the validity of solely adopting such an approach in describing the professional development of junior doctors or for my purposes medical students. Furthermore in wishing to explore the academic experiences of medical students with a view to understanding how some students struggle it is imperative that the processes

involved in becoming knowledgeable, both scientific and developmental are examined.

Therefore the relationship between theory and practice pertaining to medical student learning, particularly within clinical settings, requires further attention. Analysing what and how medical students learn in order for them to practise as doctors illustrates the previously articulated polarisation of knowledge production as either of the world or the mind (Bruner 1996). These concepts justify further framing my enquiry in that my methodology needs to accept and go on to explore the learning of medical students that is both theoretical and tacit everyday learning. In order to do this situated learning theories are key to gathering a balanced insight into how and what medical students learn.

"Theories of situated activity do not separate action, thought, feeling and value and their collective, cultural-historical forms of located, interested, conflictual, meaningful activity. The idea of learning as cognitive acquisition – whether of facts, knowledge, problem-solving strategies, or metacognitive skills –seems to dissolve when learning is conceived of as the construction of present versions of past experience for several persons acting together" (Chaiklin and Lave, 1996, p.7).

The work of Merton, Becker and Luke as discussed provides helpful concepts, such as professional identity, student perspectives and a medical habitus, which facilitate my exploration of the socialisation of medical students and the broader medical cultural context in which medical students go on to practice. However these concepts do not fully explain how students put into practice their theoretical scientific learning. The sociological stances that I

have examined have not expounded any theory of learning and purposely neglected to explore the relationship between theory and practice within vocational learning. As the focus of my study is to be on the learning of medical students who wish to practise as doctors then a more in depth study of how students, and non-traditional medical students in particular, negotiate learning that encompasses both theory and practice is required.

How medical students learn by participating within clinical settings is of particular interest. Exploring how medical students learn by exposure to clinical material, patients and by being a member of the clinical team requires a re-evaluation of the persistent conceptual dichotomy of whether knowledge is acquired or generated by participation. Therefore my methodological approach embraces a more expansive understanding of both the sociocultural models of learning and the broader medical cultural context in which students learn. Medical students' views on what constitutes their learning, social world and the relationships that underpin their learning are more fully explored. This approach challenges the traditional views of the epistemology of knowledge learning theory held within medical education that assume learning to be an objective acquisition of knowledge by usually one-way transmission from teacher to learner (Bruner 1996). This perspective also challenges the nature and sequence of the relationships between the learner, what they know and their participation in practice. The learner's identity may be more readily established because of the recognition of appropriate participation in practice

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rather than any acknowledgement of what they know per se. However the requirement of graduating doctors to "know stuff" cannot be denied and the balancing relationship between "knowing" and "being able to do" particularly in the developing professional identity of students begs further exploration.

Hence my methodology has been designed to capture the tensions between on the one hand, what Sfard refers to within different knowledge traditions as, the acquisition and participation metaphors; and on the other hand, the broader medical culture with its underlying processes of medical student socialisation and professional development including developing a medical habitus. Sfard introduces her participation metaphor to highlight how learners can be viewed as p*ersons "interested in participating in certain kinds of activities rather than in accumulating private possessions*" (Sfard, 1998, p. 6). Like Sfard, I argue that the concept of participation also facilitates learners in becoming members of a community. However my argument, and consequently justification for my methodology, also aims to clarify that in order for medical students to become members of the medical profession they need to firstly engage with the medical culture. The concept of participation is helpful in exploring ways in which medical students may do this and specifically go on to develop a medical habitus. By further exploring the connections between the theoretical knowledge and the practical know-how gained by medical students through clinical experience by using the

concept of participation I can examine the common ground between sociological and learning theories.

Brown et al (1989) describes how by providing authentic opportunities for learners to use their theoretical knowledge or "conceptual tools", much akin to the notion of participation, learners adopt the practices of their teachers. This reminds us of developing a habitus but in this context is also concerned with scientific knowledge formation not solely social practice. Sfard uses her metaphor model of acquisition and participation to argue for a combined theory of learning that relies on both concepts. By revisiting Luke's medical habitus in the light of the preceding discussions on the non-dualistic nature of learning and the value of learner participation a more enhanced and sophisticated view of how knowledge, pedagogy and practice may be conceptualised can be developed.

Lave further challenges traditional views of learning theory by outlining an analytical tool which consists of three questions to be asked: what is the telos or direction of change for the learners, what are the relations between the subject and the social world, and finally what learning mechanisms are responsible for the learning that occurs? (Lave, 1995, p.15). This methodology again encourages a more in depth social examination of the way people may learn and concentrates on the learners' journeys rather than the specific learning goals or teaching methods. Like Lave I am interested in

the trajectory of the learners which is to become doctors. This further highlights the connections between Sfard's participation metaphor and the role of the medical habitus in the learning of medical students that ultimately is concerned with who they wish to become. Furthermore Lave describes what she defines as "identities in practice" where learners and the world in which they are engaging mutually constitute each other: As previously described (Chapter 5) models of situated learning decrease the importance of isolated factual knowledge and indicate how learners can develop their professional identity by appropriately participating in professional practice. Lave considers that learning derived from such activities can produce knowledge as well as reproduce existing practice (Lave, 1995). It is important therefore that my methodology adequately explores how medical students participate within a clinical setting and what may be the consequences for those medical students who do not effectively participate.

My methodology focuses on the interpretations given by medical students on what and how they learn rather than what is taught. Focussing on student learning as the basic concept in the development of knowledge reinforces Lave's analysis of learning as participation in changing practices and again highlights the importance of the situatedness of knowledge production. My methodology is based on interviews, rather than observations, to explore different facets of medical students' participation specifically in their clinical studies that facilitate their development of a medical habitus. Medical

students' views on their interaction with medical faculty, patients and their role within a clinical team are explored. Medical student perceptions of how to fit in, maximise their learning, and effectively progress with their studies, are examined by using the concept of participation. Medical students were asked to describe their behaviour and perspectives on becoming clinical students that reflected how they participated in the medical culture. This allowed me to exam how the concept of participation is important for both professional knowledge formation and the development of a medical habitus.

In summary my methodology is greatly strengthened through using a combined analytical approach that effectively examines the socialisation, professional development and sociocultural learning processes that underpin medical students' learning from the standpoint of the students themselves. This approach examines the transformation of lay people into medical students who prepare to graduate and then practice as doctors. The methodological design specifically explores who medical students are, how student perspectives develop a medical student culture, and how this relates to the professionalisation of medical students as they begin to participate in the medical culture. How medical students successfully participate in a clinical environment and develop an appropriate habitus, particularly studying any differences between traditional and non-traditional students is central to my research. The identification of the sociocultural learning processes and how the concept of student participation facilitates both their knowledge formation

and enculturation is key to understanding any common ground between sociological and participatory learning theories. It is likely that any common ground will sheds new light on what is required of medical students to learn in order to practice. If a more expansive picture of medical student learning is to be developed then further clarification of the role of student participation is required.

Designing the research process

Choice of methods

Having previously justified the rationale for the theoretical perspectives to my study I now plan to discuss my chosen approach to the research process before outlining the methodological stages. Initially I introduce Stake (1995) who offers a justification for describing how the views of the medical students may be explored on how and what they learn, within a case setting worthy of being considered a case study. The interviewed medical students who detail their experiences of a specific medical curriculum directed by the faculty belonging to a single medical school form such an integrated system as to be considered a case, as defined by Stake (1995). Indeed my interest is not in any or all medical students' views per se but the perspectives of students who are learning to become doctors who are studying a specific medical undergraduate curriculum at one medical school, as Stake succinctly expresses:

"The real business of case study is particularization, not generalisation. We take a particular case and come to know it well, not primarily as to how it is different from others, but what it is, what it does." (Stake, 1995, p.8).

Stake provides a way to conceptualise the medical students who I interview within their setting in which they learn as a case worthy of investigation. This allows me to explore the interplay between medical students and the institution in which they learn and specific medical student practice and the context in which it is learnt within one medical school in particular. The research questions detailed above can be explored by a form of instrumental case study where "issue questions" are asked that explore students' perspectives that derive from and shape their experiences of their medical undergraduate curriculum, socialisation and professional development. The aims, and consequently methods, of this study specifically direct the focus of enquiry into exploring any perceived differences between traditional and non-traditional students enrolled onto the undergraduate medical degree programme of one medical school. As Stake (1995) states:

"*We study a case when it itself is of very special interest. We look for the detail of interaction with its contexts. Case study is the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances*" (Stake, 1995, p.xi).

Echoing Stake I would emphasise that the purpose of my research is to further understand what and how students learn to become doctors, and any differences between traditional and non-traditional students, within this one curriculum. Whilst it is not the remit of this work to intend to generalise

beyond the experience of the students studied it may be possible to do so. The selection policy of this medical school and student application choices may or may not have a profound effect on the numbers of non-traditional students enrolled to study what is also a unique curriculum despite having many features common to all UK undergraduate medical curricula. Bearing these cautions in mind I do however also indicate that my use of case study is more than solely intrinsic where the primary interest is the case itself. By the development of "*issue questions*" that reflect my personal research agenda I, as the researcher, can after getting to know and understand this case then go on to better understand and explore my areas of interest (Stake, 1995. p. 16). This has the advantage in that by better understanding the case as a whole I will, as the researcher, be able to better interpret the complex issues pertaining to my research questions which are situated within political, social, historical and personal contexts (Stake, 1995, p.17). Such an approach incorporates examining the perspectives of medical students, from both traditional and non-traditional socio-economic backgrounds, concerning how medical students from lower socio-economic backgrounds may be perceived, how aspects of their socialisation into a medical student culture may differ, and what and how medical students learn in order to practice within one undergraduate medical curriculum. Using such a case study approach facilitated a relational exploration of the issues concerned within a relatively small number of medical students.

Exploring the experiences and views of students studying their curriculum is examining a form of situated learning, and can be successfully achieved within one school's student body. By including the views from a range of students across all years of study, and particularly those who have experienced all years of the curriculum for themselves, enables the examination and description of the range of aspects of learning that are required for students to practice. Hence Stake provides a way in which interviewing medical students in this manner may be considered as a case study. Miles and Huberman (1994) whom I refer to later in describing my data analysis, provide techniques which aid data coding and interpretation, but also describe how to identify themes from interviews which relate to previously identified theoretical concepts relating to an identified conceptual framework which can facilitate an understanding of a 'case study'.

From the inception of my research both the enquiry and subsequent analysis of the resulting data require an interpretative approach such as described previously by Lincoln and Guba, 1985. I now go on to explain how such an interpretative approach can better facilitate my understanding of the data.

Research methods were chosen that adequately explore the collective social experiences of medical students and emphasise the importance of their views and what meaning they place upon these experiences. Firstly the medical students, or research participants, interpret their own and others' academic

experiences which in turn influences how they construct their own sense of the world. These interpretations made by the students affect how and what they tell each other and ultimately me about their academic experiences. However as I am interested in students' perceptions rather than accessing simple descriptions of their learning experiences how students come to understand and attribute meaning to their experiences is of prime concern to me (Silverman, 2001). Additionally, I as the researcher will also inevitably interpret what the students tell me according to my own research agenda and its inherent theoretical perspectives. Whilst specific detail of the data analysis is given later suffice it to say here that using an interpretative paradigm facilitates my understanding of the students' complex world from their viewpoint, and helps me ascertain how and why students perceive their experiences and go to develop their attitudes and values (Denzin and Lincoln, 1994). This similarly implies that whilst, like Erickson, 1986, I am interested in the key interpretations of the people studied and what he terms the *"centrality of interpretation"* I also appreciate the role and influence of the researcher upon this process. As Erickson goes on to explain:

"*Given intense interaction of the researcher with persons in the field and elsewhere, given a constructivist orientation to knowledge, given the attention to participant intentionality and sense of self, however descriptive the report, the researcher ultimately comes to offer a personal view*" (Erickson, 1986, p.42).

If this is the case then the role of the researcher, how much he or she participates in the research field, whether the researcher poses as an expert

or neutral observer and ultimately their take or stance on the interpretation of the data are all valid concerns. This information will influence what data is collected, how it is analysed, interpreted and what final conclusions are drawn. The qualitative methods of enquiry that I chose to explore students' views, perceptions and attitudes that influence their behaviours are concerned with real life and not dependent on setting up artificial experimental situations. Similar to Hammersley and Atkinson I am interested in gaining "*detailed descriptions of the concrete experience of life within a particular culture and of the social rules or patterns that constitute it*" (Hammersley and Atkinson, 1995, p. 8).

Bearing this in mind two distinct methods to explore the views of students were used. Initially facilitated focus groups allowed a rapid exploration and increased understanding of the ambient student culture and group perspectives relating to students' socialisation. Focus groups encouraged dialogue between students concerning their beliefs and views derived from their experiences of the undergraduate medical curriculum pertaining to what they thought was important to learn in order to become a doctor and the underpinning academic and social processes involved.

Focus groups encourage participants to discuss their views allowing a consensus or collective understanding to be achieved whilst also permitting

differences of opinion and experience to be aired (Kitzinger 1995). Common and disparate views are both important. Focus groups initially ascertained baseline student norms and then developed areas for further exploration within the one-to-one qualitative interviews with individual students. The focus group discussions therefore shed light on the research questions that asked how medical students from non-traditional socio-economic groups might be perceived, how the processes of socialisation into a medical student culture might come about, and whether the experiences of such non-traditional medical students might be different. The focus groups also explored the perceptions of medical students concerning their experiences of the medical undergraduate curriculum and what they perceived they needed to learn, and how, in order to become doctors. This ensured detailed information delivered in the students' own words concerning their personal views of their own experiences and opinions.

However my methodology also needed to successfully explore the sensitive issues of students' feelings and attitudes as well as what they think and how they behave. This was more effectively achieved through personal one to one interviews than group discussion. Hence the perspectives of students, both from traditional and non-traditional socio-economic backgrounds, were explored in depth by fully engaging with the issues raised at their focus group discussions in subsequent individual interviews. The individual interviews therefore examined how medical student interviewees understood both their

own status, and those of their peers, of coming from either a traditional or non-traditional socio-economic background. This then facilitated further enquiry of any varying underpinning social processes that may affect what and how non-traditional students may learn.

Whilst direct observation of the students by either a participant or non-participant researcher may be desirable in terms of collecting first hand data from the field of research it is felt that this process may well compromise the relationship between researcher and students and possibly distort the processes being studied as the researcher is both known to the students and also the teachers. Direct observation of the research field is also very time consuming and exploring the views of students experiencing the curriculum is likely to yield similarly authentic information in a time efficient manner with the added advantage of gaining the students' perceptions. Using such qualitative methods that emphasise an interpretivist approach facilitates the understanding of the students' complex world from their viewpoint (Denzin and Lincoln, 1994).

Who was researched and how

Initially a series of 3 focus groups with students from all year groups established the baseline/norms of student perception and behaviour concerning their initial and late socialisation into medical student culture, their views on their own professional identity and development, and what and how

they are required to learn to become doctors. Short early conversations with students explored their real life experiences and hence understanding of the theoretical concepts that were introduced in earlier chapters. Discussion specifically aimed to clarify if students could understand and identify what was meant by the term "non-traditional medical student". An interview prompt sheet was drawn up to facilitate the group discussions and ensure some consistency of content in each group discussion (Appendix I). Each focus group lasted approximately 45-60 minutes and had between 3-8 participants. The participants consented in writing to take part and at the same time completed a socio-demographic form asking them for their year group, gender, age, ethnicity and socioeconomic class. Detailed descriptions of the data analysis follows later, but suffice it to say here thematic analysis of the results from these initial focus groups was integral to developing the most relevant and appropriate questions to ask in subsequent more in-depth individual student interviews. In particular clarifying how students define what it means to be a non-traditional student and how this may affect their learning was prioritised and tested in later interviews.

All students from both the 5 year MBBS and Graduate Entry Programme degrees were invited by email to take part in one of the focus groups and later individual interviews. In recruiting students the invitation emails stated the purpose of the research, the proposed strategy for disseminating any outcomes, and had a more detailed information sheet and the consent form

attached. The University's ethics committee approval was sought and obtained (Appendix **I**V).

The age range of most of the cohort of medical students at the medical school is from 18-25 years. There is a high proportion of Asian ethnicities with an even mix of sexes. As students will be self-selecting in attending for the focus groups it was not possible to guarantee that all the arranged focus groups equally represented the ethnic mix, gender or age of our student body. However all students were encouraged to attend and by explaining the purposes of the research both by the emailed invitation and by personal announcements at student gatherings such as lectures, it was anticipated that students from non-traditional backgrounds would be interested and wish to take part. As the Medical School has a high Asian cohort of students it would be expected that focus groups would consist of a mix of ethnicities. Should it appear that this is not the case then acknowledgement of this and how the findings may be affected will be noted.

Similarly the focus group findings are strengthened if the groups consist of students from all years of the curriculum and both genders are represented. Therefore within the constraints of students volunteering to attend I ensured each focus group was diversely constructed in this way, by selecting a cross section of years, ethnicities and gender from those students who wish to take part. This intended to increase the validity of the findings as views from

across the student body who have experienced all aspects of the curriculum were collected (Kitzinger 1995).

All students including those who have been significantly interested to attend the focus groups were invited by email to also take part in subsequent individual interviews. Using qualitative research methods including both focus groups and individual interviews emphasised my interpretivist approach that seeks to understand the students' complex world from their viewpoint (Denzin and Lincoln, 1994). The focus groups exploring general and group student views whilst individual interviews provided opportunities to follow up on issues raised during the focus groups and probe any more sensitive issues in more depth.

Fifteen individual subsequent interviews were conducted. These students were ultimately self selecting and as this was a small qualitative study it was not planned to purposefully cover all ethnic groups within the proposed 15-20 individual subsequent interviews. However any students who identified themselves as non-traditional during the focus groups were specifically invited. Following on from this some interviewees were also identified personally by previously interviewed students. This ensured a balance of views from both traditional and non-traditional backgrounds.

Both focus groups and individual interviews had participants from both traditional and non-traditional socio-economic backgrounds ranging across all the medical school years. This ensured that the generated data had the potential to identify students' views pertaining to what it means to be a non-traditional student both from the perspective of being such a student and from the views of medical students who study alongside such non-traditional students. Similarly the insights from the data concerning any perceived differences in the processes of socialisation for students coming from a non-traditional background are validated by also seeking and including the views of students from a more traditional background. More detailed information from individual interviewees concerning their personal stories, often of their progression through the medical curriculum, highlighted the relatedness of the research questions by illustrating how the socialisation, professional development and what and how students learn also have aspects in common.

As previously outlined themes from the focus group discussions alongside theoretical perspectives were used to generate an initial interview schedule for the individual interviews. Subsequently an iterative process of modifying the interview schedule facilitated exploring and testing out student generated concepts and the developing analytical coding system (Miles and Hubermann, 1994). Later interviews were critical in verifying developing conclusions. All interviews are to be recorded and later transcribed. Field notes were also taken

Decisions made in Data Analysis

This section introduces the rationale in choosing the approach to the data analysis and outlines the detailed process of analysing the data from both the focus groups and individual interviews, including how the coding was generated, and the data displayed. A cyclical critical re-examination of the initial draft research questions ensured that they continued to capture the intent of the evolving study. This process helped reframe the research questions, clarify the inter-relationships between the concepts at the core of the enquiry and make explicit the boundaries of the study (Miles and Huberman, 1994).

Stages of data analysis

Following familiarisation with the collected data the subsequent stages of data analysis occurred; data reduction, data display and conclusion drawing/verification (Miles and Huberman, 1984, p. 21). This process is displayed by the following Fig. 2 on p. 209. This section describes in detail how the analysis of the data produced the final overarching main themes, derived from a process of structuring the data into meaningful chunks, and by using both primary and secondary coding. Primary coding was descriptive relying upon the recognition of repeated issues arising from the data and also the previously identified theoretical concepts from the literature. Secondary coding was more sophisticated requiring a higher level of interpretation and abstraction. This illuminated the more latent content of the data and also

began to highlight the relationships between emerging themes and the previously identified theoretical concepts.

Stages of Data Analysis

DATA REDUCTION

DATA DISPLAY

VERIFICATION

AND

CONCLUSION
DRAWING

Verbatim transcripts

Theoretical aggregation

Categorisation into chunks of data according to research
questions

Analytic categories which refer
to meaningful units of data,
descriptive coding.

Primary coding (variables)

Interplay
with theoretical
concepts

Interpretive approach, higher
degree of abstraction, further
categorisation.

Secondary coding (themes)

Process mode analysis. Further
level of interpretive analysis
indicating both the manifest
and latent content of data.

Thematic analysis (main themes)

Description of the Thematic Analysis

Following transcription of the focus groups and early recorded interviews units of meaningful data were categorised according to the analytic categories which were derived from the research questions. Further analysis of these aggregated data or otherwise sometimes termed "units of analysis" were performed by coding or assigning meaning to the units of data in each analytic category. Data units bearing the same code were then grouped together. Each initial code was derived by searching for data that had similar meaning or was linked by a core theme. Common phrases and shared ideas in the transcripts helped to identify these usually simple descriptive codes forming the primary coding or variables. Each code was provisionally given a descriptive name that reminded me of the substance of the block of data and/or referred to its originating research question. Whilst the codes were derived inductively using a "modified grounded theory" approach the theoretical concepts from the conceptual framework also exerted a strong analytical influence (Miles and Huberman, 1994; Strauss and Corbin, 1990). These theoretical concepts embrace the processes of socialisation, professional development and the underpinning sociocultural learning required of medical students that feature throughout my enquiry and analysis. Theoretical concepts arising from my earlier chapters such as student perspectives, professional identity and role, medical habitus and student participation orientate the data analysis by highlighting relevant areas to explore in more depth. For example, the concept of student participation can

be seen as an important "analytic tool" to explore medical student learning and the development of a medical habitus as it also sheds light on describing the common ground between the outlined sociological and learning theories integral to my enquiry.

The coding of the focus groups was instrumental, though not restrictive, in coding the subsequent individual interviews. Coding the data from initially the focus groups and then early interviews shaped the perspective for future interviews (Miles and Huberman, 1994). Data collection began to focus on identifying previously highlighted themes as well as new areas. Themes were emerging and tentative conclusions beginning to be drawn. It was important that these concepts were examined in relation to each other and tested out in subsequent interviews (Hammersley and Atkinson, 1995). Previously coded transcripts were checked for consistency as codes became more firmly established and themes emerged.

Each unit of data was labelled by its interview number and page of transcription so that it could be traced back to its origin. In considering the meaning of the unit of data its context, the question that precipitated it and its following dialogue, may be required to fully understand the meaning of what was said and allocate an appropriate code. As later interviews were analysed the process of coding facilitated a more sophisticated interpretative approach. This secondary coding involved a higher degree of abstraction moving from a

basically descriptive to inferential understanding of the reduced data. For example, Van Maanen (1979) describes "*first-order concepts"* which would be the very basic descriptive accounts within raw data or story telling and then "*second-order concepts*" which researchers use to order, explain and interpret the "*first-order concepts".* To illustrate this, the theme "medical habitus" would be an example of a second-order concept from my data that collectively represents and also helps the reader to interpret its associated first order descriptive coding or otherwise known as variables, such as "rules", "increasing capital", "clothes" and "speech". The second-order concepts or themes interplay and resonate with the issues highlighted by my conceptual framework illustrating how both theoretical perspectives and a modified "grounded theory" approach is taken in analysing the data.

As interviewing proceeded in addition to simple coding a more sophisticated thematic analysis involving examining both the latent and manifest content of the interviews was undertaken. The manifest components are the obvious and simply understood concepts arising from the interviews which have usually descriptive codes or variables. Whereas outlining the latent meaning of the interview data involves interpreting the underlying concept or main intent of the communication. Both manifest and latent content deal with interpretation but the interpretations vary in depth and level of abstraction (Kondracki et al., 2002). Mohr (1982) termed the more simplistic descriptive coding as "variable analysis" but what he termed "process analysis" is better

suited to identifying the latent content of the interviews. The process mode of analysis allows for the understanding of stories as told by participants and was a helpful approach in analysing some of the data from the individual interviews. Stories which rely on their context, chronology but also necessitate exploring the connections these stories have with the whole emerging picture (Mohr, 1982). Variable analysis is more concerned with looking for repetition and patterns within the coded data which is important in drawing conclusions. However to fully understand some of the stories told to me required a more flexible approach than simplistic and sometimes overly structured variable coding.

Linking identified codes together in a meaningful way and searching for possible relationships between codes generated overarching themes. Themes from the individual interviews therefore reflect the content and structure of the conceptual framework and build upon the analysis of the focus groups. This process was a critical step in making sense of my data as Coffey and Atkinson point out:

"*Interpretation involves the transcendence of "factual" data and cautious analysis of what is to be made of them*" (Coffey and Atkinson, 1996, p.46).

Verification and meaning making

Moving from coding to interpretation is a crucial process. By ensuring that data collection and analysis overlapped I could by a process of progressive

focusing identify meaningful patterns within my data (Miles and Huberman, 1994). I was also interested in exploring any possible relationships between variables either directly or indirectly. Establishing which variables co-vary or in other words have a dependent relationship was important in identifying any initial overarching themes.

Themes drawn from the data required consideration of both a priori and empirical concepts. For example the previously outlined structuring inter-dependent relationships between Luke's identified concepts of habitus, field and capital facilitated the interpretation of data-derived variables relating to students' professional development. Wolcott (1992) describes this process as "theory-first" as opposed to a "theory-later" approach. Once tentative themes had been verified narratives describing the issues as they arose from the data analysis explaining any underlying associations and the reasons why relationships between variables are thought to exist were written. These narratives reflect a deeper understanding and interpretation of the data.

Tentative themes derived from the coded data were tested out in subsequent interviews and by getting feedback from participants by sharing initial interpretations, a process known as "*member checks*" (Guba and Lincoln, 1981). Member checks are a useful first step in confirming that any initial and on-going thoughts are leading to conclusions that are compatible with the

participants' original assertions. This is an important issue within validity and reliability as I go on to discuss next.

Validity and Reliability

Silverman concurs with Seale (1999) that the main stay of quality within qualitative research is being able to "*show your audience*" that the methods you have used are both valid and reliable (Silverman, 2005, p.209). These terms are associated with quality assurance, trustworthiness and the authenticity of any findings. The term validity can be defined as "*the extent to which an account accurately represents the social phenomena to which it refers*" (Hammersley, 1990, p.57). Whereas reliability reflects the consistency of data collection and the analytic process, and could with respect to my study for example, consider "*the degree of consistency with which instances are assigned to the same category by the same observer on different occasions*" (Hammersley, 1992, p.67). Therefore it is my intention to next discuss in more depth the issues concerning validity and reliability relevant to my study.

One of the main strengths of my study is the availability of context-rich and meaningful data as students gave detailed personal accounts of their educational experiences and importantly from an interpretative perspective what these experiences meant to them. This takes into account the initial "interpretation" of events, relationships and meanings by the student participants and later on the inevitable secondary interpretation by me the

researcher, who goes on to analyse the transcripts (Miles and Huberman, 1994). Students were asked for their views and opinions concerning medical student socialisation, their own and that of their peers' professional and academic development. My relationship with the participants tended to encourage open and frank conversations about their experiences and views. It is therefore imperative that any interpretation of this rich raw data is neither skewed by any overly theoretical bias on my part or by paying too much heed to individual student views. However a participant's story does not stand in isolation and looking for similar stories, contrasting stories, comparing reasons for why events happened the way they did or why participants acted or felt the way they did in their accounts increases validity in the analytic process, without relegating the power of a participant's individual story to enhance our understanding of the underlying processes involved. An interpretive approach contexturalises the participants' discourse and the secondary context created by the researcher's presence and any subsequent interpretation of meanings. It is not the purpose of this analysis to attempt to remove any influence the researcher may have on either what data is gathered or how it is interpreted but rather I wanted to highlight how the researcher may influence the data gathering and interpretation. By making this explicit the reader can then decide for themselves the extent of the objectivity of the conclusions and perhaps more importantly, how the relationship between the researcher and the participants has positively influenced the richness of the data collected and its interpretation.

It is likely due to the close knit medical community that plausible conclusions drawn form the data in this way will "ring true" with medical students and faculty. The nature of the enquiry increases the likelihood of reasonable face or internal validity. However the concern with analysing such data is that the researcher requires care to avoid what has been termed anecdotalism. Anecdotalism may occur where conclusions are drawn from isolated data that favour particularly pertinent or flamboyant themes that on reflection do not represent the data set as a whole. Therefore corroborating or refuting "working" conclusions during contemporaneous data analysis and in later data collection was undertaken. Such a constant comparative method ensures that in general conclusions are not drawn from isolated instances (Miles and Huberman, 1994).

I was also concerned to test out any emerging conclusions and possible developing theory from my data by comparing these findings with the literature and specifically the a priori concepts from my conceptual framework. It is important that the power of individual student stories or vignettes is not overlooked in succinctly illustrating the core central themes from my data and how these themes are often interrelated.

Furthermore as Hammersley and Atkinson explain "*data in themselves cannot be valid or invalid; what is at issue are the inferences drawn from them.*"

(Hammersley and Atkinson, 1995, p.191). Therefore during interviews student comments were frequently summarised and interpreted by myself and then fed back to the student to confirm mutual understanding. Working conclusions and hypotheses were also fed back to students in later interviews in an iterative process. Empirically coding the data from early interviews alongside the a priori concepts shaped the perspectives of the subsequent interviews (Miles and Huberman, 1994; Strauss and Corbin, 1990). More formal respondent validation occurred towards the end of data collection by providing a written summary of initial working conclusions for student participants to reflect upon and discuss with me either before or after their interviews (Eraut, 2000a, Lacey and Luff, 2001, Miles and Huberman, 1994).

The reliability of the study reflects the consistency of data collection and the analytic process. It is also important for the process of data collection and analysis to be clearly documented and open to scrutiny so that readers can judge for themselves what conclusions to draw and whether the inferences made by the researcher are valid and reliable. All interviews were conducted by me and I endeavoured to consistently cover all the pertinent issues in each interview determined by the research questions and by following up on issues as they became clear in earlier interviews. Coding of the data was reviewed as the analysis proceeded as part of this iterative cycle. Deeper inferential analysis became possible as interviewing proceeded occasionally requiring some re-coding of data as categorisation and linking of data

became clearer. This ensured that conclusions were not drawn from isolated instances but examples searched for in earlier and later data collection. Seale, 1999, also advises the use of low inference descriptors whereby observations or in my case students' comments appear in text as verbatim accounts of what was actually said rather than either my interpretation or "reconstructions of the general sense of what a person said" (Seale 1999, p.148). Further support of this is that in general longer data extracts which include my question or lead with the respondent's comment as well as any facilitatory remarks are included to provide sufficient context.

All transcripts and original field notes are retained for possible review by external evaluators. The process by which conclusions were drawn from the results aims to be transparent and clearly documented.

Confidentiality and ethical issues

Whilst participants are required for the purposes of arranging timings and venues for either focus groups or individual interviews to give their contact details once they have been interviewed, and reviewed the summary of their interview, no documents will detail any personalised information other than sex, age, graduate status, social class and ethnicity. A professional transcriber bound by the rules of confidentiality will be used. Transcripts will be allocated a numerical code. Anonymity and confidentiality will be maintained. All electronic data will be stored on passworded secure

computers. Signed copies of the consent form will be retained separately from the field notes in a locked cabinet on medical school premises.

As the researcher is also a member of staff, care is required in inviting students to participate to avoid any possible perceived coercion and in maintaining appropriate confidentiality. As I am already known to some of the students, have inside knowledge of the curriculum and past personal experience of medical education these factors make me a "knowledgeable interviewer" (Miles and Huberman 1994). This may be an advantage in terms of shared understandings but care in interpretation of findings and cross-checking any outcomes with students is vital to avoid bias in reporting. Similarly it is likely that I will be the sole interviewer conducting these enquiries. It is possible that this may introduce areas of bias, but may also increase the validity of the data by ensuring reliability and consistency in interview technique. It is planned to use an open interview framework where during each interview a list of issues are explored by the use of open ended questions derived from the relevant literature (Miller and Dingwall, 1997).

It is possible that issues of professionalism and examples of poor teacher role modelling may be reported. Students are informed of the confidential nature of what is discussed at both the focus groups and interviews. However should a very serious disclosure be made, as guided by the General Medical Council, then the interview will be terminated and the matter discussed with

the student/s as to what processes should now occur. Students have a right to withdraw from the interview, may be counselled as to whom to further discuss/report any matter with. The School Medicine and Dentistry has clear policies relating to such procedures and I would be in a position to direct and support any student at this point.

It is important that students are fully aware of their right to refuse to participate and that the invitation to participate in the research does not alienate students who may already feel different or marginalised. Before any participation students will be asked to formally give their written consent and at this time also provide their personal details of age, gender, previous graduate degree, social class and ethnicity.

PART 3: Data and its Discussion

Chapter 7

Becoming a doctor
-exploring the themes from the focus groups

Introduction

The preceding methodological chapter described how my conceptual framework was pivotal in delineating the boundaries of my study and its analytic categories. This chapter is the first of two that presents the themes from my data analysis that depict the central issues pertaining to who becomes a doctor, the social processes underpinning medical student learning, and how and what students learn in becoming doctors. Additionally these issues are examined from the perspectives of medical students concerning their views of, and experiences of being, non-traditional medical students from lower socio-economic backgrounds.

These issues relate to the first three overarching research questions:

- What perceptions do current medical students have of students who come from non-traditional lower socio-economic backgrounds?

- Are the patterns of socialisation within this medical school different for non-traditional students from lower socio-economic backgrounds? If so, how may this affect their learning?

- 'What' and 'how' do medical students learn as they progress through the undergraduate curriculum? Are there any significant differences for non-traditional students?

Both this chapter and the next introduce the three overarching main themes from the data analysis of the focus groups and the subsequent individual interviews that describe medical student learning. These themes describe who becomes a doctor, the developmental processes underpinning becoming a doctor, and the issues underlying medical students' learning. This chapter presents the data analysis from the initial focus groups derived from an analytical approach that considered theoretical a priori concepts identified in the previous Chapters 2, 3, 4 and 5 in conjunction with themes arising from the data. The next chapter presents the themes from the individual interviews that come from the interpretation of the interviewees' responses to questions and issues raised during the focus groups.

I will remind the reader at this stage which important theoretical concepts I have used in analysing the data. Issues within the literature of what may characterise a non-traditional medical student, how this may be related to the

student's socio-economic background and Luke's conceptualisation of what Bourdieu referred to as capital are important in ascertaining the perceptions of medical students concerning who becomes a doctor. Initial descriptive and then inferential thematic analysis highlighted themes within the data from both focus groups and the later individual interviews that illustrated these issues. This lead to an understanding of who may be more likely, and also consequently less likely, to become a medical student and hence a doctor. Examining the social processes underpinning medical student learning encapsulated by Becker and Merton's work described in Chapter 2 explores medical student socialisation and medical student culture focusing on the importance of developing student perspectives, role-playing and professional identity formation. Additionally medical students' professional development is examined and compared with Luke's conception of the medical habitus in Chapter 3 which describes the behaviours or "patterned activities" (Chapter 3 p. 76) of junior doctors striving to impress more senior doctors and gain prestigious training posts. The affect of coming from a lower socio-economic group upon these social processes underpinning the learning of medical students is a key issue throughout the data analysis. The theoretical sociocultural models of learning discussed in Chapters 4 and 5, particularly emphasising the participatory nature of learning, are useful in developing a perspective that exams what medical students think they need to know in order to practice as a doctor and how they will best achieve this learning. This perspective moves away from the concept of knowledge as viewed as an

individual learner's possession and encourages exploration of how and what medical students learn from participating in team and clinical activities. The theoretical concept of student participation as an "analytic tool" in exploring medical student learning is highlighted as it also sheds light on exploring the common ground between the sociological and learning theories.

My aim for the focus group interviews, as explained in Chapter 6 (methods), p. 200 was to rapidly explore and begin to understand the ambient student culture and student perspectives. Following the focus group discussions I better understood the views of students concerning what they think are the most influential issues in determining what kind of people apply to become doctors, the social and developmental processes involved in firstly becoming a medical student and then a doctor, and what and how medical students are required to learn. These outcomes of the focus group discussions clarified the direction of the subsequent individual interviews as several areas remained inadequately explored and were raised as issues for further more in depth examination.

Three focus groups were conducted that each included between 2-8 participants recruited from across the medical school years (1-5). Fifteen individual interviews with medical students ranging from years 3-5 each lasting between 45-90 minutes were completed. Data analysis as described in Chapter 6, p. 207 explains that initial primary data coding of the transcripts

from both the focus groups and individual interviews highlighted descriptive codes or variables that relate to the theoretical concepts discussed but are also a reflective interpretative response to the data following a modified "grounded theory" approach (Miles and Huberman, 1994; Strauss and Corbin, 1990). Secondary coding involved a higher degree of abstraction and a more sophisticated level of interpretation which highlighted sub-themes and themes which also resonated with the a priori theoretical concepts. The interplay between the themes from the data and the previously outlined theoretical concepts was an important process in describing the over-arching main themes of who becomes a doctor, the developmental processes underpinning becoming a doctor and the issues underlying medical students' learning. The appendices depict a chart for the focus group discussions (Appendix V) and further charts for the individual interviews that display variables, sub-themes, themes and the overarching main themes (appendices a-e).

The next section describes and discusses the thematic analyses from the focus groups whilst the chapter after presents the data from the individual interviews. The text presents selected illustrations of examples of converging and diverging medical students' views that highlight themes from the data analysis that correspond to each overarching main theme. Subsequent discussion explains how each chosen student quotation has been interpreted by corresponding variables, sub-themes and theme as appropriate. The focus group analysis presents issues and questions for further consideration

detailed by the later individual interviews analysis. Themes from the data highlight issues and raise questions concerning what is required of medical students in becoming doctors and shed light on the processes of medical student learning. Data interpretation highlights themes from a student perspective and begins to explore tentative relationships between areas that students and the relevant literature highlight as important.

Focus groups: issues and questions

The examples of quotations selected in this next section represent the issues that medical student interviewees raised which reflect the outcomes of the thematic analysis of the focus groups (appendix V) and are also consistent with the stages of data analysis as described in the earlier methods chapter (Chapter 6 p. 207).

Issues pertaining to who becomes a doctor?

In exploring the views of medical students concerning who becomes a doctor interviewees identified characteristics that they felt were typical of, or commonly associated with, being current medical students. Interviewees then further described the kind of medical student who they think is atypical and consequently may not "fit in" with other medical students and their common activities. In connection with this the underlying social structures and processes that students thought help maintain student groupings and in this

way contribute to medical student culture were also discussed. These issues are important in the initial exploration of what it means to medical students to be non-traditional and how non-traditional medical students may be identified. Understanding more thoroughly who traditionally becomes a medical student and those medical students who are described as non-traditional by their peers is crucial before going on to exam medical students' socialisation and professional learning.

Who are traditional medical students?

Elaborating on the student perspectives discussed during the focus groups that refer to student workload, vocational motivation and student drive or ambition help clarify those characteristics that interviewees thought were typical of medical students. The quotations that have been selected from my empirical data best represent the views of interviewees that help us better understand what they think matters most in exploring who becomes a medical student and what it may mean to be a non-traditional medical student. In addition the previously outlined conceptualisations of professional role-taking, student perspectives and autonomy (Chapter 2) are helpful in highlighting important areas within my empirical data as I will go on to comment.

Medical students describe themselves as "work hard, play hard" types as can be seen by the following comments:

Facilitator– Do you think there is a stereotype, a typical medical student, now?

Female Student – Mmm, work hard, play hard, yeah.

Male Student – Work hard, less of the play hard.

Facilitator – So initially you said 'typical medical student, yeah that's me, work hard play hard.'

Male Student – Mmm.

Facilitator – Now it's, work hard, play less hard?

Male Student – Yeah, that's the way it's going.

Male Student – Until you start working and then it's just work! FG1 p24/5

Male Student – I started in 2007 and I really enjoyed it, I was having a hell of a lot of fun. I was trying to conform to the stereotype of a really good medical student who just goes out a lot.

Facilitator – Whose stereotype is that?

Male Student – Er, other students, ones that I held inside my own head. (FG1 p.6)

The views of the interviewees expressed above illustrate that whilst medical students may well like to party they also recognise that they need to be able to cope with a high academic workload. Becker developed his short-term and situational student perspectives that described ways in which the medical students he observed and interviewed coped with such a high workload. Similarly interviewees also talked about pressures concerning their workload and the processes by which they felt they coped which I will discuss shortly. However for now we appreciate that medical students consider both the

capacity for hard work and social activities important in thinking about who becomes medical students.

Interviewees commonly expressed a commitment or vocational desire to become a member of a caring profession as expressed by this interviewee's comments below:

Male Student – *You hear a lot about the altruistic qualities that a person has to have and to a certain extent that needs to be there, because if someone is sort of driven by money or, you know, driven by fame, or, becoming famous for instance, they wouldn't go in to medicine for the effort that they have to do, the recognition and the money is not the same. So you need to have somewhere along the line that you are doing something to help someone, I thinks that's something that is common amongst medical students. FG2 P4*

The sentiments expressed above were accepted by other interviewees during the focus group discussions and remind me of the student perspectives that Becker describes of idealism that he found were quickly replaced by cynicism and the need to cope with exams. Students attending the focus groups were from all years of the course and a vocational desire and continued sense of the importance of patient care were articulated at all focus groups. However this was often matched with interviewees describing how they struggled to prioritise their learning with examination preparation sometimes conflicting with their desire to learn what they perceived as either more interesting or clinically relevant.

Interviewees described their drive and ambition to become doctors as exhibited by those who are successful in gaining places to study medicine.

Facilitator – OK. What kind of person do you think becomes a medical student?

Female student – You have to be very driven. The selection process to get in to medical school is so long and difficult and competitive, and I think that almost, we were talking about this the other day as well, that at medical school you have almost one type of person, such a driven competitive person. FG2 P3

Medical students described their passion and enjoyment of medicine as well as their competitive natures and the balance between ambition, wanting to do well and cooperating with other medical students and prioritising learning required for patient care requires further examination during the subsequent individual interviews.

Male Student - So, although you are competitive, you're determined. I think you have to have some aspect of having a passion for your subject and, being a medical student, I think at the end of the day you need to have that, what do you call it, wanting to have that self satisfaction that at the end of the day you have helped someone. FG2 P4

Themes from the focus groups that tentatively further our understanding about who becomes a medical student complement student perspectives outlined by Becker that describe the capacity to deal with high work loads, vocational ambition and a competitive approach to their studies. These areas are further discussed in a later section of the focus group discussion analysis but also require exploration within the individual interviews to examine how

successful medical students manage fostering an altruistic attitude towards patients alongside learning what is required to pass examinations. Another area of interest is how students learn with each other and the issues that this may present.

Medical student culture and "fitting in"

Interviewees described shared interests and daily activities that they felt contributed to developing common thoughts, attitudes and ways of dealing with the issues they most frequently come across. This again resonates with Becker's ideas of the development of student perspectives. Interviewees similarly identified such attitudes and behaviours, which are discussed in more detail later, but of current interest they highlighted ideas about how they felt some students did not "fit in" with these commonly held beliefs and patterns of daily activities and routines. Not "fitting in" is hard for students to describe as this interviewee identifies:

Facilitator – *OK. So, do you think you all fit in?*

Male Student – *Yeah.*

Female Student – *Yeah.*

Facilitator – *Do you think you fit in XXXX?*

Female Student - *Erm.*

Facilitator - *You didn't nod, that's why I'm asking.*

Female Student – *You know what. I think, I think I've found some people that I feel I fit in with….*

Facilitator – Yeah.

Female Student – And, er, other people that I don't.

Facilitator - Mmm.

Female Student –So, I mean if I was to take the, kind of, the year in general I'd probably say no but then there's like enough people that I do feel I fit in with. So I fit in with people that don't feel they fit in, if you know what I mean? FG1 p30

So it can be observed that this interviewee not only feels she doesn't "*fit in*" with the main cohort of students but she can identify other medical students who may similarly feel that they too do not "*fit in*". Exploring what not "*fitting in*" means for medical students may help clarify what being a non-traditional medical student entails, as an interviewee in a later focus group articulates what "*fitting in*" means for her:

Female Student – When somebody says "fitting in" to me I don't think that that means like being the most popular or being the funniest. "Fitting in" means being able to get along with people under any circumstances, including people as well, making people feel included and not excluding themselves or other people. To "fit in" means a sense of, again a sense of identity almost, that you are a group of people and you can relate to the majority of people in that group rather than separating yourself from those people for any particular reason, or excluding others for that particular reason.FG3 P8

Assuming a sense of identity, a medical student identity, by acknowledging your relationship with other students in a similar position, seems to be an important issue for medical students in both exploring what "*fitting in*" means and in later examining their views on their processes of socialisation.

However for now issues of "*fitting in*" also raise questions about those students who may have difficulties or struggle to "*fit in*". During the focus groups interviewees could identify either themselves or others as "*being different*". This sometimes indicated a perceived lack of interpersonal skills or a tendency to socialise with other students less which lead some interviewees to conclude that these students find it harder to "*fit in*" with the main student cohort than others. The reasons for some medical students not "*fitting in*" and whether this helps us better understand which students may be considered "*non-traditional*" and importantly whether not "*fitting in*" has any possible consequences for their learning require further discussion and more in-depth examination through individual interviews.

When discussing "*fitting in*" interviewees described the formation of social groups of medical students within the main cohort. Examples of these groups are students belonging to various sporting clubs, those who live together at specific student accommodation sites, or come from specific components of the course such as the Graduate Entry Programme (GEP). Interviewees additionally described how by processes of making contacts with students with shared interests these social groups were instigated and maintained. The commonality within some social groups was less obviously identified and the students from the focus groups talked about, for example the "*slackers*", who were characterised by their minimal work ethic. Interviewees described how these groups are reinforced by the bonding process that occurs due to shared

interests between students and also by structural arrangements, such as seating within lecture theatres and access to electronic information, such as facebook groups and email lists.

Female Student - you just notice that the front (lecture theatre), the group at the front, tends to be more studious, tends to be from families that are either not financially so well to do or from families that are more strict with money or have different cultural backgrounds or more cultured backgrounds and then they tend to keep to themselves more and socialise less.FG2 P7

This interviewee comments on the processes of making contacts and the role of socialising and the possible effect of a student's social background in determining medical student groupings. Relationships between medical students appear to be important in sustaining medical students and warrant further examination, as this interviewee explains:

Male Student –Sometimes the advice that comes from your friends you take it on board better than advice from family members, purely for the fact that you know your friend, hard to say, not only that he has, more stuff in common, but he thinks like you as well, in the sense of, you know, although, you know, although you may be going through a tough time, they have seen it from the other side so they are not going through a tough time and usually what they say, they are in the right state of mind and you would actually take that advice on board, so, and having those friends that are in medical school and doing the same course as you in the same year, it would help a lot, so you want to make good friends with the people in your year. FG2 P13

This interviewee describes the benefits of having friends that have in common the same outlook and also a number of experiences that may facilitate students counselling each other during difficult times. This "*bonding*" process I believe is important on several different levels. Students bond with other like-

minded students who naturally become their good friends. However how students support each other through a challenging course and how these relationships form the basis of social groupings and the development of student perspectives that are influential in directing student learning requires further examination. The implications of not fitting in with other students and the issues that may arise for these students in terms of their learning also requires further exploration.

The developmental processes underpinning becoming a doctor

Issues raised during the focus groups draw attention to, and allow us to explore further, medical students' concerns over developing their own professional identity, socialisation, and their professional development.

From Becker and Merton's work the importance of students understanding and being able to actualise their role as a medical student is acknowledged. The perspectives of Becker and Merton differed, with Becker emphasising the autonomy of medical students and how their views are principally concerned with getting through medical school whereas Merton examines how medical students begin to take on a professional role which legitimises their position within a medical school institution. This section discusses how interviewees see themselves initially as medical students but with maturation and clinical exposure begin to see themselves more as doctors. The processes that interviewees think affect this change and the consequences are discussed.

Similarly medical student socialisation is explored highlighting accepted student values and norms as well as issues concerned with how students develop relationships with each other. In addition the processes that interviewees think are important in their own professional development that prepares them for medical practice and also resonate with Luke's medical habitus are explored.

Developing a Professional Identity

Interviewees described to me how they felt different from other university students because they were studying for a vocational degree that entailed not only more work but work that prepares them for a subsequent career as a doctor.

Male Student *– I think being a medical student is by it's self, a different type, you get a different label. I mean compared to anyone doing like a three year degree, obviously you are doing it for five years, er, it's a professional degree and to become a doctor there is a lot of study involved, so it has that sort of, I don't know, I won't say special but, it has that sort of label attached that OK these lot are medical students, they should have, extra work, they've got a longer university process, their whole life's going to be quite different. FG2 P2*

Interviewees' perceptions of "*being different from other students*" comes from medical students themselves but also others; non-medical students, family, friends and patients.

Female Student *– I think there's also expectations of medical students, not just in terms of your knowledge but also in terms of your social life. Like, a lot of people say, you know, 'Oh, you're a medical student, you must drink all the*

time. It's kind of like expected that medical students drink the most or they go out the most, as well as working the most. There's this expectation or this view of medical students. FG1 P2

When interviewees described how they identified with each other and saw themselves as "*medical students*" they also commented on their increasing responsibility and duty as "*doctors in training*".

Male Student *-"I think there's a definite kind of unity to medical students, there's a definite, kind of, association that comes along with being a medical student, and in one respect, yeah we are students, but in another, in another respect we've got a lot of responsibility and I think that's one of the main things that comes along with being a medical student. FG3 P1*

This perceived role and its associated professional identity epitomizes the issues that interviewees described in coming to terms with being both university students and student-doctors. Medical students see themselves more as students at the beginning of their degree but as their clinical exposure and responsibility increases their professional identity becomes more prominent.

Male Student *– When you are just in lectures like any other student doing any other degree for the first two years, it's not, it's hard to explain, you feel like a medical student, like, you do feel separate from everyone else but you don't feel like part of the medical profession you are going in to necessarily until you actually get proper clinical experience. FG1 P3*

As this interviewee further explains:

So within the general society there's that different notion and that different reference to them (medical students). And, because the work involves more than just your average pen and paper work, there's the professional aspect of the work. So you will see a medical student wearing, being suited up, and they will be at the hospital wards. So there is that greater respect and there is that greater sense of responsibility to your roles. FG2 P2

These comments remind us of Becker's caution that medical students will think and act like students because they are most concerned with dealing with current matters that determine their success and also are constrained because he feels their role lacks any real responsibility or authenticity of a doctor's role. Issues pertaining to the transition from a student to a professional identity were discussed within the focus groups and the tensions sometimes generated within individual students warrant further exploration.

Male Student – *Third year you sort of realise that the drinking culture that you had in first and second year isn't compatible with clinical medicine. You can't just sack random days off because in clinics you will get to see patients come in and then you, change because you realise that you are not working to pass exams you are passing because patients depend on you to know your stuff and colleagues depend on you to know your stuff, and it's, it's er, a level required of you by your peers that you have to meet. FG1 P3*

This interviewee's comment highlights several issues related to his developing identity. He describes a perceived boundary between theoretical learning associated with the earlier curriculum which is usually based at the medical school and clinical learning which involves being part of a medical team and meeting patients in clinical settings. He articulates his realisation that passing examinations are only a means to ensuring that his knowledge is sufficient to work alongside medical colleagues in caring for patients. He

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latterly acknowledges that he feels accountable to his peers, a perspective that contrasts with Becker's students' perspectives that are more exam focused.

Several interviewees discussed the value of their third year of clinical studies, which is their first major clinical exposure, in facilitating their changed or more accurately termed evolving perceived identity from student to one of professional. The processes underpinning this evolution in perceived self-identity require further exploration. In part some of the issues associated with developing a professional identity are concerned with medical student socialisation but the value of clinical exposure and participating in authentic clinical activities is yet to be explored and discussed.

Medical Student Socialisation

Some interviewees described their initial experiences of medical school as difficult and traumatic whilst some found coming to medical school liberating. One interviewee who had previously studied for another degree elsewhere described the progression of medical students he had observed through medical school as a journey and in doing so highlighted some of the issues that may be pertinent to medical student socialisation:

Male Student *– No-one was going through quite the same journey as a medical student does in general. It was because, I think, the course is different, it's longer. I think they sort of just identified, I don't know, maybe*

better with each other because they were all going through, sort of, the same thing. FG3 P2

This next section therefore explores the kinds of "*things*" that interviewees told me that medical students feel they go through whilst on their journey from student to doctor. Interviewees described what it was like for them when they first entered medical school and the activities and interactions with each other that they thought influenced their process of bonding with each other. Interviewees emphasised how vital they felt this process of bonding was in helping them cope with both academic and social responsibilities they described that accompany being a medical student. How these issues of friendship and commonality are influential in creating a pervasive medical student culture are expanded upon during the individual student interviews, as well as any effects of not experiencing this commonality, and therefore not fully engaging in a medical student culture. Interviewees further described how the processes involved in student socialisation begin to fade in importance as students more fully accept the responsibilities of being a doctor and take on the medical profession's values. Hence interviewees described elements of their own professional development and how they feel their journey ends when they are ready to practice.

At the beginning some interviewees found acclimatising to medical school difficult:

Female Student – I think the whole experience of university was far too overwhelming for me to actually absorb anything and by the time I got to second year I had kind of got to grips with that fact, and kind of just started again, start from scratch. *FG3 P14*

It is not clear which students struggle on coming to medical school and further exploration of whether non-traditional students find becoming a medical student more difficult is of interest. One interviewee typically articulated how medical students tend to befriend students who are similar to themselves, how this may influence their behaviour, and as I will go on to argue also their learning:

Male Student – I think the people, who you are with play a big role in defining who you are. There's two aspects to it, there's the aspect that firstly you would, kind of incline towards people who are similar to you in the first place, and the second aspect is by being in this little mini culture within the greater medical culture you also develop habits. So for instance, if you're in group of people who work really hard, say two months before the exam they start talking about revision, oh, revision is not going good, so even if you are, in quotation marks, a lazy person who doesn't start working until two weeks before the exam they will make you think, I'd better start working, so that's really really important, for motivation, for support, for studying together. *FG2 P5*

Interviewees described issues concerning achieving success with their studies; mutual support and comparing each other's progress, Interviewees considered the support they gained from their personal network of medical student friends important in terms of motivation, providing resources and someone to practise with:

Facilitator – So what benefits, if someone could summarise for me, what benefits does making friends with other medical students actually give you?

Male Student – It increases your motivation, doing anything by yourself and then doing it in a group there are other people with you, so it is better so it increases motivation, I think it's really significant, if you look at it from an academic point of view, it's really significant when it comes to exam time because any problems you have you can refer on to someone else, erm, within a group of friends there are the high achievers so as and when needed you use their study materials and when it comes to practicing clinical skills or practical skills you do that together. So there is that little community or little network of friends who study together so it increases motivation, offers platforms for study, materials sharing and also working together for clinical skills.FG2 P14

However interviewees also described a process of "*benchmarking*" or seeing

how they measured up to each other in terms of their academic progress.

Male Student –maybe just kind of trying to see where you fit in with everyone else, er, does help to kind of, help you understand what the medical school wants from you, what's going to come up in the exams, and a lot of the reason I think I've been able to get through medical school is not the lectures and stuff it's because of the students around me, it's because of my class. FG1 p 14

Becker discussed at length how medical students developed situational

perspectives that helped students prioritise what and how to learn. Becker's

students realised quickly that they couldn't cope with learning everything they

came across and decided amongst themselves what they thought would be

assessed. They then moderated their ideas depending on their exam

performance. Students from the focus groups described very similar ideas.

Medical students seek each others' opinion about what to learn, how to go

about it and also compare their performance with each other. This raises

issues concerning how those students who do not "*fit in*", those students who, for reasons which require exploration, find it less easy to socialise into the medical student culture cope with the academic demand that being a medical student brings. These students may find it difficult to judge what and how much to learn as they do not have such a supportive medical student group as this interviewee elaborates:

Male Student – *So, I would be a finalist now but instead I'm doing fourth year. And, as I said, I felt completely supported with my group of friends and with basically the year group as a whole. There was so many, kind of, connections between everyone. I know you know, there were notes being passed around, there was people offering their time to, kind of, help others like learn stuff, and it just, it went round and round and I loved it, like, I thought that this was really helpful people were helping everyone out, and it was great. But I've dropped down in to this year and its suddenly felt like a vacuum. FG1 p16*

Interviewees also felt that the support they received from each other was important in non-academic ways as the following comment illustrates:

Male Student –*Before medical school I used to see relatives quite often but because you don't have time cos you are so engrossed in university life, like, your friends actually become your relatives so to speak, and you see them. They sort of become your family, like whenever you have a problem you speak to them and when you, you know, I think for the duration of this medical school they take, er, I mean for like Asian cultures is like extended family is quite important so they probably take the role of the extended family during that time. For some people, they obviously live with their friends so then, they take an even in a greater role and so I think it's important to, you know, have a good friendship network because they provide so much support in the same way that a family can.FG2 P13*

Both physical and social isolation from non-medical activities and people interviewees raised as issues that may increase the intensity and influence of the relationships medical students form with each other. This isolation Becker likened to a form of "institutionalisation" and he highlighted the possible significant impact such isolation has upon medical student socialisation. If forming strong supportive relationships is so important for students then any negative consequences for medical student learning where these relationships are absent is an issue for further exploration. Interviewees described their social activities that facilitated their bonding process and emphasised the importance of developing a social network. Whilst interviewees mostly described an atmosphere of congeniality where students tend to help and support each other there were discussions about times when students, and occasionally certain students, who were more interested in competing with each other for learning resources and also recognition.

Male Student -*I find that the people that I get along with best are the people who, aren't looking to almost do you over in some respects. The people who see it as all an experience together, it's not a one horse race for them, you know, for that person to win essentially because, you know, it's like we said at the beginning, we're all in this, we've all got this sort of identity together and you know, a lot of the student body relate to it, yet you get to situations where, you know, if somebody can go one up on you then they will, you know, despite the fact that you are going through this experience together*

Female student -*Yeah, there is an element of competition almost among some students. I think the majority of students kind of fall in the middle, it's almost like a bell shaped distribution but most students I find, they, you want to help each other FG3 P9*

The earlier interviewee comments have indicated how medical students value the academic and social support they receive from other medical students who share common experiences and how central these relationships are to generating and maintaining a medical student culture. However the last two comments indicate that there may be other aspects to medical student culture that specifically relate to the professional development of medical students particularly within a clinical environment that warrant further exploration.

Medical Student Professional Development

We know from Becker's work that the perspectives of his medical students on their final maturation before graduation changed. They lost their cynicism and regained their enthusiasm for excellence in patient care. Similarly the more experienced students that I interviewed during the focus groups outlined how their sometimes conflicting perspectives on being a medical student but not yet a doctor fade with undertaking increasing clinical responsibility. However what remains unexplored is how medical students learn how to act on the wards, talk with patients and take on the persona of a doctor. The socialisation theories as previously outlined in Chapter 2 do not explain any active processes that underpin the professional development of medical students and whether these processes may differ for non-traditional students. Luke's concept of the development of a medical habitus (Chapter 3) sheds light on how the professional development of medical students may be

viewed and by using this concept several further issues concerning how medical students prepare to become doctors can be explored.

Interviewees described the closer relationship with the medical team and the comfortableness within the medical arena before graduating:

Female student – *In the third year you are so kind of, you are like a rabbit caught in the headlights you are, kind of, quite frightened you are still finding your feet and you're kind of getting to know everything in the hospital. And you move around quite lot and things are different in different hospitals and you pick up, try to kind of find your feet in every hospital. By fourth year you're kind of trying to make the transition between kind of being passive to taking a more active role in the team, but come final year it's completely different, it's like, you are a member of the team, you are a valued member of the team.*

Male student – *And you see it on the wards, absolutely, certainly because, fifth years, they know what, they know like how things work, they know they have been there, erm, they have seen it all so they, you can see the difference between the nervous third year and the confident fifth year who is, you know, writing in the notes and you are just standing there and hoping you don't get asked a question by a consultant.FG3 P4*

These interviewees described a gradual process of professional development as they progressed through their course from "*finding your feet*" during your first clinical year, beginning to participate in clinical activities to feeling a "*valued member of the clinical team*" by the end of their training. What are the underpinning processes that facilitate "*nervous 3rd year*" students developing into "*confident 5th year*" medical students? Reviewing the processes and structures discussed earlier in Chapter 3 that Luke highlights as being important in the professional development of junior doctors may similarly help

me to examine whether the same processes are involved in the professional development of medical students. Interviewees emphasise the importance of the introduction of a significant quantity of clinical exposure in third year and also the increasing confidence gained by successfully making the transition from observing clinical medicine to being an active member of a medical team. These comments encourage us to examine further how students by being in contact with patients and medical staff and studying on the hospital wards and other clinical settings learn what is required for them to practice. The following interviewee contrasts the priorities of less experienced medical students still imbued in student culture with clinical medical students who she feels have the responsibility to develop the attitudes, values and behaviours that demonstrate medical professionalism:

Female student – *Well, I suppose as any student you have the responsibility of taking on your own learning and, you know, passing exams, revising, all those kinds of things that go along with just being a student studying anything. But then you have the added responsibility of clinical work, like you say, and especially here, we are exposed it to quite early. We have the responsibility of, kind of, quickly picking up, kind of, attitudes and behaviours that we are supposed, to kind of, carry on through medical school and I think that's different to a lot of, erm, other subjects because you're not, it's not so vocational. FG3 P2*

Luke's ideas concerning how junior doctors develop a medical habitus may be helpful in further exploring how medical students "*quickly pick up*" the traits required of clinical medical students during the individual interviews.

In describing their clinical environment interviewees outlined their views on the relationships between medical staff and students. It became apparent that clinically experienced students understood that there was a formality and structure to these relationships. Interviewees sometimes called this structure the "medical hierarchy" and described issues concerning how such a structure may foster the development of attitudes and behaviours within medical students that sustain a top-down power balance within these relationships.

Male Student – I think there's a certain way of behaving in a hospital which makes you feel more like, erm, a doctor as opposed to a student…FG1 P3

Facilitator – Well, tell me a little bit more about the certain way of behaving in a hospital.

Male Student – there's a certain hierarchy in every medical team, erm, and it's always, the way that I find, it's always like, erm, consultant basically at the top, then the senior registrar and so on and it's kind of, I guess it's a tradition with medicine, and then you've got the medical students at the bottom FG1 P4

A further interviewee was asked to elaborate on what it was like to be on the wards as a clinical student just before graduation:

Facilitator – How do you achieve those things that you were talking about, like sort of working within a team or understanding what it's like to be on the wards?

Female student - I think just experience really, being on the wards, understanding, talking to people, seeing how relationships work within a hospital. You do know your place when you are there you know your relationship with other people, you know who is at the top and, you know who

is not quite at the top and you, you kind of quickly learn, you observe and you pick up how people interact with people and you kind of pick up. FG3 P3

The issues that these interviewees raise about how to act on the wards and the necessity of developing the appropriate attitudes goes beyond learning about the science of medicine or just simply facts. These interviewees are beginning to describe aspects of their professional development that they think are important in order for them to practice. Luke's conceptualisation of the medical habitus based on Bourdieu's thinking tools, field, capital and habitus provides me with a structure to further explore these issues during the individual interviews.

Whilst theories of socialisation and professional development are very helpful in elucidating how medical students take on and develop the appropriate attitudes and behaviours in order to practice how students also learn the theoretical and practical knowledge in becoming doctors is explored next.

Issues underlying medical students' learning

The focus groups gave medical student interviewees the opportunities to discuss their studies, what they felt they needed to learn and what they thought is most important. This included discussing their motivation to learn, the importance of clinical exposure and what this means, their relationships with the medical faculty, and also the reasons why sometimes students fail to learn. This section specifically explores what and how medical students learn

and raises issues which are pertinent to the sociocultural learning theories previously introduced in Chapter 4.

Becoming Knowledgeable through Clinical Experience

Interviewees were asked what they thought they needed to know to become doctors and gave colourful descriptions of the breadth, depth and nature of the knowledge they thought was required. The importance and centrality of clinical exposure was a key theme both in motivating students to learn but also in providing the appropriate resources for students to effectively learn. Entering the significantly clinical component of the course literally brought the medical knowledge alive. Interviewees expressed the value of opportunities to see and touch real pathology that they had read about in books and heard discussed in lectures. Entering the clinical arena reinforced the professional nature of students' learning. How students understand this and go on to participate within a clinical setting, requires further examination. Interviewees highlighted the significance of taking on increasing patient responsibility and forming professional relationships within clinical teams. This raises issues concerning the requirement for students to learn tacit and practical as well as theoretical knowledge to practice, and the value of sociocultural models of learning which can facilitate a deeper understanding of this balance.

The volume and intensity of undergraduate medical programmes have been well documented. This was corroborated by the comments made by

interviewees who described both the amount and diversity of the knowledge they felt was required:

Male Student – *It feels like you need to know everything sometimes. Sometimes you get overwhelmed with the amount of information and the variety of information you are expected to know. So, you are expected to know communication skills, clinical skills, psycho-social understanding of communities and cultural backgrounds as well as the science, and all the different types of sciences you have to know.*

Male Student – *So, sometimes it can feel like you have to know a lot, and the quantity, the sheer quantity of everything can be really overwhelming when you come in to the first year. And it can seem really daunting. Well, it felt like that to me, I don't know how you guys felt, yeah. FG2 P8*

The on-going accumulation of their knowledge was also an anxiety to them:

Male Student – *And, you can never learn enough, so you can learn things but you've never learnt it well enough so it's continuous. So it's different from other studies and quite a pressure, you like, you have to consistently be learning and revising. FG2 P8*

Interviewees describe concerns about both the volume and diversity of what they are required to know. Interestingly interviewees did not appear to be challenged by how difficult the work may be. Earlier discussion has outlined the development of student perspectives that facilitate medical students in deciding how to approach their studies and cope with high workloads. Similarly, interviewees talked about judging how much work to do by comparing themselves with their peers and what content they thought might be assessed. In addition interviewees described how their learning can be guided by formal teaching. Interviewees found the didactic components of

their course alongside log books, tutors and other students helpful in deciding

what and how much to learn.

Female Student -Cos you know that if somebody gets out, you know, that big cell biology book in your session and goes, pretty much, my lecture is this chapter, you think oh my god, or if you think that the level they are pitching at is more crash course then you know what book to use and the resources they give and the yardstick that they set is often more useful than the lecture.FG2 P11

Interviewees highlighted the difficulties in choosing to study what they thought

would be examined and what they found clinically interesting and useful.

Female Student -The time, the time aspect. You have a really big set of objectives to do in the third year, it's basically the whole of general medicine and the whole of surgery and you are doing those objectives and you know that your exam is going to be based on that book and you are not receiving much teaching.

Male Student -There's very minimal teaching and the practical aspect of it is given so much emphasis during the year but at the end of the day that you know the reward is going to come from the objectives, you are going to be rewarded according to how well you do and how well you have studied for the objectives which are mostly book based and not clinical based FG2 P17.

These comments raise issues relating to how students prioritise what they

learn and cope with conflicting pressures between exams and clinical

learning. Interviewees described how they may strategically decide how to

maximise their examination preparation but then find that their knowledge is

deficient later on as this interviewee explains:

Female Student -*You end up working towards the exams and you'd think, right I understand that, I understand that, I understand that, but I don't understand that, like, the ECG, or whatever, but it's only worth five marks so there's no point spending a week trying to learn the ECG when I can learn all this other stuff and pass the exam. So now when I'm on the wards I'm finding, OK, I do actually need to know that stuff and I've got to go back and look at it now. I found it's too kind of, I mean, you only get one shot at everything but it's easy to kind of compensate for the gaps in your knowledge and you don't really have to get a kind of broad understanding of things, that's what I've found. FG1 p7/8*

Fortunately clinical exposure and beginning to feel part of a clinical team with responsibilities for patient care influences what students decide to learn and what students think they will be assessed on.

Male Student – *The thing that hit me when I went to the medical wards was that, things I avoided the previous two years, you can't avoid because even if it doesn't come up in the exam, it does come up on the wards.FG2 P8*

Interviewees told me how they felt that clinical experience really is the crux of their learning and underpins their entire knowledge development once they enter the clinical setting. Interviewees described how clinical experience provides the context for learning medical science and facilitated integrating their theoretical and practical knowledge. Sociocultural learning models that highlight the value of student participation are useful in exploring these issues further in the individual interviews. How medical students engage with patients and medical staff provide opportunities to explore how such interactions and relationships affect their learning. Discussing with interviewees the value of their clinical experiences in preparing them to

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practice as doctors illustrated how important they thought taking responsibility

for patients is in motivating them to learn.

Female Student – *That's the worst fear though isn't it.*

Facilitator – *Yeah?*

Female Student – *That's when it matters what you know.*

Male Student – *It really, it kind of reminds me why I need to work cos it's a pretty big responsibility and I may be a first year, but…..*

Facilitator – *The responsibility is to yourself or to patients?*

Male Student – *To patients.*

Facilitator – *To patients.*

Male Student - *Yeah. FG1 P32*

The above excerpt from one of the focus groups, where 3 interviewees and a

qualified doctor (facilitator) share the same sentiment, illustrates the

importance of students feeling confident in their medical knowledge as they

begin to realise that patient safety is at stake.

Medical Relationships

Interviewees discussed what they perceived as both positive and negative

aspects of their relationships with the medical faculty. One interviewee aptly

named what he perceived as the student-faculty interaction as "*tough love

teaching*"

Male Student – *students are there to be grilled, they are there to be, er, put on the spot and tested and it's sort of like tough love teaching. You can't behave in a hospital in the same way you'd behave in a lecture theatre because you will get called on it and you will get put on the spot for it, and all of this is in front of patients at the same time, so, medical students have to reach that level where they are mature enough to know how they are supposed to behave in front of patients, FG1 p.4*

"*Tough love teaching*" implies both harshness and caring at the same time.

Interviewees described how they perceived their tutors' expectations of them:

Male Student – *Certainly for the first two years, as we said earlier, you know, marks on a piece of paper don't mean anything, but when people are looking at you, consultants, registrars, and their eyebrows are raised because they have asked you a question and you're baffled, you're a third year now, come on what are you doing? I mean, that is the major driving force.*

Female Student – *Yeah. You're like, I just want to go home and read up on that.*

Male Student – *You just want to be told well done at the end of one of the days rather than one of those glares that seems to look straight through you oh, **** what have I done!*

Male Student – *You've got the look of disappointment. FG1 p32/3*

Interviewees described experiences such as the examples above where they felt they had let their tutors down and the effect that this had on them both emotionally and motivationally. Further elaboration and description of medical students' learning within clinical settings that highlights the role relationships between the faculty and medical students take is required. Issues of how formal clinical teaching occurs, what and how students learn informally and the effect of students participating in the work of the clinical team were issues that interviewees also raised that need examining further in the individual

interviews. Exploring whether some students struggle more with learning of this nature and in particular whether non-traditional students have any specific difficulties is of interest.

Why some Medical Students Struggle

Interviewees discussed reasons why they think they struggled with their studies at times. One of the commonest reasons highlighted during the earlier part of the course was not getting the right balance between study and extra-curricular activities.

Male Student – *They (faculty) basically give you enough rope to hang yourself with, and a lot of people do. The people I know in our year who failed, they joined every sports team, they joined hockey, football, basketball, drama, skiing, you know. So they didn't know where to draw the line necessarily, they thought, oh, I'll do everything, and then realised actually they were juggling too many balls. FG1 p23*

Interviewees described how they sometimes struggled with the "foreignness" of either the material they are asked to learn or the learning environment in which they have been placed, as these two interviewees explain below:

Female Student – *But then I remember like, in learning landscape (anatomy dissection room) they did actually have prosections but it's kind of, you, when you look at it you just think 'I don't even know what I'm looking at or I don't even know where to start or how to relate the structures together.' And it's kind of like, you know with PBLs you learn and you develop that problem solving skill and with anatomy it's kind of, you don't know how to learn it, so, how should I even learn it. FG1 p10*

Male Student – *But I feel that in my third year, I just did not like my third in the sense that I just felt like, to be honest in the first part of my third year I felt*

like I was a patient in the hospital. I didn't know what I was doing, what I needed to get done. FG2 P15

Issues raised here in both non-clinical and clinical settings are concerned with students struggling with learning associated with knowledge of a specialised nature and a perceived lack of guidance of how to go about it. Some interviewees described how they found coping with the breadth and depth of the knowledge difficult, and hence struggled in developing an appropriate strategy that would ensure they knew sufficient for both examinations and for their clinical studies. Some interviewees commentated that starting the clinical component of the course was helpful in seeing the relevance and facilitating motivation to learn.

Female Student – *I actually found medicine easier as I went up the years…..*

Facilitator – *Mmm.*

Female Student – *Because, erm, I had to motivate myself and in first year, I was a bit more with it in second year, and in third year and fourth year, just everyday being exposed to a clinical environment it was as though I'd just come home and I want to be, cos, it's going to be us tomorrow on the ward. Whereas first year you can kind of drift in the background and then the exams come and oh my god I was trying to read up things but it never really happened. Whereas all my friends found it the other way round, they were quite on top of things in first and second year they really were.*

Male Student – *Yeah, that's interesting.*

Female Student - *Yeah, maybe I am just more of a clinical person. FG1 P11*

This interviewee describes how motivating she found the clinical context and how difficult she found learning independent of a clinical context compared to

her friends. This scenario illustrates the variability of student learning and the potential value of appropriate participation in the field of clinical learning which requires further exploration.

Summary and questions for the individual interviews

The data from the focus groups facilitates our understanding of the views of interviewees concerning which medical student characteristics are typical and which kinds of students may not "fit in". These issues raise questions concerning which characteristics describe non-traditional medical students most appropriately and whether coming from a lower socio-economic background is a critical issue for medical student learning. This is essential if we are to further examine the academic experiences of so defined non-traditional medical students.

How the processes of medical student socialisation are associated with a medical student culture is introduced during the focus groups. Interviewees described how medical students identify with each other, develop supportive friendships and form social groups that share similar values. How medical students do this requires further exploration alongside further exploring any consequences of not effectively socialising on student learning. How medical students develop a professional identity that is compatible with being a doctor similarly requires further examination. The role clinical exposure plays in medical students' professional identity formation and as a core feature of their

learning requires attention. Further examination of how students participate in clinical settings and go on to develop what can be termed a medical habitus is crucial if we are to fully understand how some students may struggle in their professional development. Further questions concerning the relationships between medical students from non-traditional backgrounds, their participation in clinical activities and possible struggle to develop a medical habitus and any effect this may have on their learning are pertinent for the next stage of data analysis.

The subsequent chapter examines medical student perspectives on their socialisation, development of a student culture and professional identity, themes initially explored during the focus groups, which are further elaborated upon during the individual interviews in light of an enhanced understanding of how non-traditional medical students may be perceived. Furthermore students' engagement with the medical culture, their professional development and their participation in the field of clinical learning are explored from a perspective that illuminates any differences for students coming from such a defined non-traditional background.

Chapter 8

Becoming a doctor

-exploring the themes from the individual interviews

Introduction

My aim for the individual interviews, as explained in Chapter 6, p. 201, was to follow up on the questions and issues raised during the focus group discussions. Individual interviews provided opportunities to more fully explore student perspectives in depth by fully engaging with issues as individual students raised them. Sometimes these issues were of a sensitive nature and particularly personally related to some students and so individual interviews were a more appropriate method for gathering such data.

Themes derived from the analysis of the individual interviews outlined the characteristics students think are associated with non-traditional medical students who come from a lower socio-economic background. A better understanding of the characteristics of non-traditional medical students and how these students are perceived by their peers was essential in further examining the academic experiences of these identified students from their own personal perspectives and those of their peers. Further themes concerning medical student perspectives on their socialisation, development of a student culture and professional identity which were initially explored

during the focus groups are further developed in light of an enhanced understanding of how non-traditional medical students may be perceived. Themes describing students' engagement with the medical culture, their professional development and their academic learning processes are explored from a perspective that illuminates any differences for students coming from such a defined non-traditional background.

This chapter discusses the issues and processes described by interviewees from the individual interviews that reflect the three main overarching themes of who becomes a doctor, the developmental processes underpinning becoming a doctor and the issues underlying medical students' learning which were introduced and developed during the discussion of the focus group data analysis. Similar to the focus groups discussion criteria for selection of interviewee quotations are that the chosen quotes ensure a good representation of interviewee issues, as depicted by the themes, sub-themes and variables displayed by the data display charts in the appendices, which also reflect a consistency with the stages of the data analysis (Fig. 2 p. 209).

The main themes derived from the individual interviews are to be discussed under the following headings:

- ❑ Issues pertaining to non-traditional medical students

- ❑ Socialisation, medical student culture and developing a professional identity

- ❑ Students' engagement with the medical culture
     - using Luke's Bourdieuian conceptualisation of habitus, field and capital

- ❑ Processes underpinning medical students' learning

Issues pertaining to non-traditional medical students

Introduction

Several issues were raised during the focus groups that identified the importance of "fitting in" with the medical student culture. Similarly the possible consequences of not "fitting in" on medical student relationships with each other and any effect on their learning were also discussed. Data from the focus groups indicated that interviewees recognised that certain people typically became medical students. The individual interviews went on to shed

further light on these issues and specifically who interviewees perceived traditionally becomes a medical student and which medical students they thought could be described as non-traditional. Themes associated with being a traditional medical student were being seen as "middle class" or coming from a higher socio-economic group, having a doctor as a family member, and being ambitious, highly motivated and academic. Conversely non-traditional medical students were perceived by interviewees to come from "working class" or lower socio-economic groups, did not have doctors in the family, and personally worked hard to achieve their goals. Some interviewees discussed ethnicity and culture in association with these issues whilst gender was rarely mentioned.

Descriptors of Socio-economic Background

Interviewees perceived that medical students tend to come from privileged backgrounds and good schools as highlighted by the two interviewees below:

Interviewee: I would say most white people in medical school, [**Interviewer**: mm] are likely to be middle or upper class because, there's, I don't see any representation of white working class people in medical schools (int 6 p.5)

Interviewee: I was surprised when I came to medical school I didn't expect it to be as common as especially a lot of people you won't know they're from like private school background or anything, [**Interviewer**: yeah] I think, because most people are from a state school background you'd assume, [**Interviewer**: yeah] the balance would be, [**Interviewer**: yeah] kind of fairly representative but a lot of people they won't mention it, but you'll find out if you ask them, [**Interviewer**: yeah] that they went to private school (int 6 p.1)

Interviewer:	So in terms of so- you said about social groupings, [**Interviewee**: yeah] it doesn't matter whether you're middle class or working class because you say you mix with all sorts of different groups
Interviewee:	well, I don't, I don't think that comes into it because I think pretty much everyone's middle class, so I don't think you can kind of split the, the social groups by class because [**Interviewer**: yeah] everyone is middle class
Interviewer:	everyone?
Interviewee:	yeah
Interviewer:	so so the exception is to be working class?
Interviewee:	yeah, certainly (int 1 p.13)

However interviewees could identify medical students either themselves or students they knew who were not from higher socio-economic groups and good schools. Interviewees described these medical students as coming from "working class" backgrounds characterised by family homes in poorer neighbourhoods, coming from state schools, whose parents had typically "working class" jobs, like the interviewee comments below:

Interviewer:	Okay and just to make sure I've got it right, how are they (*working class students*) like you, what is it that you're defining as being like you?
Interviewee:	eh well they're from, most about fifty percent are from Newham, [**Interviewer**: mm] or Tower Hamlets (*poor neighbourhoods*), I know a few that lived close to me, [**Interviewer**: mm] who went to the college with me that's how I know them, [**Interviewer**: mhm]. Some have parents who will have similar jobs as mine, [**Interviewer**: mhm] if that makes sense, like my dad's a cab driver, [**Interviewer**: yeah] but ehm some, one of my other friends dad works in a market, [**Interviewer**: mhm] so and things like that, [**Interviewer**: mm] but I don't think we kind of introduced ourselves with our parents occupation, ((brief laugh)) (int 2 p.6)

Interviewees were aware that a minority of medical students from their cohort fitted some of the socio-demographic characteristics typically associated with widening participation criteria and could be described as coming from a non-traditional socio-economic background. From the comments it can be sensed that these interviewees recognised that these non-traditional medical students are a minority and their backgrounds are not seen as normative. Hence interviewees discussed examples of how some students they perceived as coming from such a non-traditional background may have difficulty accommodating some aspects of medical student culture as their social norms may be at variance, as this interviewee illustrates:

Interviewer: Okay, I mean are there, any other examples where you say you need to fit in, so where you've struggled to fit in?

Interviewee: yeah, I suppose just eating out at lunchtime, [**Interviewer**: yeah] in between lectures [**Interviewer**: yeah] something which eh I wouldn't be used to spending money every day, a couple of times a day, [**Interviewer**: yeah] on myself just to eat out, [**Interviewer**: yeah] that's something which is completely the norm, [**Interviewer**: mm] here [**Interviewer**: mm] so little things like that.

Interviewer: mm, so if you haven't got the money to do it, [**Interviewee**: yeah] does that mean to say you don't do it and therefore you haven't had that time spent with friends

Interviewee: well eh personally what I done [**Interviewer**: yeah] was just gone and increased my overdraft, [**Interviewer**: oh okay ((brief laugh))] done it that way, [**Interviewer**: yeah] I try not to, like I keep up with the people, with my friends [**Interviewer**: mm] in terms of those, so like no one would be able to tell that [**Interviewer**: mm] I'm from a poor background [**Interviewer**: mm] ehm while you know, and I've had jobs and things like that so [**Interviewer**: which has helped] there's always been a source of income (int 3 p.8)

This interviewee illustrates how medical students from non-traditional backgrounds with financial constraints may feel pressurised into living comparable lifestyles or joining in with activities associated with medical student culture that are not part of their usual experience. By conforming to common medical student patterns of activities, such as frequent eating out, this interviewee believes that other students will not be able to recognise him as different.

Issues of speech and behaviours

One of the issues most frequently raised by interviewees was that some non-traditional medical students can be identified by their speech.

Interviewee: I think it is my accent, I think there's sort of an understanding that because I talk the way I do I obviously come from east London, [**Interviewer**: yeah] and then there's an understanding that someone who comes from east London ehm wouldn't get into medical school because east London is a working class area, [**Interviewer**: yeah] ehm so yeah I think that's basically it as soon as I open my mouth people say 'how come you're a medical student' [**Interviewer**: yeah] ((brief laugh)) you know ehm it doesn't take a lot (int 1 p.13)

This interviewee highlights how medical students are perceived by each other, and possibly also society, in association with certain cultural norms, such as speaking well, with being a doctor. The normative expectation is that medical students do not come from working class areas.

Interviewees also identified differences between some medical students in how they act and their areas of interest that might distinguish students from non-traditional socio-economic backgrounds.

Interviewee: You can tell, by the language, by the way they talk, [**Interviewer**: yeah] by the way they act, [**Interviewer**: yeah] it's you can tell straight away, I don't know if I can explain by the accent as well, [**Interviewer**: yeah] yeah it's but not always accent but by the way they act and by what they talk about. (int 2 p.6/7)

This interviewee further expanded on what he meant and he described how non-traditional medical students from certain backgrounds when in conversation with their friends would use language and mannerisms that would be inappropriate elsewhere.

Interviewee: it's just certain things you're accustomed to some things you'd expect from someone in your area, [**Interviewer**: yeah] so I don't know, like when you joke about you just (barge, like just barge) someone or just hit someone with your elbow or something, just laughing like that, [**Interviewer**: right, yeah] or hitting back, [**Interviewer**: yeah] it's just it's friendly it's not violent.

Interviewer: so you're talking about mannerisms?

Interviewee: yeah

Interviewer: yeah so a bit jokey it's not just banter but it's physical kind of contact with your mates as well which is which is common from where you come from?

Interviewee: and language as well

Interviewer: and language too

Interviewee: not particularly good language, as in like

Interviewer: swearing or

Interviewee: yeah, but they it's as if a joke, they do it as a joke, no one takes it seriously, [**Interviewer**: okay] but I know for a fact it happens a lot everywhere ((brief laugh)) in my area, I hear of I hear young kids swear at each other all the time, [**Interviewer**: yeah] but it's not as if offensive, [**Interviewer**: mm] it's just part of their language (int 2 p.7)

This interviewee recounted that some medical students would talk and behave very differently depending on whether they were with friends or in a more formal setting. However interviewees observed that despite this moderation of their behaviour the experiences of non-traditional students may not be comparable to those of their traditional peers.

Interviewer: On day to day interaction with staff on the wards, you think generally speaking things are equal and there are no particular, stand out bits that you would be alarmed about or?

Interviewee: no I would say it's, it's not equal, I think probably interaction is better with people who have gone to, the traditional medical students [**Interviewer**: right] and not as good for the non traditional medical students

Interviewer: but, but why?

Interviewee: its possibly just because I know I always go back to the way people speak but it's important because that's the first thing, that's one of the first things you notice about people the way they speak, [**Interviewer**: yeah yeah] so, I think the way people speak and kind of discussions they have with people, and obviously the doctors, they're more likely to be from a traditional background as well. (int 6, p.23)

This interviewee identifies that non-traditional students may be identified by how they speak and also what they speak about as they may not have so much in common with doctors who are perceived to come more frequently from a traditional background. Later data illustrates what implications this lack of commonality may have on student learning.

Interviewees further distinguished between medical students who come from high socio-economic traditional backgrounds and medical students coming from lower socio-economic non-traditional backgrounds by pointing out that whilst most traditional students were thought of as hard working and ambitious their non-traditional peers were seen as harder working and prioritised their academic studies.

Interviewee: I think that people who end up, who are, who are from, people who are from these backgrounds, [**Interviewer**: mm] are less likely to get in first time round and when they do get in they work a lot harder, people who are from underprivileged backgrounds, [**Interviewer**: mm] I think in my opinion they work a lot harder in terms of their lectures and exams, [**Interviewer**: sure, yeah] and people who fail a lot more are from, are from backgrounds who are not underprivileged, [**Interviewer**: mm] and people who tend to take work less seriously (int 2 p.17)

Interviewer: But then there would be also students that we have talked about who have no money and you mentioned perhaps the way they speak, yes. Are there any other things about them which, not necessarily make them stand out in a negative way, but just make them stand out.

Interviewee: I find that to be honest people that come from, say if you were to class them as the non-traditional, I find that some of them erm work harder than we do erm like they really care about their work a lot, a lot, a lot, like it is their main priority. Like because if they are the first one in the family to go to a really great job kind of thing and so it is almost like they are really relying on them, so their determination is that to kind of support their family I feel. You can see that in their drive and how much they pay attention and focus and know (int 14 p.8).

Non-traditional medical students are perceived to prioritise their academic work and focus on their studies because they are well motivated as they recognise the opportunities that being a medical student and going on to qualify as a doctor may bring. Interviewees were aware that traditional

medical students frequently had family members, often a parent and/or sibling, who were doctors whereas non-traditional students tended to not have any social contact with doctors before coming to medical school.

Interviewee:	I would say typically a medical student comes from a background where one or both parents are doctors, or perhaps a doctor and a nurse or that kind of background.
Interviewer:	Yes.
Interviewee:	And perhaps they have got older siblings who are doctors or in the medical school at the moment and they perhaps come from a private school, very well educated, very well spoken (int 12 p.1)

Interviewees easily identify through conversation and friendship medical students who have family members who are doctors and who also commonly come from independent schools with all the privilege that this bestows.

Many of the issues and characteristics that interviewees used to distinguish between traditional and non-traditional medical students from lower socio-economic groups resonate with the concepts used by Luke in describing Bourdieu's conceptualisation of capital. Whether there are any significant differences for non-traditional medical students who possess relatively less capital than their more traditional peers in fitting in with a medical student culture, forming relationships with faculty, or subsequently learning within a clinical environment are of great interest and further examined in the subsequent sections.

Socialisation, medical student culture and developing a professional identity

Introduction

Earlier chapters have identified two perspectives on socialisation that assist medical students come to understand and become immersed in medical student culture: conformity to emerging professional expectations and ideas of student self-direction. How medical students develop common perspectives, form supportive relationships with each other, and cope with tensions generated by developing a professional role whilst remaining a student were issues raised during the focus groups.

Themes from the individual interviews explore in more depth what defines medical student culture and how by a process of socialisation medical students become members. How medical students form their friendships, the processes associated with establishing their social groups, and the issues involved in maintaining these social relationships are further explored during the individual interviews. What medical student culture means to students, how the relationships they develop contribute to their collective understandings, and the issues that these shared student perspectives present for how students may see themselves and also how and what they learn are explored.

During the focus groups issues raised concerning students' vocational motivation and the role of clinical experience appeared to ease the tensions created by being students with professional roles. How clinical exposure facilitates medical students developing a professional role and identity is further discussed. It is by developing a more comprehensive understanding of how students initially socialise into a medical student culture that furthers our understanding of how and which students may struggle to "fit in" with the medical culture and the possible consequences of this upon student learning.

Socialisation and the formation of social groups

Interviewees identified how they made their friends at medical school and how various social groups were formed. Many of the groups interviewees highlighted refer to choices students make concerning society memberships e.g. sports clubs and accommodation, or early medical school allocations to seminar groups, as these interviewees below explain:

Interviewee: So they'll make friends like that, people who do sports societies, what they do after the lectures end, [**Interviewer**: mm] whether they go out to eat or whether they go out, [**Interviewer**: mm] society stuff basically, [**Interviewer**: yeah] I think I think that kind of links people make together (int 2 p2)

Interviewer: Okay how did your friendship group get together?

Interviewee: Based on where we were put in halls cos in halls of residence in the beginning, [**Interviewer**: mhm] we were all put, all medics in one block of halls, [**Interviewer**: right] so yeah we just got together in that way. Our flat, our entire floor, are still friends we are still in the same friendship group so yeah it was where we were put we didn't actually go out of our way to find, [**Interviewer**: mhm] find each other (int 7, p.2)

Interviewer:	So tell me about how you made your friends
Interviewee:	ohh, that's a good question thinking back I think it was mostly first PBL group, [**Interviewer**: mhm] you meet people, and obviously your first PBL group is always quite strong because everyone's new and everyone's kind of going through together, I suppose it kind of hooks on who you meet first (int 6 p.4)

Processes underpinning medical student socialisation involve elements of personal choice and practical opportunity. Interviewees identify joining student societies where students will have in common similar interests alongside sharing student accommodation and study classes that provide opportunities for students to make friends with each other.

Interviewees were also aware of other student groups which may appear to lack any overt formality or purpose, as exhibited by the student societies, but also foster strong inter-personal ties between students. Interviewees identified such groups by students who frequently attend the medical student union activities (late-night eventers), or who can be identified by either a high ("grads") or low ("The Wastes") shared personal work ethic.

Interviewer:	What about the group who've got a high work ethic then? Have they got a name?
Interviewee:	the graduates ((laughs))
Interviewer:	the graduates ((laughs)) sure
Interviewee:	yeah there are some, there are obviously some graduates that I know of but they're not all like that, [**Interviewer**: mm] but yeah I don't think they have a particular name
Interviewer:	yeah and they tend to be quite

Interviewee:	oh yeah I mean for obvious reasons they've had their fun obviously they've been to university, have done a degree, [**Interviewer**: mm] they're not interested in going out a lot, [**Interviewer:** mm] they'll they have a high work ethic, a high drive, [**Interviewer**: okay, right] yeah and they tend to stick together
Interviewer:	do they?
Interviewee:	yeah. what am I trying to say, work ethic, some of the ones who have got more of, you know, more of a drive ehm will congregate together and I've seen them not only socialise together but they'll sit in the library together and work together and question each other , [**Interviewer**: yeah] but there are some people who are like, you know, who have formed a group of also based on work ethic, but who don't have much of a work ethic, [**Interviewer**: ((laughs))] and go out and socialise together
Interviewer:	mm, well, they are they called anything, what would they be known as?
Interviewee:	should I really say
Interviewer:	mm
Interviewee:	((laughs)) we call them the wastes
Interviewer:	the wastes, what w- a- s- t- e
Interviewee:	yeah wastes, wastes, they're called the wastes ((laughs))
Interviewee:	they call themselves the waste group, they know they are, they're the ones that sort of, fifty percent is fine, and party a lot, fifty, I'll just get fifty percent and revise the day before the exam, they're known as the wastes (int 7, p.7)

Whilst medical students may be comfortable initially making friends with students opportunistically this interviewee is aware of how students remain friends with students who share the same perspectives such as work ethic and other things in common with each other. She says for instance that the "graduates" congregate for both social and academic reasons and similarly the "wastes". How the formation of groups with such polarised attitudes to work may affect how students learn is examined later p. 311-12.

Interviewees perceived that the groups they belonged to and the friends they had made were often medical students who they could identify as coming from the same kind of background as them.

Interviewer: Yeah, okay and why do you think, I mean the Halls of Residence might have been the starting point but why have you stayed such good friends?

Interviewee: I think, maybe, erm, it's difficult, I think maybe we do share common backgrounds and common interests (int 10 p.10)

Interviewees voiced opinions about what these common backgrounds and interests that maintained their friendships and social groups might be. Past schooling, home area and sometimes what social class interviewees perceived they came from were identified as issues associated with a student's background. Issues relating to family, ethnicity and religion provided insight into what interviewees meant when they talked about a student's culture. Interviewees were aware of how they saw medical student groups being affected by students' ethnicity, religious practices and backgrounds:

Interviewee: In our year, [**Interviewer**: yeah] there's a lot of Asians, [**Interviewer**: yeah] and eh there has been a tendency I think for a lot of similar ethnicities to stick together, [**Interviewer**: mm] and I think a lot of that's due to the societies that are set up, there's a lot of societies that are just aimed at one and they don't invite everyone else, [**Interviewer**: oh okay] but eh that does tend to kind of segregate a lot of the communities apart (int 4, p.6)

One interviewee described how she saw her year as divided into three main groups of students.

Interviewer:	So what sorts are these three groups?
Interviewee:	We have a religious group on the one hand which is very identified by culture, defined by the way they talk, defined by the way that they dress, erm the way that they interact with one another and the way that they look, the way that they behave towards the rest of the cohort. So that is one group and that is quite a big group of people, especially in our year in particular. And then we have the mainstream, the Asian crowd if you like, the Bollywood crowd as I like to call them so we have that and then we have the white cohort, which has sort of unfortunately segregated away and it is very, very distinct. It is three groups of people and I don't know why that has happened (int 11 p7)

A further interviewee commented:

Interviewee:	I think, they keep to themselves, [**Interviewer**: yeah] they, and it's not just the Beng- I'd say the local Bengali's tend to be very eh religious [**Interviewer**: mhm] ehm so it would be the the Bengali's and the Pakistani's who are religious, [**Interviewer**: mm] the people who tend to, those very religious people, [**Interviewer**: mm] tend to stick to themselves
Interviewer:	okay, what percentage of the cohort do you think roughly, for your year that would be?
Interviewee:	I wouldn't be able to say that, I don't know, a good couple of rows in Perrin but
Interviewer:	a couple of what?
Interviewee:	rows in Perrin, lecture theatre
Interviewer:	yeah, a couple yeah, let's talk about seating, so where do they sit in the Perrin?
Interviewee:	ehm front middle
Interviewer:	front middle that's the [**Interviewee**: yeah] quiet Bengali religious ones is it?
Interviewee:	yeah, well Bengali and Pakistani (int 3 p.12)

Ethnicity and cultural issues, such as religious beliefs, the way students dress and interact with each other are features of medical student groups which interviewees are aware of. Interviewees also identified other structures, such as seating arrangements in lectures, which serve to maintain the cohesion of these groupings.

Maintaining Structures of Medical Student Groups

Interviewees have described how medical students with common interests form groups and how students' perceived commonality facilitated the cohesion of these groups. Interviewees identified ethnicity, cultural and religious practices, as well as the socio-economic backgrounds of students as influencing their choice of extracurricular activities, friends and hence the groups they felt part of. This is further illustrated by the following quote from an interviewee, of Asian ethnic origin who described himself as coming from an underprivileged background, who observed that medical students from a similar background as himself did not go and take part in the Student Union activities.

Interviewee:	if I was, if I was to tell you that none of my friends go (*to the Students Union*), [**Interviewer**: yeah] none of my circle of friends go, [**Interviewer**: yeah] then I would, based on that assumption, based on that, [**Interviewer**: mm] I would assume that it's people that were not from under privileged backgrounds, [**Interviewer**: mm] that were not from these areas, [**Interviewer**: mm] which you consider widening participation that do go (int 2 p.10)

This interviewee is aware of the importance his group of friends place on the underlying supporting structures within their social groupings. Interviewees identified that ethnicity, religious views, family and social backgrounds so strongly influence some medical students that they find conforming to the norms and values commonly accepted as mainstream medical student culture difficult.

Interviewer: why don't those students go to those things (*student union*)?

Interviewee: I think it's more of a, if my circle of friends, they're all Asian, [**Interviewer**: mm] or they're all from not all Asian, African, Middle Eastern as well, [**Interviewer**: yeah] but ehm they all have a strong cultural influence, [**Interviewer**: mm] on what they do outside of university, [**Interviewer**: mm] [**Interviewer**: yeah] or what their parents would think if they went, [**Interviewer**: yeah] or their parents [**Interviewer**: yeah] and the reason they don't go is purely because, probably because of that, the reason I don't go is because not only because of that, [**Interviewer**: yeah] those reasons cos I do admit they are reasons but I don't I don't see any reason to go, I don't, I don't think that I'll, I'll find it as fun, as other events like football, [**Interviewer**: mm] or going to dinners or something like that, [**Interviewer**: mm] cos that's the kind of stuff me and my friends do. (int 2 p.10)

Interviewee: yeah, I generally mean sort of drinking, in general sort of socialization, like a lot of ehm religious students ehm don't, just don't go to the student's union cos they feel like it's not right, not even the drinking, just generally going to like a pub or a club, [**Interviewer**: yeah] they just don't generally

Interviewer: they just don't do that

Interviewee: they just don't do it, I mean, it's not right to them, [**Interviewer**: mm] and so, and because of that, in their friendship circle, even if there are students who don't mind that, [**Interviewer**: mm] they will probably be more likely to hang out with their friends who, who do other things

Interviewer: what sort of other things do they do?

Interviewee: ((brief laugh)) it's funny you should say that, cos there's a bunch of people from Dawson Hall (accommodation) who fit this very very well, cos they don't, they never come to any of the, they never came in first or second year to any of the SU stuff, [**Interviewer:** yeah] the student union stuff, [**Interviewer:** yeah] and they, they'll always doing different things, and we're always wondering, 'what on earth are they doing?' ((laughs)) [**Interviewer**: ((laughs))] and doing things like, you know, ehm, they'll go to London and do things in London like go to museums [**Interviewer:** yeah] or go bowling and stuff like that, it wasn't that they didn't socialise, they did. [**Interviewer**: but with each other], they just did different things, [**Interviewer:** yeah] they just didn't do what most medical students do

Interviewer: mm, which is what?

Interviewee: which is, ((laughs)) go to the union, [**Interviewer**: ((laughs))] and then yeah, [**Interviewer:** yeah] just have a good time ehm (int 9 p.13-14)

These last two interviewees reiterate some of the issues that have already been identified as influencing the formation of student groups and how some students choose not to take part in certain medical student activities. However what interviewees also identify is that the student groups who did not take part in the student union activities had their own alternative substantive social life. Interviewees were aware of social and physical issues that encouraged the formation and maintenance of student relationships and groupings and how sometimes these issues could also create a barrier or curtail students forming certain relationships or feeling part of some groups. The relationships interviewees made, the students they called their friends, and the social groups they felt part of helped clarify the characteristics students associated with non-traditional medical students.

This process identified what "fitting in" and hence not "fitting in" may mean and expands what is understood as being medical student culture. Further

issues of what effect any form of segregation within the medical student cohort even if self-imposed may have on medical student socialisation are examined next highlighting how interviewees view the importance of networking with their peers, more experienced students, the faculty, and what advantages such activities bring. Additionally how the relationships that medical students form and the groups they join may also influence their study habits and ultimately what and how they learn.

Medical student culture

The focus group discussions elicited that interviewees viewed their relationships with other medical students as important and a source of both social and academic support. Interviewees described how medical students developed a shared understanding of what to expect during their studies and how to deal with common medical student experiences. The following individual interviews further explored the relationships medical students form and how the process of bonding with each other creates a key part of medical student culture. Interviewees' views on their medical student culture and pertinent issues related to their development of a professional identity are explored. Instances where interviewees described difficulties in bonding or examples of where students did not conform to the expressed medical student culture are highlighted.

Bonding and support

Interviewees were aware how medical students bonded with each other due to their developing a shared-understanding of what being a medical student entails, socialising and spending time with each other. Sometimes this time interviewees identified as being enforced due to either a social or physical exclusivity derived by curriculum constraints, for example being attached to a firm further away from main campus. Interviewees felt they gained from bonding with each other as the following interviewee explains:

Interviewer: you say you you've got lots in common [**Interviewee**: mm] what sort of things are in common?

Interviewee: the main thing is the fact that we're all medics, [**Interviewer**: mm] and I think that all medics will ,will gel together, I think if you put, now, okay I'll just use the example that in halls of residence now they've mixed everyone up, they don't want all the medics stuck together in the same block but I know for a fact that people, medics will find each other, [**Interviewer**: mm] no matter where you put them they'll all gel together they'll find each other wherever they are, [**Interviewer**: mm] and yeah cos they've got something in common, [**Interviewer**: mhm] so I think that's the main thing (int 7, p4)

This interviewee goes on to further explain that by being "all medics" and having a common timetable and sharing daily routines helps medics to gel together and go on to develop an understanding between themselves.

Interviewee: I've never had the opportunity to sort of get to know non-medics, [**Interviewer**: mm] because I was put in that position, [**Interviewer**: mhm] in the first year I was put with medics so I just naturally, cos we we had the same timetable, we'd all used to get up at the same time, go to lectures together, come back from lectures together, we had the same deadlines, [**Interviewer**: mm] so we'd understand when we need to work when we've got exams so we all need to be quiet and study, [**Interviewer**: yeah] whereas when I was living there last year, [**Interviewer**: mm] with

a bunch of non-medics, [**Interviewer**: mm] they'd be noisy a day before my exam, [**Interviewer**: mm] and I'm trying to revise for my exam, [**Interviewer**: mm] so I was not going to gel with them so much, [**Interviewer**: yeah] and they had so much time on their hands I didn't have much time to socialise with them, [**Interviewer**: mm] so yeah that kind of understanding (int 7, p.5)

Interviewees were aware that medical student bonding is determined just as much by mutual need and shared understanding as their separation and isolation from other students and mainstream university life. How bonding with other medical students can help students settle into new learning environments and gain confidence is illustrated by the following quotation that describes the value of both friendship and academic support:

Interviewer: okay and you mentioned two girls on your (firm) in the third year who kind of encouraged you, what was that all about?

Interviewee: yeah

Interviewer: what was that all about, [**Interviewee**: eh well] why did they bother ((laughs))

Interviewee: ((laughs)) I don't know, I mean I guess it's friendship as well, [**Interviewer**: yeah] eh but also it's also companionship in that you've got someone else to go with you, [**Interviewer**: yeah] and some people do enjoy helping others [**Interviewer:** mm] One of them was, one of them is very academic she knew what she was about, she was very good at it, [**Interviewer**: mm] the other one wasn't very academic at the start but she became a lot more passionate because of her interest, [**Interviewer**: yeah] and I guess also the fact that I had them two people who are very interested in medicine, [**Interviewer**: mm] also gave me the eh opportunity to think, okay yeah so I could actually take this chance as well to do the same, [**Interviewer**: yeah] and I guess just by being around them they helped me eh become a lot more interested in what I was doing and, [**Interviewer**: yeah] and I felt a lot better for knowing a lot more [**Interviewer**: oh okay] and then I kind of came through (int 4 p.10)

This interviewee was attached on placement without his usual friends and also with two graduate medical students who he felt supported and motivated him to become more involved, learn more and as a consequence become more confident. Interviewees described the importance of socialising with each other so that by getting to know each other trusting relationships could form.

Interviewer: You mentioned about the kind of togetherness you felt in the first PBL group, going back to the first year when you first came and I know that time has moved on a little bit now, but how did you make your friends in the first year?

Interviewee: Well I decided that I needed to go to Fresher's Week, so even though I am older and even though I was commuting in, it seemed a scary thing to do, but I came up for one of the least kind of alcoholic and dangerous sounding events erm I can't remember now it was a Saturday night and I came up and actually the girl who I met, they met us at the tube station, so that we didn't have to be on our own. The girl who I met there who was also nervous and waiting, is now my best friend at college, so from that moment you know we stuck together absolutely through thick and thin (int 12 p.6).

Once trusting relationships are formed interviewees described how they can then act as a foundation for further peer and academic support as these interviewees explain on being asked about the value of such relationships.

Interviewee: ehm wanting to get away from everything sessions, [**Interviewer**: ((laughs))]   wanting to go out sessions, [**Interviewer**: yeah] sort of having that kind of ehm understanding between each other, [**Interviewer**: mm] that yeah you know what we we've got this to do, [**Interviewer**: mhm]   it has to be done, [**Interviewer**: mm]   but let's just chill out now. [**Interviewer**: mm] so it's from a much more relaxing point of view, peers, [**Interviewer**: mm]   however you can also flick it on the other hand, you do have the study sessions together as well (int 5 p.14)

Interviewee: starting third year I think I've realised the actual true potential of having friends in uni, [**Interviewer**: yeah] in medical school cos they understand, [**Interviewer**: yeah] what you're going through the problems you have, [**Interviewer**: mhm] and you know you have you have funny moments you have sad moments, [**Interviewer**: mm] but you can speak to them and they understand, [**Interviewer**: mm, mhm]. They know more than anyone that you need to you need to de-stress in some way or another, and that they're more they're the ones that are more than happy to come to dinners and stuff cos, [**Interviewer**: mm] they have the same issues as well, [**Interviewer**: mm] so they want to see their friends, (int 2 p.10)

Interviewees commented on the value of bonding with each other, for friendship, and both personal and academic support, particularly if they felt parental support was lacking.

Professional identity formation and the role of clinical exposure

Initially what sets medical students apart and gives them a sense of identity is their physical and social isolation from mainstream university. Medical campuses are often geographically apart from other faculties, a feature which is exacerbated when medical students begin to also spend more time in clinical settings. The more intense curricula, heavier workload and frequent assessment procedures ensure an early distinction between medics and their fellow students from other faculties. Medical students bond together, albeit there may be segregations within the whole cohort, but medical students recognise each other's commitment to study medicine and their need of each other, as this interviewee explains:

Interviewee: I think as medics, well that's a phrase my dad he was always making fun of me for using, "we medics".

Interviewer: Um

Interviewee: There's a social community and there's a sense of, we will be together for this long time. There is, there's this inevitability of I'm going to have to get on with these people because I'll be here for six years which is why I think we form such strong bonds with each other because there's a sense of security in knowing these people are around me which is why I think perhaps there's a huge divide with the kind of university (main campus) and medical thing because they're leaving, they're not quite here (int 13 p.17-18)

Similarly to the focus group discussions interviewees highlighted their vocational aspirations which necessitate medical students acquiring an early understanding of medical professionalism. During the individual interviews discussions also highlighted the importance of increasing clinical exposure and what effect this has on medical students' sense of identity.

Interviewee: I think that's such a great time is when you're treated like a doctor as well, when you're not treated like a student

Interviewer: Um.

Interviewee: … that's when you feel the difference because that's a problem with firms is that you're always stood there, no one takes you seriously, you cant do anything, you have no idea where you are going or what you are doing and just feeling, its that feeling of being in place and feeling like yeah, I should be here, yeah I'm useful I can do something (int 13 p18)

This maturation and increasing sense of identifying one's self as a doctor as opposed to a medical student comes gradually and depends largely upon the degree of participation a student has achieved in the life of the ward or clinical attachment. Interviewees indicated that a significant transition was the start of their first full year of clinical studies.

Interviewer:	why do you think you are nervous, or feel uncomfortable at the beginning of the third year?
Interviewee:	it's the change in scenario
Interviewer:	yeah
Interviewee:	it's also I think cos you start feeling a lot more like you're coming to the stage where you're going to be a doctor, [**Interviewer**: mm] you're half way through and it's, you are, in finally in the clinical setting, [**Interviewer**: mhm] and so I guess it kind of dawns on you that you are, going to be a doctor, [**Interviewer**: mhm] sooner or later, [**Interviewer**: mhm] and that's part of the nervousness as well
Interviewer:	it makes you feel, I mean that's what you want to be isn't it, a doctor, so why does that make you feel nervous?
Interviewee:	because it's a big responsibility
Interviewer:	big responsibility, what, and one might not be up to the challenge?
Interviewee:	not at that point ((laughs))(int 4, p.16)

This interviewee acknowledges that by starting the clinical part of the course students feel more like doctors but also begin to be aware of the responsibility that this brings. A common sentiment shared amongst interviewees was that by increasing your knowledge you also begin to feel more like a doctor.

Interviewer:	okay, do you see yourself more as a student or do you see yourself as a doctor?
Interviewee:	I think up until the end of fourth I saw myself eh as more of a student when I got to fourth, at the end of fourth year, [**Interviewer**: mm] fourth year you learn a lot and for once I started feeling a lot more , oh like, I'm a doctor, cos people could ask me questions and I would know the answer (int 4, p.8)

Interviewees considered there were other issues that made them feel more like doctors such as acting the part.

Interviewee: do you mean sort of how fifth year students interact with patients as opposed to maybe a third year student?

Interviewer: yeah, mm

Interviewee: I think fifth year students are generally, they know how to, there's a certain way of behaving, [**Interviewer**: mm] that doctors have, [**Interviewer**: mm] which fifth year students are much better at than third year students, [**Interviewer**: mm] there are certain things that doctors do, there are certain ways that doctors treat their patients for example, [**Interviewer**: mm] that third year students don't really know how to do, and I think you get better at that as you go along

Interviewer: okay what about responsibility?

Interviewee: yeah I think that gets, [**Interviewer**: mm] students develop more and more responsibility, more and more professionalism I suppose as they go along, and I think when you get into fifth year you feel like you have a lot more responsibility because people, you know you're going to be dealing with peoples' lives in a years time, so you have to turn up (int 9 p.18)

Clinical exposure raised several issues that interviewees thought were important in developing a professional identity such as acting and being treated like a doctor as opposed to a student, gaining in knowledge, and beginning to take on patient responsibility. These issues and the processes which underpin them are examined in more depth when it is considered how medical students develop a medical habitus, and also how some students may struggle to do so.

Students' engagement with the medical culture

-using Luke's Bourdieuian conceptualisation of habitus, field and

capital

Introduction

The focus group data provided initial insights into what and how interviewees

perceived they needed to learn to become doctors. How medical students can

most appropriately learn the important social aspects which form part of their

professional development remained as questions for the individual interviews.

Luke's medical habitus based upon Bourdieuian concepts, previously outlined

in Chapter 3, facilitates exploring how medical students may learn these

aspects. Bourdieu's concepts of field, habitus and capital resonate with issues

highlighted by interviewees from both focus groups and individual interviews

that describe medical students' clinical learning environments, the

relationships students form within these, and the attributes students bring

themselves. Further exploration of how medical students fit in and go on to

participate in the medical culture of the clinical learning environment are

significant issues examined in this next section.

A Medical Student's Capital

Bourdieu likened capital to a person's financial, personal and social wealth.

This section examines how the previously outlined differences between

medical students coming from traditional and non-traditional socio-economic

backgrounds in terms of their financial resources, social and family

backgrounds, which constitute a student's financial, social and cultural capital, may affect their experience of the medical curriculum. It is acknowledged that the capital of all medical students is significant. What is of interest is the relational aspect of the capital pertaining to non-traditional medical students compared to their peers coming from more advantaged backgrounds and how this is perceived by medical students from both groups. In addition the views of medical students are sought concerning what kinds of capital are required to ensure success and hence are perceived as constituting "legitimate capital" (Brosnan, 2009).

For medical students a lack of finance commonly also means limited access to a variety of learning resources and hence a lack of educational opportunity, as one interviewee commented below:

Interviewee: I suppose it comes back to resources [**Interviewer:** mm] ehm things like textbooks [**Interviewer:** mm] and ehm those exam, you know, exam question database [**Interviewer:** mm] online those kind of, all those kind of things, [**Interviewer:** mm]   which cost those massive subscriptions [**Interviewer:** mm] ehm and all these weekend taster breaks and lectures and [**Interviewer:** mm] there's a lot available for students, but it comes at a price" (int 3 p.14)

Financial resources are clearly more problematic for some students compared with others as indicated by the following discussion:

Interviewee: I mean there are some people who's parents have bought them a flat so they haven't got to worry about paying rent erm and things like this. Or the parents have bought them a car so they can zoom off somewhere, and that is hard and as well as buying text books and all that kind of thing,

> paying fees, erm being a medical student is about all those other things as well and kind of balancing all those tensions.

Interviewer: Tell me about the tensions.

Interviewee: Erm well paying fees and managing your money is a huge, huge pressure, which is something I know people talk to me about fairly regularly. Because you are eating out a lot, you are having to erm buy fairly smart clothes to wear and it is something you are constantly balancing your budget and people literally don't have lunch because they are trying to manage on a very small budget, especially at this time of year.

Interviewer: What the end of the year?

Interviewee: End of term, erm so that is a real pressure and I don't think everyone experiences that pressure.

Interviewer: So it is worse for some students than others?

Interviewee: Yes I think so.

Interviewer: Would you hazard a guess as to which ones it is worse for?

Interviewee: People who come from a working class background, people who have to support themselves as well as study. (int 12 p. 9-10)

These interviewees are aware that the possible educational disadvantage for students who struggle financially may be more subtle than just not being able to afford textbooks or attend courses. Interviewees with less financial capital may find that they cannot join in with the lifestyle of some of their peers. The consequences of this may be fewer opportunities to socialise with a wider network of friends which may affect their experience of being a medical student and possibly the development of an appropriately supportive academic group.

Social capital and networking

Socialising with each other and forming supportive relationships interviewees considered an important part of the medical student culture. Interviewees discussed how when students shared similar backgrounds and interests this contributed to the bonding process and conversely when less background commonality existed between students, and also between some students and faculty, less opportunities occurred to develop a rapport that facilitates the processes of networking.

Interviewer: all in all yeah I was sort of thinking when, well, have you felt disadvantaged because of your background all in all, [**Interviewee**: yeah]

Interviewee: I think there've been a lot of hurdles, [**Interviewer**: mm] eh every time, applications to get into medical school, [**Interviewer**: yeah] ehm and your first couple, your first exams, [**Interviewer**: yeah] every final exams, [**Interviewer**: mm] ehm your OSCEs and your, [**Interviewer**: mm] any deadline really [**Interviewer**: mm] ehm it has always been more of an effort on my part to, to, to reach out to people, to get any help that I can get, [**Interviewer**: okay] ehm so may be compared to some people who are from a lot much better backgrounds, [**Interviewer**: yeah] who can access those resources a lot easier (int 3 p.13)

Interviewees identified disadvantages in securing advice and support from the very beginning of non-traditional medical students' journeys to becoming doctors. Bourdieu likened social capital to a person's "*sphere of contacts*" and this interviewee raises issues concerning perceived inequalities in medical students' access to both physical and personal resources (Grenfell and James, 1998, p.21). Medical students coming from non-traditional medical student backgrounds describe a lack of ease in accessing an appropriate social network, and in particular someone who they think has the right

background, inside knowledge and can act as a mentor, as this interviewee

further describes:

Interviewer:	Right, okay. What about the parents? Having a family member that's a doctor?
Interviewee:	Do I think that makes any difference?
Interviewer:	Is it an issue?
Interviewee:	I think, is it an issue in the sense that I think it's a great support thing to have a family member that understands the pressures of medicine or what medicine is about, what its like and I think it is an advantage in getting your head around where you need to get to because you've seen the finished article, erm, which I think is slightly different for the working class because there's always an element of the unknown (int 13 p15-16).

Interviewees distinguished between medical students who had doctors in the

family and how in particular having access to doctors for advice, support and

provision of academic resources was invaluable, as the two interviewees

below explain:

Interviewee:	The word I was looking for the last ten minutes, is networking, that is definitely the thing that I have missed out on throughout my eh medical career so far
Interviewer:	and why is it easier for the ones who have eh different backgrounds?
Interviewee:	ehm it's just that I, I sort of always feel like, I'm having to discover all these things for myself, [**Interviewer**: mm] and my college friends as well, I think, we are sort of from the same background, I said that eh two of them haven't got doctors in the family, ehm we're discovering things for ourselves (int 8, p.10)
Interviewee:	In terms of studies, perhaps you eh haven't had so many resources [**Interviewer:** mm] and so much help from, ehm cos I have, I've not had people in like family friends or doctor friends or there's no doctors in my

family, [**Interviewer**: yeah] there are no so ehm family friends who are doctors [**Interviewer**: mm] or anything like that so I've never really had access to [**Interviewer**: mm] people who ehm could give me that kind of advice, ehm experienced advice, [**Interviewer**: yeah] ehm I've not had those resources [**Interviewer:** mhm] there's students in our year who I know, who know admissions tutors or they've their parents know admissions tutors and things like that [**Interviewer**: mhm, mhm, mhm] and for me that's just like that's crazy cos there's no way I'd be able to, access that, [**Interviewer**: yeah] ehm so you do have to try and fit in firstly and secondly sometimes it is more of a struggle to get, eh to get to those same resources [**Interviewer:** mm] ehm cos it really does mean going out of your way (int 3 p.7)

Interviewees were aware and could identify inequalities in the social contact between medical students themselves, medical contacts and the faculty. Many medical students are perceived to have doctors as family members. Interviewees highlighted varying experiences of the processes of networking that interviewees indicated students used to access resources, gain both academic and personal support, which facilitated their learning and professional development. However interviewees also commented that some medical students were more aware and also more able in networking as this interviewee explains:

Interviewee: Erm I guess it comes down to individual experiences. Erm probably the way they are treated by other staff erm is probably the most obvious way, so a consultant might talk down to you.

Interviewer: What if you are a non-traditional student?

Interviewee: Erm I think it is very easy to sense, I don't quite know how but I think it is easy to sense if someone isn't from the same background as you. There was one occasion I had which was just a bit bizarre where I was sitting with a consultant who I admired, you know I had seen her at work, we got on very well and she was talking to the Acute Pain Nurse who was training up to be able to prescribe and they suddenly started talking about ballet and erm the opera and you know for ten minutes or so we were in-between a patient coming in and I couldn't join in that conversation. I

mean I have seen a ballet, I didn't enjoy it very much erm I can't afford to go to the theatre, erm I don't like opera at all. I haven't learned to love opera let me say and I did not fit in that conversation at all and you know I just kind of sat there thinking, 'these are the people I am going to be mixing with, you know is it really for me? Do I really fit in this environment?' Especially because she was talking about bringing her seven year old son and encouraging him to enjoy the opera and I would say that emphasised the differences maybe in expectations or in my background erm but I didn't suffer any consequences of it, erm I just kind of smiled and nodded like I knew exactly what they were talking about.

Interviewer: Really, what does that say? That is interesting, why smile and nod?

Interviewee: Erm I suppose it wasn't appropriate for me to say "oh I think opera is a waste of time, but I do like that song by the Fisherman."

Interviewer: Yes.

Interviewee: Not wanting to look different, not wanting to draw attention to myself, erm you know. (int 12 p.14)

This interviewee raises issues concerning a medical student's social capital which are initially related to the student's background, their contacts and interests which may facilitate or hinder establishing a rapport with each other and the faculty. Whilst this interviewee felt unable to join in with the conversation she continued to appear to be interested as she wanted to fit in and develop a professional relationship with the consultant.

By socialising both formally at specific events, and informally with peers and faculty, interviewees identified issues associated with the underlying social processes involved in networking and what they think is important in establishing student networks. What is of further interest is whether students from a non-traditional background are hampered in this process.

Interviewer:	okay ehm and why do people, from the backgrounds that we've described, not so frequently talk to the consultants?
Interviewee:	I don't think, eh it's not that they don't frequently, [**Interviewer**: yeah] I think it's, they at the start, [**Interviewer**: yeah] they don't actually know that eh it's probably what they don't come in with the feeling that they have to kind of do it
Interviewer:	it's not their way of going about things
Interviewee:	yeah yeah yeah they wouldn't have thought about that, it's only once you're in your third year [**Interviewer**: yeah] and you realise, [**Interviewer**: yeah] the things you do, [**Interviewer**: yeah] that they start picking up and they, I mean
Interviewer:	and then, do they do it?
Interviewee:	and then they will start doing it (Int 6, p.14)

Interviewees perceived some medical students from a non-traditional background may have a low interest in networking possibly because they do not appreciate its potential value, but with experience they see medical students networking and begin to recognise some of the benefits, as illustrated below.

Interviewer:	yeah, okay, so, what, what do you think about the networking with staff, how does it go, have you seen much of it, do you do much of it, what do you do?
Interviewee:	I don't really do much of it, [**Interviewer**: yeah] in the sense of, I never used to anyway, [**Interviewer**: yeah] and I've kind of happened to do it more this year because of the BSc, [**Interviewer**: yeah] but I don't generally do that, ehm partly because I never valued it, because I didn't think it was important, ehm and partly because I had no direction, [**Interviewer**: mm] I've kind of started to do it more now. I find that sort of non traditional students, the reason that they're not good at is because they don't value it, [**Interviewer:** right] because they don't take it as important as traditional students.
Interviewer:	rather than having any difficulties doing it?

no, I think it's a mixture of both, I think, it's both, because they don't value it, then they have difficulty doing it, ehm, yeah, and I guess maybe the traditional students are aware of the advantages of networking, [**Interviewer:** mm] and so they feel that they have to do it, and so they work at it, and they get better at it (int 9 p.16)

This interviewee is aware of the differences between students and their perception of the benefits of networking and also identifies that some medical students from a non-traditional background whilst wanting to network may find that they struggle in undertaking the social processes associated with effective networking. Interviewees have already outlined some of the issues they perceived distinguished non-traditional students from their peers such as how they talk and what they talk about. These issues were further examined using Luke's adaptation of Bourdieu's concept of cultural capital.

Cultural Capital

Interviewees felt that traditional students had an advantage as they were perceived to be more at ease in socialising. Non-traditional students were perceived to sometimes struggle in establishing a rapport with the faculty as they may have less in common with consultants who are seen by students to be more likely to come from a traditional background themselves. Common interests such as certain sports, leisure activities and not least the likelihood that many traditional medical students and doctors come from medical families, encourages a persistent medical culture of "*wealth and upper classness*". Non-traditional students' speech or lack of perceived good

articulation and confidence in formal social settings compared with their traditional student peers, often described as "*coming from private schools*", tended to be a means by which interviewees differentiated themselves.

Interviewee:	I think traditional students do have lots of advantages, in the sense that they are a lot more, maybe there, I don't know, they're a lot more sort of, they come across really well, [**Interviewer**: yeah] and they come across quite polished, they come across like ehm more professional maybe, [**Interviewer:** mm] and they do have lots of advantages, and we're a bit more rough round the edges and you know, we have a bit more, we have a bit more to go I think, [**Interviewer**: mm] to get to that same level of, face validity. it's not necessarily that they don't, they lack the skills, it's because they don't know how to express it, may be better, [**Interviewer**: mhm] or as well as traditional students, [**Interviewer**: mm] who have just had maybe a firmer grounding, [**Interviewer**: yeah] and a better foundation (int 9 p7)

Interviewees acknowledged that traditional students appeared to have "*face validity*" judged by their demeanour which interviewees considered an appropriate prerequisite in becoming doctors. One interviewee associated traditional interviewees' "*face validity*" with a "*firmer grounding and better foundation*" which may also relate to a student's cultural capital. Whether interviewees came from medical families and the advantages that such a family background may provide were discussed.

Interviewer:	Is that because of some hesitancy or are they just shy?
Interviewee:	I don't really think it is shyness I think it is, from my point of view as well when you open your mouth you know you are not going to say things quite as eloquently as someone else or you might tend to use layman's language more than medical language, whereas someone who is more familiar and even my children are picking up medical language from me. So you know they would fit in much better in that kind of setting erm so I just think it is kind of an awareness that you don't know as much as other people (int 12 p.8).

Interviewees were aware that coming from a medical family provided advantages such as financial means, access to mentors, networking but also that traditional medical students were more likely to possess the personal attributes such as how they speak, and what they speak about, that better equips them for their medical studies.

Examining these issues facilitates further understanding of how some medical students; non-traditional students in particular, may have significantly different learning opportunities and experiences than their traditional medical student peers. By using Luke's adaptation of Bourdieu's concepts of capital, field and habitus how interviewees perceive their learning environment and what effect a student's capital may have on their learning may be explored.

The Medical Field –describing the learning environment

Bourdieu defined his metaphorical field as being "a *structured system of social relations at a micro and macro level"* and considered individuals, groups, institutions and their structural relationships to each other vital in defining and describing his concept of field (Grenfell and James, 1998, p.16). The social relations that interviewees experienced and observed are important in describing the medical field in which they learn to become doctors.

Interviewees identified how they felt the medical culture influences both pre-clinical and clinical students' learning. Interviewees described how they "*knew their place*" which they felt is at the bottom of an established medical hierarchy of the faculty, medical staff and students and gave examples of how they perceived the importance of establishing and sustaining appropriate medical professional relationships. However as the interviewee below illustrates the importance of understanding and then engaging with the medical culture is not obvious to all medical students:

Interviewer: Have you struggled with any elements of third year?

Interviewee: It was tough to get used to being, well made to feel really small and like you don't really know what you're doing cos I've had many consultants like that. When I got on the wards it was, it just became so much less about medicine, it became about, it became about your relationships with your peers, like your team that you're working with at the time. Because you're a third year they're not going to treat you like you're, they realise you're nowhere near being a doctor, so they don't treat you like a doctor, they just treat you like, you're, I don't know they're all different I can't make a generalisation (int 7, p.12)

This interviewee identifies some of the issues that medical students face on starting on the wards and how she now recognises the importance of medical relationships. Understanding the doctor-patient relationship and the value of clinical teaching medical students easily accept as important but alongside this interviewees also described how becoming a medical colleague relies far more on the relationships doctors have with each other, the staff they work with and their students, as this interviewee further explains:

Interviewee: I felt I have to get in his good books you know, that kind of, [**Interviewer**: thing] thing and that's what my friends all said to me as well like 'you've just got to be really nice and praise the consultant. I thought well what is this all about, ((laughs)) I thought it was about medicine, [**Interviewer**: yeah, ((laughs))] its not about that, its about relationships. It's about learning how to engage [**Interviewer**: yeah] I thought I would just be going in there and to put my medicine into practice but it wasn't, [**Interviewer**: no] I felt like it was more about engaging with, [**Interviewer**: yeah] peers colleagues, [**Interviewer**: yeah] elder people (int 7, p.14)

Interviewees acknowledged the importance of positive relationships with the teaching faculty in thinking about "*how to engage*" and the effect this has on their learning:

Interviewer: Okay I mean how important do you think relationships with the faculty are for your level of learning?

Interviewee: I can't emphasise that I mean it is hugely important. If you feel that you are being alienated and that you are just not good enough then you will go away into your shell and you will try to do things on your own because your motivation is there, you are here as a medical student to be that doctor at the end of the day, but if you feel that there are people out there who are just perhaps knocking your confidence back, you will try to do it on your own and that doesn't help. (int 11 p.3-4)

Relationships between interviewees and the faculty were identified as very motivating for students' learning and interviewees were aware of the importance of developing a good rapport with teaching staff. However medical students often tolerate humiliating interactions with the faculty higher up the medical hierarchy because this is seen as common acceptable practice. The medical culture to which students aspired to become part of was often viewed as harsh as this interviewee highlighted.

Interviewee: And I am very aware of the hierarchy and erm basically I just realise that they want the medical students to be there, answer the questions when they are spoken to, and just observe and learn how to be an FY1 which is basically to do the job efficiently without making mistakes and to ask questions when you are not sure. But just to be efficient and good at what you do and no more, no less really, like a cog in a wheel of some… And it annoys me a bit because it is just such a waste of time (int 12 p.16).

This interviewee felt like a "*cog in a wheel*" of some presumably big machine which she likens to the medical hierarchy and hospital environment that she feels enforced to be part of as she is a medical student. The interviewee is aware that her role as a medical student at the bottom of the medical hierarchy is to perform the menial tasks such as pulling the curtains around the patient during ward rounds.

Interviewee: Yes well I am in my third year so I am going to be spending my next three years doing this I suppose. It is just the kind of hierarchy thing of if everyone is there then my role as a medical student is to pull the curtains around, because everybody else is busy getting on with the patient and the FY1 (junior doctor) is writing the notes and erm if the FY1 is not there, then perhaps we might be asked to write in the notes, but I suppose it is only by watching and seeing this kind of curtain pulling role, and you are waiting to catch things as they fall, you know that kind of those little things you know and that is my role and it is very important and if I don't pull the curtains someone glares at me because I should know that my role is to pull the curtain you know.(int 12 p.17)

The interviewee is aware that through behaving appropriately, by drawing the curtains for example, she can avail herself of the possible learning opportunities that arise during the ward rounds. The interviewee perceives that the junior medical student's role is to pull the curtains around and in exchange for such appropriate behaviour she will be given the opportunities

to learn what she feels she currently needs to know. In this instance it appears that this interviewee is more concerned with prioritising what theoretical medicine she can learn rather than understanding the posturing of the medical hierarchy. However she does learn, and without being overtly taught, how to behave and appropriately participate in what Luke called the "*patterned activities*" of the medical field (Luke, 2003, p.60). Later in this section interviewees identify how by appropriately interacting with faculty and fitting in on the wards, just as this interviewee above describes, they begin to develop a medical habitus.

Earlier discussion highlighted how non-traditional medical students may be disadvantaged in a clinical setting because of a perceived lack of commonality with the medical hierarchy. Whilst it may appear that some non-traditional students may initially struggle in developing an appropriate medical habitus interviewees did not comment that non-traditional students were overtly treated any differently by the faculty than their more traditional peers.

Interviewer: yeah, what about the actually learning, you know your experience of being in a problem based learning group [**Interviewee:** yeah] for example, any disadvantages there do you think or where you struggled a bit more?

Interviewee: I've never really felt [**Interviewer**: no] like there's been any bias [**Interviewer**: right] or there's never been a problem with that [**Interviewer**: okay] ehm everyone generally treats each other as fellow students [**Interviewer**: mhm] equally kind of ehm and the teachers and lecturers definitely do [**Interviewer**: mhm] I've never seen a problem where anyone was getting more attention or less attention specifically, [**Interviewer**: right] ehm other than just [**Interviewer**: mm] from their own merit really (int 3 p.14)

What this interviewee means by a student's "*own merit*" may reflect perceived differences between students in terms of their motivation or preparation for learning which from this interviewee's perspective seems reasonable. However such differences between students may mask inequalities in capital which facilitate or limit a student's initial understanding of what is required of them. Only one interviewee gave an overt example of where a consultant's interaction with them caused distress and highlighted an awareness of a lack of commonality:

Interviewee: One of my consultants did tell me to change my accent, which I wasn't so impressed by, but that was more of a negative statement, [**Interviewer**: mm] it wasn't a kind of ehm an observation, [**Interviewer**: mm] ehm and that was different because the people that are saying 'oh you've done well,' they're people who are probably from kind of similar backgrounds to me, [**Interviewer**: mm] ehm and who don't, who aren't particularly well spoken themselves and don't come across as particularly middle class, [**Interviewer**: mm] but for someone who's kind of a bit more posh, [**Interviewer**: mm] to say 'you need to change your accent' and 'you know this isn't going to work for you' ehm that was a bit more kind of, okay, that was out of order

Interviewer: and was that during feedback at the end of a module?

Interviewee: yeah, yeah

Interviewer: yeah, okay and how had you done on that module?

Interviewee: I'd passed and done well I had ehm there was another girl who was on the module with the same consultant [**Interviewer**: mm] and he signed both of our books off [**Interviewer**: mm] ehm and kind of passed us both and said we were both good students, [**Interviewer**: mm] and then he asked me to wait behind, [**Interviewer**: mm] and told me to change my accent ((brief laugh)) ((laughs))

Interviewer: has your accent changed throughout the five years at all?

Interviewee: I don't think so, no ((brief laugh)) (int 1 p.15)

This interviewee recognised the differences between herself and the consultant in terms of class and accent but rejected his advice to conform to a more commonly accepted way of speaking. Doctors speak with a variety of accents today but there is still both peer and hierarchical pressure to conform to an established medical culture norm.

In describing the clinical learning environment interviewees highlighted that whilst the clinical setting was engaging it was often also "*unfocused*" with students very unclear about what to learn and how to go about their learning. Interviewees discussed how they felt they were given little guidance and often the wards were so busy that they felt initially unable to ask. Additionally interviewees again raised issues concerning their perceived lack of any specific clinical role which meant they often felt in the way without a professional identity as this interviewee explains:

Interviewer: okay, what about going onto the wards at the beginning of the third year, how did you find that?

Interviewee: I think that was a daunting experience but I think that was the same for everyone, [**Interviewer:** yeah] and I found it a bit, a bit lost like a sort of rabbit in the headlights a little bit, [**Interviewer:** ((laughs))] ((laughs)) in that I didn't know what I was meant to, what my role was, and ehm I've said it before actually, I think that it took me a year before I realised what a third year medical student on the ward should be doing, [**Interviewer:** right] like on my last firm, [**Interviewer:** yeah] sort of halfway through my last firm, I realised, and I wished I could have gone back [**Interviewer:** ((laughs))] and done it all again and it would have been a [**Interviewer:** right] much more productive and I would have got more out of it

Interviewer: why did it take you so long?

Interviewee:　　well it was, I had, I didn't have anyone to ask, and it wasn't explicitly, we didn't have any sessions, I noticed, on what to do (Int 8, p.10)

Issues of the importance of networking, having access to a mentor and appropriately engaging with the medical culture are explored in the next section. How students' participation in the medical field by appropriately interacting with the faculty and the medical team goes on to critically influence their developing undergraduate medical habitus is further examined.

Developing an Undergraduate Medical Habitus

A previous discussion (Chapter 3) has outlined how Luke's understanding of Bourdieu's concept of habitus can be used to examine the social aspects of junior doctors' and by extension also medical students' learning. By incorporating Bourdieu's thinking tools of capital and field Luke introduces a relational conceptualisation by which junior doctors' professional development can be examined. How the various capitals medical students possess are similarly used within the medical field to further their social standing can also be examined. For medical students to effectively participate in their clinical learning environments it is argued that they need to similarly develop an appropriate medical habitus. Luke describes how "*particular characteristics, dispositions and skills are needed to gain success as a doctor*" and data from the individual interviews sheds light on what these may be for medical students (Luke, 2003, p. 146). Interviewees highlighted how such attributes or capitals may be developed by interacting with medical staff and the faculty

and by these processes they tried to effectively participate during their clinical placements.

Interviewees described how they began to develop the appropriate personal attributes, demeanour and behaviours appropriate for a clinical environment once coming into contact with patients and medical staff. Interviewees were aware of a clinical, and specifically hospital ward etiquette, which highlighted issues of how to behave, what clothes to wear and how to talk, as described below:

Interviewee: Just generally when I've got these "firm" clothes on [**Interviewer:** yeah] and I'm just in that mindset [**Interviewer:** yeah] I suppose, just trying to ehm come across as [**Interviewer:** mm] well spoken cos it does help

Interviewer: and was that a gradual thing throughout the five years or did you change like that from the beginning of coming to medical school?

Interviewee: I've always found that I think for me personally fitting in [**Interviewer:** mm] is a big thing to me, [**Interviewer:** mhm] so I've got relatives in Newcastle for example, [**Interviewer:** mhm] who call me posh, [**Interviewer:** ((laughs))] and so I have to adjust, [**Interviewer:** yeah] how I speak, [**Interviewer:** mm] and what I, how I behave [**Interviewer:** mhm] ehm likewise when in medical school you have to adjust [**Interviewer:** mm] eh on firms and with lecturers and PBL's you have to again adjust ehm it's you have to adjust to the situation, [**Interviewer:** mm] and I think I've always, I'm not too bad at doing that (int 3 p.15).

Interviewees were aware of how certain clothes, ways of speaking and behaviours were expected of them and facilitated their "fitting in" with the clinical setting. Interviewees told me how they understood how to behave, talk and dress by observing the medical staff in the ward environment. Interviewees also highlighted that some medical students from a non-

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traditional background lacking any previous exposure to what they called a

"*professional background*" may initially struggle to appreciate what is

required.

Interviewee:	I think we have all been through that, all of the medical students from everyone I have spoken to, erm you dress in a particular way, you have been told to come to work smart erm you talk in a particular way where you are polite erm and you don't use slang words or anything like that and you try and fit in, you try and conform and I think part of that conforming is an act, because if you think about it, most of us come from different backgrounds, we have all had different experiences in life or different social classes or whatever, and suddenly you come to this erm profession called medicine which tells you how to think, how to act, who you are essentially, erm so there is constant trying to fit in. And I think that is one of the things that can knock your confidence as well because if you have come from an environment, you know a non-professional background, from a lower social class background, you haven't had that exposure, you haven't had that knowledge and education, in terms of knowing how to act, it can be a huge struggle. (int 11 p.10)
Interviewer:	So how do these people fit in I suppose? How do they learn to act appropriately?
Interviewee:	I think the environment is a very big teacher and erm a lot of the times when you see what the majority are doing you get sucked into that and you try and conform to the norm, and this is what the vast majority of people do (int 11 p.6)

The environment is described by this interviewee as a "*very big teacher*" and

illustrates the inter-dependent relationship between how medical students

develop a way of fitting in and the medical culture of the ward which prepares

them for further learning, as another interviewee explains:

Interviewer:	So some of that time you've spent, [**Interviewee**: yeah] is about being part of the furniture, [**Interviewee**: mm] so you're so ingrained at being in the clinical environment, [**Interviewee**: mm] okay, is there anything else about being almost a fifth year student?

Interviewee:	do you mean sort of how fifth year students interact with patients as opposed to maybe a third year student?
Interviewer:	yeah, mm
Interviewee:	I think fifth year students are generally, they know how to, there's a certain way of behaving, [**Interviewer**: mm] that doctors have, [**Interviewer**: mm] which fifth year students are much better at than third year students, [**Interviewer**: mm] there are certain things that doctors do, there are certain ways that doctors treat their patients for example, [**Interviewer**: mm] that third year students don't really know how to do, and I think you get better at that as you go along (int 9 p.18)

The processes involved with fitting into the hospital ward's activities, feeling comfortable with the medical culture and beginning to emulate what doctors do indicates how medical students begin to develop a medical habitus, an effective way of conducting oneself, which in turn facilitates a student's professional development.

Interviewees also identified more proactive processes of increasing their capital and ensuring they secured a place within the medical culture. This involved activities and behaviours that resonated with Bourdieu's ideas of "*playing the game*" where a variety of techniques are purposefully employed to win favour with senior doctors who students think will be able to influence and help them with their studies and later careers. Interviewees were aware of rules or shared understandings between students and medical staff concerning how to speak and best interact with consultants, being seen and appearing enthusiastic and knowledgeable, and overall the value of networking. The following excerpt from an interview describes the value of networking as a means to "*playing the game*" for one interviewee:

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Interviewee: it's only once you're in your third year [**Interviewer:** yeah] and you realise, [**Interviewer**: yeah] the things you do, [**Interviewer**: yeah] that students start picking it up.

Interviewer: and then, do they do it?

Interviewee: and then they will start doing it (networking)

Interviewer: how do they realise to do it?

Interviewee: eh I guess it's they see people doing it first of all

Interviewer: and what do they see people doing?

Interviewee: eh spending more time with the consultants, trying to eh get on a consultants good side [**Interviewer**: yeah] going to a lot more of the hospital based activities, such as the Christmas eh disco or something like that

Interviewer: Apart from actually being there physically in a space, such as the hospital disco or whatever I mean what else would you do to effectively network?

Interviewee: eh I mean being keen and being [**Interviewer:** being keen] knowing your stuff, knowing your stuff, [**Interviewer**: yeah] working hard but also actually eh going out of your way to contact consultants if you want to do audit's or something like that, [**Interviewer**: yeah] going out of your way to contact different people (int 4, p.17)

Other elements of "*playing the game*" such as ensuring you are seen by people that matter and especially seen to be keen are ways in which interviewees thought they could increase their social standing. By networking with people, consultants whose expertise is greater than theirs, interviewees are aware of how some students try to not only win favour but also pick up knowledge that will help them progress. Whilst not all interviewees described "*playing the game*" in such an overt or strategic manner interviewees appeared to be aware of the value of developing an undergraduate medical

habitus which they believed would facilitate successful learning in clinical environments.

However whilst such a medical habitus is viewed as an important requirement for students' professional development interviewees revealed how they perceived some students may be disadvantaged. How these disadvantages may present and how the iterative interdependent relationships between a developing habitus, medical field and a student's capital are helpful in further understanding these processes require examination. Interviewees observed that some non-traditional students with less capital at the start of their clinical training may struggle to establish an effective medical habitus. How this may affect a student's learning and in terms of Bourdieu's concepts how students generate more capital and hence more social standing requires further discussion. One interviewee commented that:

Interviewee: If you're not on their level, if you're not speaking the language then you're going to struggle (int 5 p.5)

This interviewee wasn't talking about the possible difficulties arising if a student's first language isn't English but highlights how the language of the medical field and the expectations of people already embedded within the medical culture may affect students. One of the most pervasive issues identified from the data is "speech" whether it's the way certain medical students speak as typified by their accent, grammar, mannerisms or content which may indicate their social background, family and cultural influences.

Such examples of a student's cultural capital may either advantage or disadvantage students in terms of how they are perceived by medical staff in fitting into a clinical setting.

Interviewees expressed the views that students from non-traditional backgrounds may feel disadvantaged when expected to engage with the medical hierarchy and they had observed this more frequently than when non-traditional students talked with patients. One interviewee commented that the way he commonly talked and communicated with his family and friends before coming to medical school is not now how he perceives the optimal way of communication to be in the medical field. He also describes how he feels that many of his peers are more articulate than him, he feels less confident, and he has struggled to learn how to better communicate with peers and staff, more so than patients. One may argue that this is a common reaction for all novice students on entering their clinical education however interviewees agree that for some students from non-traditional backgrounds this period of adjustment and learning is harder and steeper. It appears therefore that the initial experiences of non-traditional may be significantly different compared to their more heavily capital laden peers, as expressed by one interviewee:

Interviewer: what sort of things do you think a private school person would, [**Interviewee**: ((laughs))] ((laughs)) would kind of give themselves away by, just out of interest?

Interviewee: eh it's a good question actually, I don't know, you'd assume that you'd be able to tell the difference in terms of, the way people speak, [**Interviewer**: mhm] is definitely important, and mmm, I don't want to say confidence

because obviously confidence is neither private school nor state school but maybe a little bit more confident, but definitely the way people speak, [**Interviewer**: yeah] is probably the best one

Interviewer: and examples of learning how to act on a ward, or to speak to a consultant, [**Interviewee**: mm] or to speak to the nursing staff, are those things which, which are less obvious to them, [**Interviewee**: mm] or does everyone pick it up at the same time?

Interviewee: possibly they might be less obvious, [**Interviewer**: mm] just because of experiences they've had, cos obviously if your parents are from a managerial, or professional, profession, if you like, [**Interviewer**: yeah] they're going to be, or you're going to know certain ways to act, or you're going to see them and think that's a good way to act, [**Interviewer**: mm] cos if they're not, you might not see that, [**Interviewer**: mm]   (int 6 , p.17)

Whilst students from non-traditional backgrounds may initially struggle to appreciate what is required to fully fit in and go on to develop an effective habitus interviewees observed, and sometimes experienced for themselves, that learning how to speak and behave in ways that facilitate their integration into the medical field facilitates developing a durable and effective undergraduate medical habitus. One of the main issues in developing such an appropriate habitus appears to be a student's desire, ability and opportunity to network and develop relationships with more experienced medical staff and students. Interviewees have discussed previously how they perceived networking to be an effective means in gaining important knowledge on how to progress within the medical field. Initially successful networking appears to relate to students' social and cultural capital where traditional medical students are advantaged by possibly already having medical contacts, and more subtlety possessing the appropriate persona and commonality with doctors which interviewees believed facilitated networking. However whilst

non-traditional medical students may initially be naive in recognising the value of securing resources through processes such as networking and struggle in doing so interviewees identify that they can and do learn:

Interviewee: I would say that I've had a bit of, in the last year I don't know whether it was a disadvantage because of my background or whether it was just it took me three years before I was ever going to do that, [**Interviewer**: mm] but in the last year, my eyes have been open to a world that I could have tapped into more, i.e. ehm like the Royal Society of Medicine and the extra stuff they do, [**Interviewer**: yeah] and even just like, so I've recently become a member of that, and I took my nan for her birthday for dinner at that restaurant [**Interviewer**: oh yeah] and she said that was the defining moment of, that was a moment, a snapshot in time, so things like that and going to, going away from the medical school to do, do different things, and going to conferences and things, this week going to the medical education conference, [**Interviewer**: yeah] things like that, I realise that I really enjoy things like that, but I had no one ever to say, 'why don't you do this, have you heard about this, ehm this is, why not try going to this', so it took me three years before I got to do that (int 8, p.8)

This interviewee's account of the potential benefits of accessing resources and his initial ignorance of their existence illustrates the inter-dependency and structuring nature of the relationships between the concepts of capital, field and habitus. Non-traditional students such as this interviewee lament their lack of medical contacts that can act as mentors and introduce them to resources. Non-traditional students describe how not having a doctor in the family, contrasting with traditional students who are perceived as frequently having medical family members, disadvantages them in securing both general and academic support. Not having an accessible mentor-like figure this interviewee also associated with being slower at understanding the

requirements of the medical field and how to best fit in and maximise their learning opportunities.

Interviewee: but I didn't know whether, I didn't know whether I was allowed, that was the done thing, [**Interviewer**: right] ehm and that, this might surprise you, I don't know, but I didn't know what the word clerking meant when I went onto the wards for the first time, 'go and clerk a patient', [**Interviewer**: mm] ehm and I, there's one particular student in my year whom I was on attachment with a GP in second year, and he definitely, I mean he's definitely got direction, I don't know where he's getting it from, but he's got direction, knows what he wants to do, knows a lot about different things. He would get bored of GP, he would say 'oh this is not really good', and ehm and he'd go away, and then you'd come back next week and say 'yeah I didn't like GP last week, so I just walked on to the ward and did some clerking,' and I didn't even know what clerking meant and I felt, ((laughs)) I felt stupid, and it just, it took me longer because I've not had someone to ask what my role was on that ward, [**Interviewer**: mm] (int 8, p.11)

The interviewee is now aware of how by lacking a mentor-like figure this may have affected his learning. He compares himself with a peer who appears to have more "*direction*" which is perceived as knowing more and also knowing how to get the best out of learning opportunities. Interviewees were aware that by developing an appropriate habitus their chances of networking and gaining favour with senior doctors and ward staff are increased.   The processes of networking were then perceived to be able to improve students' learning experiences and hence in a self-perpetuating cycle go on to increase their social and cultural capital, as one interviewee explained to me:

Interviewee: with like socialising, I mean making, friends higher up [**Interviewer**: right] because even though it's not, it's not something that you'd like to say but eh with medicine there is a lot of eh making, knowing your

consultants well, [**Interviewer**: mm] and knowing your future employers [**Interviewer**: yeah] and some people from the get go, [**Interviewer**: yeah] kind of know that, [**Interviewer**: yeah] because they're from backgrounds where it's eh kind of implied, [**Interviewer**: yeah] whereas with poorer backgrounds, you're not used to that scenario, you're used to working, you're kind of I'm guessing they're used to working hard, [**Interviewer**: yeah] to get what they want

Interviewer: yeah I mean what's so, so what advantages do you get do you think by socialising, making contacts?

Interviewee: you kind of put yourself in a different community, [**Interviewer**: mhm] and that is very good for knowing what you need to do, kind of, it prepares you for FY1 FY2(first two years post graduation) and where it gets to ST (specialty) training [**Interviewer**: yeah] so it tells you cos with with the eh the older people, older people know exactly what it, what they need to do to get to where they are, [**Interviewer**: yeah] and if you're only talking to students, [**Interviewer**: yeah] you're not going to find that out (int 4, p.16)

By networking this interviewee believes he will increase his knowledge of what is required in order for him to practice as a doctor. How Luke describes Bourdieu's self-perpetuating structuring inter-relationships between habitus, field and capital increases our understanding of how medical students perceive and go on to create and sustain a durable undergraduate medical habitus that facilitates their learning. Furthermore by better understanding how an undergraduate medical habitus develops the issues and processes involved when students struggle can be elucidated.

Processes underpinning medical students' learning

Introduction

Tensions in current educational discourse, what constitutes legitimate medical knowledge and how a deeper understanding of sociocultural models of learning can contribute to exploring issues of medical student learning important to this thesis have been acknowledged (Chapters 4 and 5). This section examines issues that arose from the individual interviews that underpin medical student learning, highlighting aspects which motivate interviewees, what knowledge interviewees consider necessary, the processes interviewees observed underpinning how they learn, and overall the value of clinical exposure.

Motivation to learn

Similar to Becker (Chapter 2 p. 23) interviewees identified both short and long term perspectives that highlight issues concerned with how students prioritise what and how they learn and what influences their motivation to learn. One interviewee commented that:

Interviewee: There is a path that's there and it's laid out for you, and that's exciting because you don't need to lay down the foundations on that, you can just simply walk along the path, jump the hoops and skip the hurdles (int 5 p.13).

Much of this section discusses how interviewees see themselves "*jumping hoops and skipping hurdles*".

Interviewer:	what would you say your priorities are, as a medical student?
Interviewee:	ehm becoming competent, [**Interviewer**: mhm] cos I'm in final year so ((laughs))
Interviewer:	((laughs)) pressures on
Interviewee:	yeah
Interviewer:	yeah okay and that's, that's your current priority yeah [**Interviewee**: yeah] long term priority?
Interviewee:	ehm graduating
Interviewer:	graduating, [**Interviewee**: yeah] and would that have been different to, if you can remember back to when you first joined?
Interviewee:	ehm I don't think, well I think probably when I first joined my priority was passing first year, [**Interviewer**: yeah] and it kind of has been every year [**Interviewer**: yeah] just to kind of pass this year [**Interviewer**: yeah] ehm so I don't think it, it's really changed cos I want to pass this year now so, yeah (int 1 p.9)

This interviewee expresses the common goals of academic success indicated by passing end of year examinations and finally graduating. The interviewee also states she wishes to become competent, and in this context this means competent to practice as a doctor. Other interviewees also voiced a longer term goal of wishing to become a doctor but also as in the following instance, a good doctor.

Interviewer:	you mentioned your goal, what is your goal?
Interviewee:	ultimate goal is obviously to become a good doctor
Interviewer:	right, [**Interviewee**: yeah] do you think that's a common goal, for medical students?
Interviewee:	yes, become a doctor, not become a good doctor just a doctor, because obviously like that group I was telling you about (*the wastes*) I don't know how fussed they are whether they're a good doctor or a normal

doctor or what even is a good doctor in their opinion, [**Interviewer**: mm] but they just obviously their goal is to pass, pass medical school, [**Interviewer**: right] graduate with an (MBBS) but my goal is not that, my goal is to become a good doctor, I don't just want to be a doctor I want to be the best if I can (int 7, p.9)

Becker too found that towards the end of their training medical students lost their previously gained cynicism, strove for excellence and developed more patient-centred altruistic goals. However this interviewee whilst wishing to be the best doctor she can also believes that for some students just passing is good enough for them. This illustrates the variability of work ethic that exists within the student cohort, how students with similar work ethics may associate together as previously discussed (p. 270), and as examined later may go on then to encourage and support each other academically. Interviewees have previously described their perception of non-traditional students as hard working. This may be associated with more dedication to studying rather than being necessarily aware of what may be required to succeed in the longer term as explained by another interviewee's comments below:

Interviewee: I find though generally, that non-traditional students are more academically focused, and ehm traditional students are more career focused, does that make sense? It's just something I've noted, [**Interviewer**: yeah] ehm they tend to be more sort of future thinking, future minded, and non- traditional students are sort of more 'oh I have to get, you know, this much percent in this exam, I have to do this, I have to do that, and if I don't my life is over', [**Interviewer**: ((brief laugh))] kind of thing, and they tend to stress a lot more about exams [**Interviewer**: yeah] and things and the current things more so than, maybe not so good at planning ahead

Interviewer: why, why do you think they're more, they think it's more important to do well at the assessments?

Interviewee: ehm, maybe because, maybe because that's how they got into medical school, because they got in, by sort of really working hard to get the best grades, and consistently got the best grades, and they associate success with getting the best grades, perhaps (int 9, p. 11-12)

Interviewees perceive differences between traditional and non-traditional students with students who come from less privileged backgrounds motivated to work hard as they associate their success with academic achievement whereas traditional students may be better aware of how their career trajectories may also be influenced by other issues. A further two interviewees comment about how they are aware that non-traditional students appear to work harder and postulate the reasons for why this may be:

Interviewee: I think that people who end up, who are, who are from, people who are from these backgrounds, [**Interviewer**: mm] are less likely to get in first time round, [**Interviewer**: mm] because they don't, because of the help or the enthusiasm that is given to them by their teachers, [**Interviewer**: mm, mm] and when they do get in they work a lot harder, people who are from underprivileged backgrounds, [**Interviewer**: mm] I think in my opinion they work a lot harder in terms of their lectures and exams, [**Interviewer**: sure, yeah] and people who fail a lot more are from, are from backgrounds who are not underprivileged, [**Interviewer**: mm] and people who tend to take work less seriously (int 2 p.17)

Interviewer: do you think their goals might be any different?

Interviewee: someone of a working class background, I, for some reason I think someone like that would maybe be more sort of driven than someone like me, [**Interviewer**: mm] I don't know maybe cos they, I I know I'm generalising but maybe they've worked a lot harder to get here (int 7, p.9)

Interviewees observe that non-traditional students work harder to get into medical school possibly without the assistance that their more traditional peers have received and once here appear to take their academic studies more seriously. Non-traditional medical students are perceived to be more

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"driven" or motivated to do academically well possibly because of this initial lack of help.

Another issue that interviewees described in association with motivation was their interactions with the faculty. Interviewees wished to impress their consultants who they recognised were responsible for their assessments.

Interviewee: I think it was a change to actually be in front of consultants and follow a consultant and actually feel the need to answer questions or ask questions and know things erm because you don't want to be embarrassed and you don't want to come across that you don't know anything, so you brush up on things, which is good (int 14 p.6).

These comments illustrate how interviewees' appreciate how the clinical environment and interactions with faculty differ from their earlier more anonymous university-style teaching. Interviewees observe that they are much more noticeable and are expected to actively participate in clinical teaching. Whilst the above interviewee's comment is fairly neutral in terms of emotion the following interviewee illustrates what effect a consultant can have on a student's motivation to learn.

Interviewer: mm so for you was it most important what the consultant said or what your gang of mates said?

Interviewee: at the time it was what the consultant said, I don't know whether I should have, you know, paid more attention to what my peers were saying or what he was saying, but I'm very sensitive, and I can't, I don't like it, [**Interviewer**: mm] I didn't like that fact that he thought I knew nothing, [**Interviewer**: mm] that's just ruined the whole relationship for me I just thought that's it, he's not going to ever believe in me now, [**Interviewer**: mm] so that's that firm failed not that I failed it, [**Interviewer**: mm] but you know I give up like that quite quickly

Interviewer: so you didn't fail it did you?

Interviewee: no no I think I proved myself towards the end, because I really made an effort after that, [**Interviewer**: mm] cos I thought I'm not going to have him you know think that I can't do this (int 7, p.13)

This interviewee reveals how important she thinks her relationship is with her consultant by acknowledging how deflated she feels because she values a consultant's positive opinion of herself. She then goes on to say how she made more of an effort and "*proved herself*". These sentiments resonate with the earlier comments made in the focus groups concerning "*tough love teaching*" (p.255). Whilst this scenario may have had a positive outcome in terms of motivating this interviewee to work harder some medical students will become so disheartened following negative feedback that they disengage from studies.

Interviewer: What does clinical education give you, anything else?

Interviewee: I think it gives you confidence.

Interviewer: Okay.

Interviewer: Because if you are able to have a discussion erm an academic or intellectual discussion with a consultant and you can hold your own, in terms of being able to discuss with somebody at the top of the hierarchy, so I can see a certain level of confidence and you think, 'well hang on I am doing something right here', or 'I have learned something' or 'I am learning the way I ought to be learning'. The feedback that you sometimes get from the consultants if it happens to be positive that is a very good confidence booster. Erm I have had that happen to myself so I can say that it really does help. If I feel, in the same way that it can knock your confidence as well if you feel as well that a consultant has not been as sympathetic towards you as a medical student for whatever reason and maybe they are thinking that your knowledge base isn't all that great or whatever, can knock you back as well. (int 11 p.3)

The relationships interviewees describe that medical students have with their teaching consultants appear to affect a student's motivation to learn on several different levels. Most simplistically students are assessed by their consultants and so will wish to act and appear to know sufficient to pass the assessment criteria. Interviewees value the consultant's opinion of them and this appears to be related to their self-esteem and how students see themselves as potential doctors. For some interviewees either a positive or negatively perceived relationship with a consultant can significantly enhance or reduce their whole learning experience.

Legitimate medical knowledge

Interviewees were asked what they thought they needed to learn and know in order to practice. The definition of knowledge as both "theoretical and practical understanding" was introduced in Chapter 5 and is helpful in determining professional competence (Eraut, 1994, p.16). Eraut also described professional knowledge as made up of differing types of knowledge, principally propositional, process and personal (Eraut, 1994). These definitions facilitate further understanding of the interviewees' responses. Additionally interviewees commented on how they made decisions concerning what and how much to learn concerning the range and depth of medical knowledge.

Interviewees gave illustrations of what they thought they needed to know:

Interviewee:　you have to know the basics [**Interviewer**: mm] eh so there's human anatomy, [**Interviewer**: mhm] physiology pathology ehm so just knowing those things that's knowing the theory and then knowing people as well, knowing what people are like, what, knowing how to dissect a situation,[**Interviewer**: mm] and how to problem solve, knowing how to, I suppose all those things, [**Interviewer**: mhm] knowing what to do. Its a big thing as a foundation doctor [**Interviewer**: mm] ehm where you constantly put under pressure, you're constantly having to make decisions [**Interviewer**: mm] ehm and you've got big responsibilities obviously [**Interviewer**: mhm, mhm] ehm so knowing what to do is [**Interviewer**: mm] is something this year I'm finding I'm having to learn a lot more of eh sounds very vague though, knowing what to do (int 3 p.15)

This Interviewee is aware that he needs to know sufficient theoretical or propositional medical science but also more than "*the basics*". He describes it as "*knowing what to do*" and he and other interviewees, such as the one below, described similar issues concerning what they would need to know in order to take on the responsibility of being doctors as opposed to being students. These issues involve cognitive, procedural and affective competencies and collectively enable a medical student's professional development.

Interviewee:　mm, knowledge, [**Interviewer**: yeah] need to have knowledge, and they need to know, just, ways of interacting with patients and other colleagues and [**Interviewer**: yeah] how kind where to sit, the way you speak and the way you do things and your mannerisms and stuff, and how to, how to act with patients and colleagues I think is an important one there, people need to learn (int 6 p.17)

Knowing what to do and how to act alongside the requisite theoretical knowledge highlights many of the attributes discussed in developing a

medical habitus. Interviewees are aware of the importance of learning non-clinical material as well as practical procedures and clinical skills as the following interviewee's comments demonstrate:

Interviewer: Okay. What, what sort of things do you learn on the ward?

Interviewee: Um, um, it depends. Er, I mean the clinical skills, practical skills.

Interviewer: Hmm.

Interviewee: Um, um, I think now more than I did when I was a third year now when I've been on wards I've just been trying to look at what F1s are doing thinking I need to prepare myself for that (int 15 p23).

Once in their final year of study interviewees appreciate that the "practical understanding" Eraut outlines as part of professional knowledge begins to play a more significant role in determining what is required of them to know before graduating.

Interviewees did not give any examples of where they perceived traditional compared with non-traditional students' opinions might differ in what content to learn but there were some subtle differences in the processes underpinning how much or to what level they might decide to learn. Student perspectives on how interviewees prioritise and cope with a heavy academic workload have already been introduced (p. 243-4) and so suffice it to add here that interviewees continued to voice similar concerns and additionally discussed how to pace their learning specifically to match curricular and personal time constraints.

Interviewer:	I mean how, how did you decide what to learn any rate?
Interviewee:	No I don't think you know how, what to benefit.
Interviewer:	So but I ...
Interviewee:	You're sort of overwhelmed …
Interviewer:	Yeah.
Interviewee:	…with what you should know. (Laughs)
Interviewer:	Because it seems so much.
Interviewee:	And sometimes I think god I've got to learn this now I've got to learn this. (Laughter) Where am I going to start?
Interviewer:	And, and I think my question to you is when do you know you've learnt enough as well?
Interviewee:	I don't think you'd ever know, never know …
Interviewer:	Alright. I saw you with a … it was this dermatology book wasn't it?
Interviewee:	Yeah.
Interviewer:	Okay so it's … I mean so how do, how do you decide what dermatology to learn?
Interviewee:	Yeah. Yeah I was thinking that earlier actually. (Laughs) How much to learn. Um, I don't know I just think that the time constraints mean that there is only so much you can learn (int 15 p28-29).

The next quotation additionally conveys how interviewees select what to learn:

Interviewer:	Okay I mean do you think there is any difference between students in terms of their work ethic?
Interviewee:	Okay erm I think there is definitely.
Interviewer:	Yes, tell me what you think about that.
Interviewee:	Okay based on my own experiences and I have other commitments too that you are aware of so I have to constantly make sure that I am learning the right amount of information in the right way that I can relay it back if

a consultant asks me a question concerning a particular subject matter. To know when to ask the right questions and to be very selective about getting through the exams at the end of the day as well, because at medical school it is all about sitting the exams and just getting through it, one hurdle after the next. So I think it is about being selective about what you need in order to pass the exams but at the same time not using that as a way of compromising you as a doctor, with that doctor patient relationship at the end of the day in terms of your knowledge base, as you need to know that too. (int 11 p.2)

This interviewee highlights how she prioritises her learning according to the examination requirements although she also appreciates that this needs to balance with what she thinks she will need to know in order to practice. These issues resonate with earlier themes from the focus groups of work overload and tensions between learning that focuses on passing examinations to the occasional detriment of what is required to practice. Fortunately interviewees were helped to identify what and how much to learn by gaining consensus from other students, as explained below:

Interviewer: Do you think some study habits are fostered or encouraged by the people that you hang around with?

Interviewee: Yes, yes I do, erm it rubs off when you see erm if you hear other people asking each other questions you makes you think 'oh I should be learning more', erm you see somebody's notes and you think 'oh that is a good way of doing it', and I think we ask each other quite a lot of the time, you know, "how are you doing? What do you do? How would you tackle this issue?" And about assignments as well, we always ask each other how we are getting on and what sections we have done and how did we go about it (int 12 p10).

Interviewees have previously highlighted that they tend to form relationships and networks with students from similar backgrounds. These social groups

provide academic and social support for medical students who usually experience a sense of commonality within these groups.

Interviewer:	I mean you mentioned several times the importance of your friends in supporting you. I mean do you think a student's group of friends or the people that they tend to hang around with actually affects what they learn?
Interviewee:	I think it can …
Interviewer:	Yeah.
Interviewee:	…it depends on how you take it really, erm, but I think it certainly can, your friends can influence you I would say (int 10 p.15)

The ways in which interviewees thought their friends may influence their learning was further explored. Academic support in terms of students checking with each other about how to revise and how much depth to go into are common concerns which help establish an agreed baseline from which students tend to compare themselves with. Consensus on what and how much to learn interviewees highlighted as important early on in their course but still remained important issues for some interviewees further on in their studies.

Interviewee:	in first year we did a lot of group discussions towards the end of our exams [**Interviewer**: yeah] but I think it's because in first year we had, we didn't exactly know what was coming up, [**Interviewer**: mm] it was the first experience and it's better having a lot of people there because [**Interviewer**: mm] everyone has their own input everyone has a different idea (int 4, p.4)
Interviewer:	you gave me a sense that perhaps your friends ehm helped you decide, when to start revising and how much to do, [**Interviewee**: yeah] so tell me about that

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Interviewee: you do, you do, you talk to your friends and you say, [**Interviewer**: mm] I've only done this, or I've done this, [**Interviewer**: yeah] and you kind of, just to gage where everyone, everyone's at, because you need to know, you need to work out timelines with them, [**Interviewer**: yeah] not obviously with a piece of paper, [**Interviewer**: no, okay] but you're just talking and you're saying, [**Interviewer**: yeah] 'oh right, yeah, I've only done this and that. You just talk like that, [**Interviewer**: yeah]   and that helps you figure out where you're at and where you should be (int 6 p.11)

One interviewee, whilst recognising the usefulness of some students comparing themselves with each other academically, claimed that knowing how other students performed was not of interest to her.

Interviewee: Because I you know because you're not sure are you where, er, what the standard is for everyone else .

Interviewee: Um, yeah I think some, I think some people really like doing well in the exams.

Interviewer: Yeah for their own sake.

Interviewee: I'm not, I wouldn't ever ask anyone else what they got in their exam result. I just, I wouldn't think that was anything to do with me.

Interviewer: (Laughs) Yeah.

Interviewee: I just wouldn't. That just wouldn't come into … but I can kind of see people doing that and having … they want to know what someone got so they're judging themselves against that. But that doesn't worry me at all. (int 15 p. 34).

Pertinently this interviewee has elsewhere commented (int 15 p.17) that she sometimes feels not fully integrated into the medical student culture and frequently observes how some aspects of the student culture make her uncomfortable. Issues that arise from this are that if medical students for whatever reasons are not fully socialised into the student culture they may

miss opportunities to seek advice and compare themselves academically to their peers. In general interviewees observed the usefulness of coming together and sharing their knowledge.

Interviewee: When it comes to dealing with examinations everyone starts to adopt similar techniques, or starts thinking about it cos everyone cos before you're set, because you're from different schools you're different, [**Interviewer**: yeah] but once you're in medical school you [**Interviewer**: mm] because you integrate yourselves with each other, [**Interviewer**: mm] you kind of do become, you start using similar ways of learning and start [**Interviewer**: mm] eh helping each other in different ways (int 4, p.4)

Furthermore medical students who socialise with other students who are poorly informed, academically weak students or simply inexperienced may not glean the appropriate information to best inform themselves about what to study, how much and at what pace to not only pass examinations but also to practice.

Interviewee: I think by second year people who find it difficult to do that, definitely did try eh identify other people [**Interviewer**: mm] who had similar difficulties, like some people might have failed, and so by failing they know that they, they need to start earlier, [**Interviewer**: mm] and they would have met other people like them, [**Interviewer**: mm] and hence then you would get a group of people who know they need to start earlier, [**Interviewer**: mm] so they would start earlier , [**Interviewer**: yeah] in order not to fail the next year

Interviewer: alright, so the so people are pacing themselves, if I've got this correctly, according to

Interviewee: what they feel their potentials are

Interviewer: which is demonstrated by whether they've passed the exams or not

Interviewee: yeah (int 4 p.7)

Whilst these students may have much in common and share the need to start revising in good time the overall benefit of them collectively revising together exclusively is challenged as they would then omit opportunities to judge their progress with other perhaps more able students who may be better informed about the requisite standards.

The multi-faceted nature of clinical exposure

The issues underpinning medical students' learning highlight how clinical exposure, which provides medical students opportunities to see and practise what doctors do in authentic settings, is a common thread within the interviewees' discourse on what instigates, defines and sustains their learning. Much of what students think is required of them to know and do is based on what they see in clinical settings and on what they observe consultants and other doctors doing. For many medical students clinical exposure is the crux of their learning as this interviewee highlights:

Interviewee: For me you want to be in and be a good student and learn from being in because you do really learn from being on the wards, it is much better to see the patient and the symptoms on the patient or feel the examinations and things like that, or see the surgery and understand this is what it actually looks like, the disease process (int 14 p. 7)

Interviewees found starting their clinical training exciting and motivating as illustrated by the comments of two interviewees below:

Interviewer:	okay, alright, ehm what about clinical, so when you went into the third year and you started going onto the wards, how did that affect your learning?
Interviewee:	I think clinics is the biggest change students can see, and you'll see people who in first and second year, who wouldn't be bothering with anything, they would just pass, [**Interviewer**: yeah] you would see them suddenly jump up and start working harder because they've found something they're interested in, [**Interviewer**: okay] because it's the reason they chose medicine [**Interviewer**: yeah] and it's finally come along, [**Interviewer**: yeah] and I sort of in my first, in my first year where one of my friends she didn't really do that well until she got to clinics, [**Interviewer**: yeah] when she got to clinics she loved clinics so she spent all her time catching up, [**Interviewer**: yeah] and doing what she needed to, [**Interviewer**: okay] she became a lot more motivated to do it, [**Interviewer**: right, yeah] and I think that happens a lot in, when it comes to clinical years (int 4, p.7)

Interviewer:	What about going, going from second year to third year, and going onto the wards, [**Interviewee**: yeah] how was that for you?
Interviewee:	ehm exciting, [**Interviewer**: yeah] there's a big difference [**Interviewer**: yeah] ehm
Interviewer:	did you like it?
Interviewee:	I enjoyed it, definitely did enjoy it it did, there was a lot more patient contact, [**Interviewer**: yeah] ehm and you got to feel like what it might be like as a doctor [**Interviewer**: mhm] ehm yeah
Interviewer:	and how did that make you feel?
Interviewee:	ehm well excited I suppose, [**Interviewer**: mhm] kind of, it meant having to apply your knowledge constantly, [**Interviewer**: yeah] ehm so there was more studying involved, [**Interviewer**: mhm] I suppose (int 3 p.12)

Interviewees were aware that they began to feel more like doctors, the patient contact motivating them to learn as they could now see the relevance of the theoretical and scientific material they had covered previously. Brown's description of his theory of cognitive apprenticeship illustrates how medical students may apply their conceptual knowledge just like using a "*set of tools*"

given authentic opportunities similar to the settings in which doctors practice (Brown et al, 1989, p.33). These issues also highlight the previously discussed ideas of Lave and Wenger who stress the importance of the situatedness of knowledge production, how learners can develop their professional identity, and learn how to participate in professional practice appropriately (Lave and Wenger, 1991). Some interviewees voiced the value of feeling part of the whole medical team both in terms of motivation to learn and also in increasing their sense of responsibility to the team.

Interviewer: Is there anything else which encourages your motivation to learn once you enter the wards?

Interviewee: Erm I think you feel more like a doctor, you feel more like a part of the team and generally all my firms have been quite good, they make me feel like part of the team. So you feel like 'yes I have got to be in there' in the morning, sometimes with lectures although probably we shouldn't say it to yourself, but you wake up in the morning and 'I don't really want to go', you might not go to a few but with firms I never miss unless I am ill for example.(int 14 p6)

This interviewee describes how by "*feeling more part of the team*" she feels required to attend and presumably because she describes her "*firms as quite good*" at making her "*feel part of the team*" she has begun to develop an appropriate medical habitus that facilitates her fitting in with the ambient etiquette of this ward and team. The important role of developing a medical habitus in students' professional development has been previously outlined p.298 and it is emphasised that without sustained appropriate clinical exposure and involvement with clinical teams a student will struggle to develop in this way. This is illustrated by the following interviewee's

comments that contrast her demotivating third year clinical experiences with her more recent clinical exposure.

Interviewer:	Is there anything that you find particularly motivating that, that encourages you to learn, makes you more part of things?
Interviewee:	When I was in third year, there were always … there were too, there were just too many students on the firms and we were just, we were just in everybody's way I think really.
Interviewer:	Hmm.
Interviewee:	Um, and that was quite de-motivating. So when especially this year (final year) when I'd been on firms where there's been less students … so you can be more involved and everyone knows who you are and, and, and therefore you know they know what, why you're there and what you're trying to do then. Anyone from the nurse and so on …
Interviewer:	Hmm, hmm.
Interviewee:	…then you feel more part of the team. (int 15 p.37)

This interviewee observes that when she was a more junior student she felt less involved and not part of the team but during her final year attachments she felt more part of things and welcomed. She interprets this as due to the number of medical students being allocated to firms. However alongside other interviewees' comments noted previously concerning their professional development p. 301, some of her earlier demotivation from not feeling part of things may have resulted from a lack of clinical exposure and an as yet poorly developed medical habitus. These features also resonate with Lave and Wenger's conceptualisation of legitimate peripheral participation where medical students gain in knowledge and experience and feel more like a team

member as they increasingly participate in the daily routines and clinical activities of the ward.

Clinical exposure also helps interviewees decide what material to learn.

Interviewer: How do they decide which bits are most important do you think?

Interviewee: I think based on clinical exposure on our firms on our rotation you will see certain cases that come up over and over again all the time. There were particular conditions erm the valve problems came up a lot so in order for me as a medical student to know that, of course learning key topics in cardiology does help based on what your lecturers will tell you or the curriculum emphasises, at the end of the day in terms of firms there will be certain things that will keep on coming up over and over again and it does help you. (Int 11 p.3)

Interviewees observed that clinical exposure encourages students to learn about common cases and what patients frequently present with. Interviewees also provided other examples of how clinical exposure interacting with patients helped them prioritise their learning.

Interviewee: … with your other colleagues, I think that's why, erm, and it puts you in a situation really, the patients actually start to ask you questions, you know things like why have I got this? Do you think this is what it is and, erm.

Interviewer: That's down to knowledge though isn't it or?

Interviewee: I think it is about knowledge but also at the same time how you say it to the patient (int 10 p.19)

An earlier discussion highlighted the tensions some interviewees felt in choosing whether to prioritise examination preparation or clinical learning. Interviewees described how as they progressed into their clinical studies

matters of clinical relevance tended to take precedence such as how to talk with patients. However whilst clinical exposure aims to enhance medical students' learning students may perceive the clinical environment which is set up to primarily treat patients rather than teach students as unstructured and not providing sufficient support or guidance for students.

Interviewer: how important do you think clinical exposure is for your learning?

Interviewee: I mean some things … I mean I think and maybe because I'm just not interested in surgery but I just think sitting in endless surgeries …

Interviewer: Yeah.

Interviewee: … is of, is of no benefit to anybody's learning even if …

Interviewer: Hm.

Interviewee: … I was in, um, because you know it's good to get an idea and maybe see one operation once but there's no point watching for us … you know I was on, um, orthopaedics a couple of weeks ago and, er, and I stood in surgery one day watching like the same operation and I was thinking what is the point of me … I've seen it once I don't need to understand this. The intricacies of what you know.

Interviewer: Hm.

Interviewee: So that, so that in that respect I, I don't know. Um, I think yeah it is important to get clinical experience but then there's a lot, there's a lot of time on a ward which I just, it's just there's … I think as medical students you just learn that you're kind of be waiting around for things to happen. Half of your life or more than half of your life is spent waiting for things to happen. (Laughter) (int 15 p.37)

Clinical exposure can be invaluable for students' learning and how students avail themselves of the opportunities that such experiences can bring is of great interest to this thesis. Understanding further how some students from non-traditional backgrounds may initially struggle in interacting appropriately

by developing a medical habitus because of a lack of relative capital has been explored. However the development of a medical habitus is principally concerned with the professional development of students and tends to neglect the theoretical aspects required of a medical student's knowledge base. The next section looks at the opinions of interviewees concerning how they perceive they learn the necessary knowledge, including specifically the medical science, for them in order to practice, additionally highlighting any perceived differences between traditional and non-traditional students.

How do medical students learn?

In Chapter 5 Young's theory of social realism encouraged an examination of the role of what he calls "objective knowledge", the processes by which it is formed and propagated within the curriculum, and how practice may be affected by these concerns. Interviewees have identified various types of knowledge that they think are important for their future practice as doctors; prepositional medical science, clinical and communication skills, and professional knowledge, akin to what Eraut calls tacit knowledge. Insights into how students decide what and how much to learn have been discussed with the overall value of clinical exposure highlighting significant issues. How interviewees again value the development of collective student perspectives but also perceive differences in how individual students approach their studies are outlined next.

Interviewer: So thinking about your learning and you say you help each other out and that, erm I mean in what specific ways do you think that you help each other learn?

Interviewee: Well what we used to do in Floyer (student accommodation) actually in halls was they would sit in a massive group like in the kitchen and everybody would try and do like a topic and then teach it to each other.

Interviewer: Oh right.

Interviewee: So that was quite effective, or then they would do questions together and normally some people, everybody had a different knowledge so you can use each other's knowledge to kind of, if you don't know something somebody else might and then they can answer the question and explain why. So you kind of learned off each other that was helpful (int 14 p.4).

This interviewee can identify examples of how medical students within their social groups can effectively learn together. Other interviewees gave similar examples of how medical students within their social groups learnt together to facilitate their studies, as the interviewee below explains:

Interviewee: In terms of helping me with my medical education, [**Interviewer**: mm] we practice things, we book things, like in the Barts centre, [**Interviewer**: right] for clinical skills and we'll go altogether, [**Interviewer**: mm] and do skills and clinical skills, just time to revise, examinations and other clinical skills, [**Interviewer**: yeah okay] that sort of stuff (int 6 p.11)

These interviewees can identify and are aware of the benefits of learning together; sharing knowledge, setting standards and providing feedback on each other's performance.

Interviewees were also aware of individual differences in students'
approaches to their learning

> **Interviewer:** I mean is there anything else that's different between the, some groups of students and that they struggle more with coming into the clinical years?
>
> **Interviewee:** Um, I don't know if it's … I think you've got to be quite self-motivated.
>
> **Interviewer:** Hmm.
>
> **Interviewee:** And there is a lot of times I think on the wards that you kind of get knocked about. You know you go in and then teachings cancelled and then it's not really worked you know.
>
> **Interviewer:** Hmm.
>
> **Interviewee:** And I think it's very easy perhaps if you're not that motivated or maybe not that confident just to either go home or, or then think …
>
> **Interviewer:** Hmm.
>
> **Interviewee:** … I'm not going to come in (int 15 p26).

How the medical field, the clinical environment, is viewed by interviewees has
been discussed p. 299. Interviewees sometimes find the clinical setting harsh,
uninviting and unstructured leading to being very uncertain about what they
should be doing. If a medical student is also unconfident about how best to
learn effectively on the wards then their motivation may be affected.

> **Interviewee:** The good thing is I had two girls on my (firms) who were very good at making me go out there, [**Interviewer**: mm] and so because it forced me to be a lot more, cos I'm quite, I'm quite shy, [**Interviewer**: mhm] it forced me to be a lot more outgoing, forced me to be to kind of, make myself more aware of what I need to be able to do and to go out and ask for what I need to be able to do because usually I'd, I'm the type of person who would if I don't understand something I wouldn't ask, I wouldn't want to ask a question, the teacher a question in case it made me feel maybe eh felt it was an inadequate question to ask, [**Interviewer**: mm] I'd always go back and learn it, [**Interviewer**: mm] but I mean clinics kind of teaches

you that, at this point you might as well ask and just deal with it, [**Interviewer**: mm] you have, I mean you have to know it's, it's eh and you might forget to go and look up later on as well, [**Interviewer**: mm] (int 4, p.9)

Fortunately for this interviewee he benefited from being placed with two more confident graduate-entry students on his firm. The camaraderie which ensued encouraged him to take a more proactive approach to his learning, and by then knowing more he began to feel more confident. Taking such a proactive approach to their learning involves confidence and interviewees perceived that students from non-traditional backgrounds with less social and cultural capital appear and may feel less confident in their approach to their studies. This may have a detrimental effect on what they learn. Such students may not feel able to ask questions, interact fully with the teaching staff and so not effectively participate in their learning. The value of the supportive relationships between medical students which facilitates overcoming this perceived disadvantage is therefore not to be underestimated.

Spectrum of learning models

Interviewees were asked to describe how they learn what they need to know in order to practice as a doctor. This data sheds light on previous tensions outlined in Chapter 4 concerning the dual nature of knowledge and in particular how interviewees perceived needing to balance learning the theoretical aspects of medical science with what they felt they needed to practically know to become a doctor and do the things that doctors do.

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One interviewee succinctly describes how he feels he gains the required knowledge.

Interviewee: There's virtually no responsibility as a medical student, [**Interviewer**: mm]   your only responsibility is to learn as much as you can, [**Interviewer**: mhm]   and your only responsibility is to absorb as much information as you can and you're a sponge, [**Interviewee:** mm]   so you take in and you absorb as much information as you possibly can, [**Interviewer**: mm]   and that's your responsibility, that's for yourself, [**Interviewer**: mm]   when you become a doctor you have responsibility for others (int 5 p.14)

The interviewee's claim that he feels no responsibility as a student resonates with Becker's ideas outlined earlier that students are only concerned with what is relevant for them. So this interviewee perceives that as he has no responsibilities for others, he is only learning for himself, he would be motivated to "*absorb as much information as possible*" presumably to pass examinations. This interviewee doesn't specify here the sources of his information and it is speculated that he means information from multiple sources, books, electronically, and clinical experiences. If this is the case the people interviewees come into contact with during their studies may present valuable learning resources as another interviewee identifies:

Interviewer: How do you think that knowledge base which enables you to practice, comes about? How do you learn what you need to learn?

Interviewee: our peers so whether it is our friends at the medical school or consultants or other doctors or other members of staff erm forming part of the erm multidisciplinary team and just asking questions if you are not sure of anything (Int 11 p.2)

This interviewee alludes to issues associated with interacting with people, members of a medical team, perhaps beginning to feel part of that multidisciplinary team and understanding what it is that they do. These issues and their underlying processes associated with student learning do not reflect the metaphorical attributes of "*being a sponge*" referred to earlier. A further interviewee expands upon these issues describing how what she prioritises and how she learns has changed as she has progressed and is now in her final year of studies.

Interviewer:	And by seeing what they're doing, observing them (junior doctors) is, is that enough preparation or, or would you think of doing something specifically after you've watched them do something then?
Interviewee:	I mean no I don't think it's enough but, but I think it's just part of … I'm trying to think. I mean I'm thinking more along the … I mean obviously if it was the admin kind of side of things which I just kind of ignored last year what they were doing.
Interviewer:	Yeah.
Interviewee:	And I was thinking why I need to know this.
Interviewer:	Yeah. (Laughter)
Interviewee:	I was worried about learning the medicine or something, now …
Interviewer:	Yeah.
Interviewee:	but now it's more about learning the actual skills er, the actual job kind of thing (int 15 p.24).

This interviewee raises issues that underlie the processes of learning to become a doctor. Initially she describes her frustration at being exposed to what she perceives as irrelevant material (administration) whilst on her clinical

placement. She confirms her initial interest was solely in medicine or more specifically facts and procedures associated with medical prepositional knowledge. However as she nears the end of her time as a student her perspective has changed and she becomes more aware of the need to learn "*the actual job*" i.e. what it is that newly qualified doctors are required to do.

The process involved in learning these aspects of medical practice repeatedly highlights the value of clinical exposure and as the following interviewee illustrates the significance of participating in the activities of the clinical ward and its team.

Interviewer: mm, and what sort of things do you think you're learning in third fourth and fifth year?

Interviewee: I think you're learning to become a type of person

Interviewer: right, what, more so than actual medical facts, or procedures?

Interviewee: yeah, maybe on the wards, yeah maybe because I think you pick up so much without really being aware of it, and you can kind of tell the people who have been to firms and the people who haven't, [**Interviewer**: mm] just from the way they are. They know where to go to find certain things, they know where to get the notes from, they know who to speak to, to get things done, [**Interviewer**: mm] ehm because they've just had that experience, ehm and I think more so, maybe, that's probably what you learn more so than medical facts because that you can pick up from a text book, that you can pick up from other things, [**Interviewer**: mm] ehm I think that is probably, this is probably the most important type of learning which you do get on the wards, which is why I think it's imperative that ward based teaching must exist in the medical curriculum (int 9 p.17)

Several important points are made by this interviewee who identifies that the "*type of learning*" occurring on the wards is important for subsequent practice, goes beyond medical facts and is associated with personal clinical experience. The interviewee is aware of significant differences between those

medical students who have "*been to firms*" and those who haven't and also relates their learning to becoming "*a type of person*". These observations resonate with aspects of sociocultural learning theories that focus on the trajectories of learners and who they wish to become. The interviewee identifies students who have "*been to firms*" from the "*way they are*", and because they know where items of importance are kept and how to get things done. This implies that these students have participated in the daily activities of the ward and "*picked up*" relevant knowledge in the process. Sociocultural learning theories emphasise the importance of learners' participation in the routine work of the community to which they wish to become a member. By participating in the routine clinical activities interviewees are aware of and learn to do what will be required of them when they graduate.

Interviewees also perceive how participating in the clinical environment facilitates their learning of clinical medical science as well as practical issues. One interviewee recalled how he found starting his first clinical placement and how what he saw and did during the day provided him with opportunities for learning and also motivated him to learn further on his own in the evenings.

Interviewee: In that first, eh the first week, I learnt a lot, cos it's the, we started on cardiology so it was eight to six, I think we did in our first week of third year, and I was like, when I came out of it I started feeling like I know stuff now so I used to go back and actually read up, [**Interviewer**: mm] and it's very different to pre- clinical cos you wouldn't have to really go back and read up every single day, [**Interviewer**: mm] you'd have a certain amount you can do, [**Interviewer**: mm] but I felt motivated to go back and eh learn more so that I would understand more the next day (int 4, p.9)

This interviewee changed his learning habits to ensure that he felt well prepared to take part in the next day's activities. Similar to Lave's examples of the apprentice merchant tailors (Chapter 4 p.125) the interviewee explains how by sitting in clinic with the expert doctor (consultant) medical students can learn how to practice medicine without any overt teaching.

Interviewer: How do you apply the knowledge, you said you learn a lot of knowledge and you apply a lot of knowledge, how do you do that?

Interviewee: When you see the consultants doing certain things, [**Interviewer**: mm] you can kind of piece together why they're doing it, [**Interviewer**: mm] and I think that's when the application is, is when you start seeing that doctors are making a diagnosis and you understand why they're treating them with a certain drug, [**Interviewer**: mm] and that for me is kind of the application process, if you're able to figure out why they're doing it, [**Interviewer**: mm] it means the knowledge you have learnt, [**Interviewer**: mm] you're understanding why you're, why it's relevant (int 4, p.8)

An interviewee observes a doctor making a diagnosis, prescribing medication and can understand why the sequence of events unrolls as it does. Lave considers that learning derived from such informal apprenticeship educational models can produce knowledge as well as reproduce existing practice (Lave, 1995). The illustrations interviewees gave concerning what they felt they needed to know and how they most effectively learn challenge medical educators' commonly held conceptions of medical student learning that emphasises the importance of prior scientific knowledge and its application within a clinical field. This has important implications for medical student practice and how they may best learn to become doctors that highlights the

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value of sufficient appropriate authentic clinical exposure at all stages of medical undergraduate curricula. Ensuring non-traditional students' equity in accessing and participating in similar clinical activities and apprenticeship relationships with staff compared with their traditional medical student peers remains a challenge for educators.

Summary

The preceding text has presented themes from the data analysis resulting from the individual interviews that builds upon the findings from the focus groups. Issues pertaining to non-traditional medical students that examine their socio-economic characteristics and their patterns of socialisation in comparison to medical students from a more traditional background are described. How medical student culture develops and plays a part in the formation of the professional identity of medical students is identified. The processes underpinning medical students' learning and the purposes and outcomes of students' engagement with the medical culture, development of an appropriate medical habitus and participation in clinical learning are examined. The next chapter conceptualises how these areas facilitate a better understanding of the specific academic experiences of non-traditional medical students. Following this any subsequent conceptual conclusions, future research and policy making implications concerning the development of

the medical undergraduate curriculum and widening participation can be better considered.

Chapter 9

The academic experience of medical students who come from non-traditional socio-economic backgrounds: becoming visible

Introduction

This chapter discusses how medical students who come from non-traditional lower socio-economic backgrounds may be perceived, experience the processes of medical student socialisation, and may differ in terms of their learning from their peers from a more traditional background. The discussion specifically responds to the study's research questions by elaborating upon and drawing conclusions from the insights gained from the empirical data that highlight the academic experiences of non-traditional medical students from lower socio-economic groups. In addition concepts during the earlier introductory chapters and where relevant drawn from the wider medical education literature highlight the specific issues.

Non-traditional medical students from lower socio-economic groups were perceived by themselves and their peers to be few in number but identifiable by possessing certain socio-economic characteristics that distinguished them from medical students from a more advantaged background. These characteristics were found to play a significant role in determining what and how medical students learnt and for some students presented a significant

disadvantage. Such disadvantage is associated with differing patterns of socialisation and issues with developing a professional identity compared with their more traditional peers. Developing an appropriate medical habitus and effectively participating in clinical learning opportunities appears more challenging for some non-traditional students.

The following sections examine what it may mean to be such a non-traditional medical student and shed new light on the academic experiences of such under-represented students and how they may best learn to become doctors. These aspects present future research areas and highlight where policy-making pertinent to medical undergraduate curriculum development and widening participation should now focus.

What it means to be a medical student coming from a non-traditional lower socio-economic background.

My data qualitatively confirms the previously reported persistent under representation of lower socio-economic groups within both application and admission processes to UK medical schools (Grant et al, 2002; BMA 2004 and Mathers et al, 2011). Several issues thought important in describing non-traditional medical students were identified. Non-traditional medical students were perceived to come from lower socio-economic groups, having studied at state schools, with homes typically situated in poorer "working class" areas, and had no family members or personal contacts before medical school who

were doctors. Furthermore my research highlights how such an atypical non-traditional background is perceived as being disadvantageous for medical student studies by identifying how having a doctor in the family and coming from a professional background bestows many advantages on students persisting after enrolment. Indeed I would argue that my study confirms that this relative disadvantage is experienced by such non-traditional students to a variable degree throughout their undergraduate studies and may persist into postgraduate life.

A more nuanced understanding of the academic experiences of these students once at medical school was gained. This builds on previous research which has focused on how widening participation policies and activities may raise aspirations and present increased opportunities for students from such atypical backgrounds to consider applying through the Higher Education route to become doctors (McLachlan, 2005 and Powis et al, 2007). A commonly held assumption within medical education is that once these students have access to the facilities and teaching at medical school a level playing field is created that facilitates a culture based on meritocracy. However for the minority of the medical school cohort that is from a socio-economic disadvantaged background my research confirms that disadvantage may persist and distinct challenges and issues may arise for these medical students. It is already known that students from such non-traditional backgrounds are commonly dissuaded by a combination of class

views and assumptions from choosing a medical career (Greenhalgh et al, 2004). It is further argued that these views and assumptions continue to exert their affect on the patterns of medical student socialisation, professional development and learning of the few medical students coming from non-traditional lower socio-economic backgrounds.

A more sophisticated picture of how financial constraints may limit both the social and academic opportunities for some medical students from lower socio-economic backgrounds is gained. Previous studies have reported that medical students with financial hardship rather than solely academic difficulties are more likely to drop out (Arulampalam et al, 2004). Whilst the outlook or perspectives of non-traditional medical students may be more studious, with a high work ethic they are often hampered by limited access to any additional support. This concurs with the conclusions drawn by Brown and Garlick (2007) who have previously outlined some of the issues experienced by non-traditional medical students admitted to King's medical college through a specific programme who similarly describe how such students may be unable to rely on parents or a wider social network for guidance concerning medical school matters. My findings further examine how there are no "short-cuts" for non-traditional medical students who rely on their own resources, appear driven and work very hard to gain access to and succeed at medical school and how these issues contribute to a more

nuanced understanding of medical student socialisation and medical student culture.

The conceptualisation of what traditionally constitutes legitimate capital for medical students is challenged by identifying how non-traditional medical students are seen as lacking in both social and cultural capital compared with their more traditional peers. This highlights the relational nature of capital within this context and the significant consequences for some students' initial socialisation into medical school, later interactions with the faculty, and participation in clinical learning. Reay (1998) talks about a "pervasive tendency" within Higher Education that portrays middle-class privately educated students as normative with non-traditional students as deficient. This sentiment is echoed in medical education as a whole and borne out by my study where traditional medical students are perceived as usually coming from middle-class families, often with a doctor-relative, and having had a privileged education from either a good state or private school. The continuing positive influence of medical parental careers not only on their children's choice of careers but also the capacity to assist their children once they have made their choice is highlighted. By examining how the cultural capital possessed by traditional students is perceived by medical students facilitates our further understanding of how students from less privileged backgrounds may be disadvantaged. Medical students from traditional backgrounds are seen as confident, possessing good social skills and are aware of the

advantages of networking in both getting them into medical school and helping them succeed once there. This is in comparison with medical students from lower socio-economic backgrounds whose cultural and social capital may handicap them in initiating and engaging in effective social networking.

A more nuanced understanding of how ethnicity, cultural and socio-economic issues all closely relate to possible educational disadvantage within medical education is gained that sheds new light on the sometimes restricted social perspectives of non-traditional medical students. The significant family responsibilities of some medical students who were from both an ethnic and lower socio-economic background who more frequently lived at home rather than in student accommodation were acknowledged. Additionally the cultural and religious practices of certain ethnic groups that make up the medical school cohort were identified as significantly affecting aspects of medical student socialisation.

Ethnic minorities have always been over-represented in medicine when compared to the general UK population (Modood and Acland, 1998). Brown and Garlick (2007) also assert that non-traditional students tend to apply to local universities where the ethnic mix may be an important component in their choice. The medical school experience for some of these students is vastly different from their home, family and peer expectations. My work

extends Brown and Garlick's observations by furthering our understanding of how these issues interplay within the medical students' socialisation.

Non-traditional medical students' socialisation

Medical schools in the UK in the last two decades have seen an unprecedented rise in female and ethnic minority students but with little change in socio-economic class (Goldacre et al, 2004). My research sheds light on the perceptions of today's medical students within this sociodemographic context alongside significant changes in how medical care is structured and delivered within the NHS. Earlier sentinel work examining socialisation notably by Merton and Becker features medical student populations as overwhelmingly male, white and socio-economically advantaged. Additionally much has been written concerning the role of the medical student culture and students' experience of the hidden curriculum in determining the processes of medical student socialisation (Sinclair, 1997, Cribb and Bignold, 1999 and Lempp and Seale, 2004). However my conclusions focus on how medical students from non-traditional socio-economically disadvantaged backgrounds who remain significantly in the minority within medical school cohorts may experience the undergraduate medical curriculum and engage with the processes of socialisation.

Medical students by a combination of both social and physical segregation from other students develop an identity, camaraderie and ways of deciding

and going about daily activities that constitute the formation of a medical student culture. Medical students value and depend upon their peers for friendship and academic support which contributes to both the formation and continuation of such a culture. Whilst in general non-traditional medical students were perceived to adhere to this established medical student culture some of these students' perceived attitudes and resultant behaviours were out of kilter with what was understood as mainstream medical student culture. Associated with this was the understanding that some aspects of non-traditional medical students' experiences at medical school were, as described by Brown and Garlick, "*quite socially and spatially separate from their quotidian lives*" (Brown and Garlick, 2007). My research takes a fresh in depth look at several of the consequences of this finding.

Non-traditional students were specifically described as preferring to form friendships and social groups with medical students from similar backgrounds, ethnicity and culture. Furthermore medical student groups that consist of students from non-white ethnic, lower socio-economic backgrounds, who share religious cultural beliefs were identified as specifically not joining in with perceived mainstream extra-curricular medical student activities. Non-traditional medical students from lower socio-economic groups, particularly from Asian ethnicities with a strong cultural background and religious beliefs, tend not to socialise after working hours or partake in student union activities that involve drinking alcohol or going into bars. These

research findings are consistent with work from other areas which indicates that certain ethnic minority groups may experience exclusion from areas of the student experience (Stuart et al, 2011, Flores-Gonzales, 2000 and Malach, 2003).

Some students from ethnic groups did join popular Student Union societies such as the Asian Society. However this also revealed aspects of exclusion with students from the Asian Society commonly forming their own social groupings with their own preferred social activities. These examples provide illustrations of how my work extends how we understand the socialisation of non-traditional medical students and whilst previous authors have concentrated on the exclusion of such students from mainstream medical student culture my work also indicates how such students both by processes of passive and selective social networking segregate themselves and the possible consequences of such behaviour. For all medical students the interaction with other medical students and staff appears to be essential for learning what they need to know in order to practice. Allied research also confirms that the more students interact with other students and staff the more likely they are to persist with their studies (Tinto, 1998). The spatialities of medical students appears to be partially dependent on how they see themselves and how others, particularly other students and medical staff, perceive them. Non-traditional medical students were perceived as hard-workers who prioritised their studies. I argue that this influences their

integration with each other as students with similar work ethics are favoured contacts. These preferences limit their full participation in medical student culture. This conceptualisation of the segregation of non-traditional medical students extends our previously understood processes of medical student socialisation and has later implications for what and how these students learn.

Socialising is important in developing bonds between students, forging networks and preparing students to enter the medical culture of the clinical environment. Students who therefore tend not to fully socialise, preferring to socialise with only certain groups, were perceived to be at a disadvantage. Medical students who participate less in the social life of the medical school or only socialise with friends from a similar background are not maximising their opportunities to increase their social and cultural capital as conceptualised by Luke outlined in Chapter 3. My research highlighted how the value of networking was not fully appreciated by non-traditional medical students who perceived that kind of social activity as characteristic of more traditional medical students. Unfortunately for some non-traditional students socialising and networking opportunities may take a lower priority than other extra-curricular activities such as paid work, family time and religious practices as described by Stuart et al, 2011.

My work examines how non-traditional students whilst lamenting their lack of access to resources and mentoring that they perceived were more accessible

to traditional students found the processes of networking difficult even if opportunities arose for them to avail themselves of these. Whilst some non-traditional students gave examples of where they felt they had benefited from socialising outside of their established social groups others refused to take up such opportunities even though they appreciated the possible benefits because they preferred the activities and company of their usual social groups. Medical students have many opportunities to take part in a wide range of university-linked activities which as described may form the basis of committed networks of friends. Alongside other authors including Stuart et al (2011) I demonstrate how these friendship networks may be an important means to increasing a student's social capital and facilitate their progression and later employment.

Whilst students gain self-confidence, a sense of well-being and happiness at university resulting from taking part in social activities it has been previously noted that some students may feel excluded from the activities organised by the students' union. In general student union pursuits are acknowledged as mainstream medical extracurricular activities and non-traditional medical students, particularly those with strong cultural or religious beliefs, were less likely to be involved. This has connotations with which students medical students made friends with and as I will go on to explain may affect their learning. My research explores how the networks of friendships formed at medical school can be viewed as a form of 'social capital' which can go on to

reinforce the increased levels of capital usually associated with traditional students. The more a student socialises the more confident he or she will feel, and confidence was identified as particularly important in navigating the demands of first entering into the clinical field.

Having friends and the membership of both formal and informal social networks outside of a non-traditional student's familiar habitus increases their social capital. The importance of these relationships and activities for overcoming social exclusion and signifying the level of engagement for non-traditional students requires greater appreciation by Higher Education establishments and medical schools in particular. My research examines afresh how non-traditional medical students can be encouraged to socialise outside of their regular groups and the benefits to their learning of doing so. Research conducted by Thomas (2002) identified ways in which a Higher Education institution can facilitate the socialisation of all students. Providing student living arrangements and appropriate social facilities, not all of which promote alcohol, are commonly employed by medical schools and are well illustrated within my data as useful and common ways in which students made their friends. Encouraging collaborative teaching and learning practices that promote social networking which is not in direct opposition with the student's familiar habitus requires further reflection. My research extends how such practices can be implemented and what effect they may have on the socialisation of some non-traditional medical students.

My research was conducted at a medical school which operates a problem-based learning (PBL) curriculum with students meeting initially once then twice a week in small groups during their first year for a supervised learning session. These PBL groups facilitated early friendships and peer academic support. Problem-based learning specifically encourages collaborative learning between students of the core medical science syllabus. Whether or not a medical school has chosen to use PBL as a means to deliver the curriculum the importance of providing a structure by which new students meet regularly in small numbers outside of any culturally determined social groups is useful in facilitating social networking. My research sheds new light on the relational aspects of medical student learning and how students learn alongside each other. These groups also promoted interactions with the academic faculty conducive to developing helpful relationships that facilitate students' learning and professional development. However these opportunities for promotion of students' social networks are challenged by the often contrasting descriptions of students' experiences once they enter the fully clinical phase of their training and begin to more actively interface with the established medical culture. It is at this stage that differences between students' social and cultural capital become most apparent. The clinical faculty may not be aware of the influence they may have on the professional development of junior medical students and the possibility of mediating some of the negative effects of a medical institutional habitus which at best is

challenging for most medical students and entirely alien for students from a non-traditional background.

My research extends how we can better understand what effect socialising into the medical student culture may have on the learning of medical students and non-traditional medical students in particular. Medical student culture partially determines student workload, informal academic standards and helps prepare students for clinical learning as students come to a consensus as to what is required of them to succeed. As novice medical students better understand and abide by an agreed student culture this helps them comprehend what to expect and hence prepare for their subsequent clinical experiences. In contrast my research also highlights some of the possible consequences of not engaging with the medical student culture and how this may disadvantage student learning. My research challenges established views of what and how medical students learn within clinical settings and in particular examines the academic experiences of non-traditional students. This involves exploring previously uncontested relational and institutional aspects of medical student learning involving the ambient medical culture, the context in which students learn, and the multifaceted nature of student participation.

My research challenges medical educators' fixation with curriculum and educational psychology by extending our understanding of the pervasive and

durable nature of the medical culture and its relationship with students'
professional development and learning. On-going research that explores the
relationships between the medical culture, student learning and the medical
curriculum is required to further our understanding of the complex issues
involved. This necessitates taking a further look at how medical students
immerse themselves in the medical culture and develop a medical habitus
which facilitates these processes.

Developing an undergraduate medical habitus and participating within clinical learning

The historical context of UK undergraduate medical education with its
resistant curriculum development in response to either political health reforms
or educational research highlights the unchanging nature of the structure of
medical education and its associated medical culture. There is in addition a
paucity of acknowledgement of the effect of institutional structures on medical
student learning and the relational aspects of how medical students learn
which in part are addressed by my research. Classically medical
undergraduate curricula describe a preclinical phase which frontloads
students with discipline dependent scientific knowledge which students are
then to apply to clinical scenarios when they first meet patients in the later
clinical phase of their programme. Medical education lacks any significant
theoretical conceptualisation of how medical students may actually do this
and indeed whether it is possible at all. In examining these issues my

research identifies that medical students easily acknowledge this artificial divide between pre-clinical and clinical learning, recognise the requirement to learn different aspects of professional knowledge and struggle balancing assessment requirements with clinical patient-centred learning.

Whilst most medical schools have made some attempt at designing an integrated curriculum by breaking down the discipline barriers and introducing patients to students much earlier methods of instruction that emphasise one-to-one transmission of knowledge and principles of adult learning are still favoured. There is limited understanding and application of theories that examine what has come to be understood as the "hidden curriculum" and derive from sociocultural models of learning in explaining how medical students develop a professional identity and learn to effectively participate in clinical medicine. Such a narrow view of how medical students may best learn and the notions of how students develop a professional identity particularly when considering the trajectories of non-traditional medical students are challenged by both the methodology and findings of my research.

In extending how we currently understand how non-traditional medical students are perceived by themselves and their peers to be lacking in what Luke conceptualised in Bourdieuian terms as financial, social and cultural capital a fresh look at what and how these students learn is made possible. A non-traditional medical student's capital was perceived to be lacking

compared with their traditional peers across all three parameters; financial, social and cultural, and how these parameters may then go on to subtlety interact to further disadvantage a student from a non-traditional background. The familiar habitus of non-traditional medical students from a socio-economically disadvantaged background is typified by financial constraints leading to both fewer social and educational opportunities. Differences in the way non-traditional students talked and what they talked about due to varying life experiences prior to medical school and fewer networking opportunities with an absence of mentoring were noted. Non-traditional students with comparatively less capital find interacting with the faculty initially more difficult as they frequently have less in common due to not sharing similar backgrounds, education and even hobbies.

The notion of developing an effective undergraduate medical habitus and how such a habitus facilitates students' participation in the clinical environment by increasing their ability to appropriately participate in the activities of the clinical team and in developing a professional identity is highlighted by my research. Furthermore our understandings of how non-traditional students are perceived to be less aware of the requirement to develop such an appropriate medical habitus and of the benefits of doing so are expanded. The inter-relationship between a medical student's habitus and their activities and relationships with staff and patients in the medical field identified a reciprocal growth in their capital. Consequently by developing an appropriate medical

habitus a student goes on to increase their capital and position themselves within the medical field in such a way as to maximise their opportunities to learn what is required to practice. Any medical student who does not behave in such a way as to maximise these opportunities is seen to be disadvantaged. Issues that may affect such an effective habitus from forming are limited initial capital and inappropriate or ineffectual participation in the medical field which were more commonly associated with non-traditional medical students.

The importance of repeated and appropriate clinical exposure for medical student learning is critical. My research establishes that effective clinical exposure is essential to the professional development of medical students and by definition means far more than simply seeing patients with pathology. Effective and appropriate medical student participation in the daily activities of a clinical team which best prepares students for their future roles as doctors best defines clinical exposure and facilitates a more nuanced understanding of medical student practice. The importance of developing alongside an appropriate knowledge base the behaviours and attitudes, which form an emerging medical habitus, compatible with successfully practising as a doctor are emphasised. In order to do this medical students need what Merton termed the "*sustained involvement in that society of medical staff, fellow students, and patients*" to be able to practise what it is that they will be required to do when qualified (Merton, Reader and Kendall, 1957, p.42).

Insights from Lave and Wenger's (1991) conceptualisation of a "*community of practice*" also highlight how my research illustrates how newcomers are permitted, or preferably in the case of medical students actively encouraged and supported, by the established experts to participate in the authentic activities of the team. Elements of Lave and Wenger's model of Legitimate Peripheral Participation shed light on how medical students might most effectively learn what is required to practice but as my research indicates may also in contrast illuminate how in some circumstances, non-traditional students in particular, may struggle.

All medical students on occasion may find the legitimacy of their participation questioned or rarely undermined by other students, their teachers or even patients. However my research confirms that this occurs more frequently for non-traditional students as we know that they initially struggle to develop a medical habitus that facilitates integrating into the clinical team due their lack of commonality with the established medical faculty. In addition non-traditional students find the unfamiliarity of the ward environment and its daily routines and the professional interactions with patients initially challenging. These students usually have had no sustained contact with medical or frequently any profession previously and are unrehearsed in how to behave in such situations.

Both formal and informal teaching, learning and assessment occasions provide opportunities for interactions between staff, students and patients. These interactions occur within institutional structures, notably the medical culture, and have a central role in reproducing, but also possibly changing, social and cultural inequalities (Thomas, 2002). According to Thomas, a traditional institutional habitus, such as the medical culture, assumes that the habitus of the dominant group, in this case traditional medical students, is not only the correct habitus, but treats all students as if they possessed it. She goes on to add that this is reflected in the institution's teaching, learning and assessment strategies and ensures that non-traditional students whose habituses are dissimilar are subsequently positioned at a lower status and effectively discriminated against. My research examines how these issues may be played out within undergraduate medical education.

Non-traditional medical students are already disadvantaged because of their lack of comparative capital and so some find the activities of participation difficult and consequently struggle with developing a professional identity compared with their traditional peers. Lave and Wenger are interested in the trajectory of learners and who it is that the learners wish to become rather than what they learn per se. Most medical students wish to become doctors. My research examined how traditional medical students tend to be more careers focused already preparing for future specialty choices by gathering credit in terms of research papers, conference attendance and social

networking whilst non-traditional medical students rely on successful past strategies and concentrate more on gaining academic success as demonstrated by passing their examinations. Whilst non-traditional medical students may be initially disadvantaged on entering the clinical phase of their learning because of difficulty in developing an appropriate medical habitus my research illustrates how these students do go on to develop such an appropriate medical habitus, even though this process for some non-traditional students proved challenging. How non-traditional medical students develop an appropriate medical habitus depends upon the degree of critical participation these students have in the life of the ward and acceptance by the clinical faculty of such students. Arguably this currently represents the fluidity of an individual habitus as students are required to respond to fit in with the ambient institutional medical culture rather than any responsiveness or substantial shift in the institution's culture as exhibited by the medical curriculum to accommodate such students.

Further educational research relating to medical students from a non-traditional socio-economic background

The findings from this study present a more nuanced understanding of how medical students who come from non-traditional lower socio-economic backgrounds may be perceived. These students may experience the processes of medical student socialisation and learning differently from their peers from a more traditional background. Such findings represent

significantly under-researched areas within undergraduate medical education that highlight where further research could focus. Understanding better how student networking enhances learning, the role of student support including mentoring, what the professional development of medical students entails and examining the participation of medical students within the clinical learning are initial areas which could be further explored. In addition if widening participation initiatives are to be taken seriously by medical schools then the undergraduate medical curriculum and educational policy in general needs to consider how medical students from non-traditional backgrounds may best learn, how they may struggle and how best to support medical students from non-traditional backgrounds. These and further suggested areas for future research are discussed within the subsequent conclusions chapter.

PART 4: Conclusions

Conclusions

Introduction

This final chapter presents an account of what my thesis aimed to explore highlighting the significance of the findings with particular reference to an emerging developing conceptual framework that examines medical student learning, embracing both aspects of socialisation theory and sociocultural participatory practices. Such a conceptual framework that encompasses both sociological and sociocultural theories enables the professional development and learning processes of medical students to be better understood. In particular such an approach facilitates examining the issues associated with the learning of atypical non-traditional medical students who come from lower socio-economic backgrounds who are the focus of this study. How these findings contribute to enhancing our understanding of the field of clinical learning and facilitate future medical undergraduate curriculum development is discussed. Furthermore attention is drawn to the implications of being able to generalise beyond the initial setting of the study to inform the approach taken in future educational research and policy. However, initially a short summary of the conception, methodology and themes derived from the study alongside a more personal reflexive account are presented.

Summary

Since 2003 I have been involved personally and at policy level in selecting medical students for undergraduate medical degree programmes. The medical education literature persistently reports an under representation of lower socio-economic groups within both application and admission processes to UK medical schools (Grant et al, 2002; BMA 2004 and Mathers et al, 2011). Concern was raised over 20 years ago that the numbers of medical students from the then social classes I and II were disproportional, even taking into account the number of students from medical families (McManus, 1982). Despite the increase in university places and specifically a rapid rise in medical student numbers in the last decade there remains a persistent inequality in representation from students from lower socio-economic groups in the UK where they make up only one-seventh of the medical student body (Kamali et al, 2005). The 2010-11 medical undergraduate intake contained only 7% of accepted medical school applicants form the lower socio-economic classes which confirms that no significant change has occurred (Office for National Statistics, 2012).

There is clear evidence therefore that medicine has failed to recruit applicants and students from lower socio-economic groups. However my interest as a medical teacher, particularly as one who has been responsible for supporting students admitted under widening participation initiatives, continues beyond the hurdles of medical selection. I have found that there is a specific lack of

educational research and literature concerning the academic experience of these students. Much of the literature and research concerning medical student widening participation outlines the difficulties of getting onto medical degree programmes and then managing to cope financially without exploring whether these students have any specific issues with the curriculum, and importantly how difficulties may be overcome. Widening participation policies and activities have focused on raising aspirations and presenting increased opportunities for students from such non-traditional backgrounds to consider applying through the Higher Education route to become doctors (McLachlan, 2005 and Powis et al, 2007). However there is very little research that goes on to study the academic experiences of these few students who do succeed in securing places at medical school. This is set against the backdrop of an undergraduate medical curriculum that is resistant to change despite significant political and organisational innovation within the NHS. Furthermore in wanting to explore the relational aspects between medical student practice and the institutional structures that form the context in which medical students learn it was necessary for me to engage with literature outside of the field of medical education, namely from the fields of sociology and sociocultural models of learning. Deciding to examine what and how medical students learn, and those students from non-traditional socio-economic backgrounds in particular, challenged my conventional understanding of learning. Much learning within medical education is still imbued with a very traditional stance that favours principles derived from adult learning theory and the perception

of knowledge itself as a possession to be acquired. For medical students becoming knowledgeable is an important requisite of becoming a doctor and for students from a less advantaged background my study shows that becoming knowledgeable for them is intimately linked with both their professional development and identity.

My earlier chapters therefore frame my enquiry of what and how medical students learn from a more nuanced perspective that also explores the social practices of students. Such an approach requires an enhanced personal understanding of aspects from both sociological theory and models of sociocultural learning, that shed light on the processes of student socialisation, as well as the relational aspects between student practice and the institutional medical culture. By endeavouring to seek a tentative conceptual rapprochement between the fields of sociology of medical education and sociocultural learning theories it is possible to re-examine the role of student participation within the context of medical students' clinical learning. This facilitated me understanding better how a medical student's habitus and degree of effective participation are related. Furthermore now understanding this pivotal relationship encourages me to examine how we, as medical educators, define clinical exposure and gives me the language to engage in debate, to argue for changes to a medical undergraduate curriculum that will benefit all students.

Becker et al's (1961) sentinel text describes the culture and experiences of graduate medical students in the 1950's which remain poignantly pertinent today. Becker's text outlines medical student perspectives which clearly resonated with the experiences of the medical students within my study. This was a powerful reminder to me of the unchanging nature of the medical culture and to a lesser extent the medical undergraduate curriculum itself. Similarly exploring how medical students understand their role within the medical school and the tensions exhibited between what is perceived as a student versus a doctor's role, and how students manage these tensions, were issues introduced by both Becker and Merton, that I went on to further examine in my own empirical study.

Becoming familiar with the work of Luke (2004) revealed the insightful relationship between Bourdieu's thinking tools of habitus, capital and field. Appreciating the inter-relationships between these concepts was crucial to examining afresh the relational nature of medical students' clinical learning and how students from lower socio-economic groups may be disadvantaged.

This thesis set out to explore and describe how medical students who come from non-traditional lower socio-economic backgrounds may differ in terms of their learning from their peers from a more traditional background who study at the same medical school. Three initial focus groups encompassing medical students from all years of the curriculum established baseline norms of

student socialisation, common values, and experiences pertaining to their academic lives. Participants were asked to give their perspectives on who becomes a doctor today, the processes involved in socialising to the medical student body and how best to learn what is required to practice. Analysis used both a priori concepts from the literature and themes arising from the empirical data to generate three main over-arching themes, who becomes a doctor, the developmental processes underpinning becoming a doctor and the issues underlying medical students' learning. Fifteen individual interviews were then undertaken to explore in more detail medical student perceptions of students who come from non-traditional lower economic backgrounds, the processes involved in their medical school socialisation and professional development, and any issues underlying their learning. The same three main over-arching themes arose; who becomes a doctor, the developmental processes underpinning becoming a doctor and the issues underlying medical students' learning. In addition issues pertaining to non-traditional medical students, their socialisation, and medical student culture and developing a professional identity were elucidated. The sociocultural processes underpinning the learning of medical students from non-traditional lower socio-economic backgrounds were highlighted and in particular the issues associated with their appropriate participation in the field of clinical learning.

Non-traditional medical students were found to possess certain socio-economic characteristics that distinguished them from medical students from

a more advantaged background. These characteristics were found to play a significant role in determining what and how medical students learnt. Non-traditional medical students from lower socio-economic backgrounds were found to have differing patterns of socialisation and issues with developing a professional identity compared with their traditional peers. Developing an appropriate medical habitus and effectively participating in clinical learning opportunities proved more challenging for non-traditional students. These aspects present future research areas and highlight where policy-making pertinent to medical undergraduate curriculum development and widening participation should have a focus.

Developing a conceptual framework that examines medical student learning

By combining perspectives from both sociological theories and sociocultural participatory models of learning this thesis can contribute to a more nuanced understanding of how and what medical students learn. Such an approach facilitates extending what is understood regarding how medical students from non-traditional socio-economic backgrounds learn to be doctors concerning their patterns of socialisation and perceived challenges in developing an appropriate medical habitus. This involves examining how sociological perspectives such as aspects of professional identity, role-taking and student autonomy contribute to our understanding of the processes of medical socialisation alongside Luke's conceptualisation of medical professional

development. Taking such a sociological perspective draws attention to, and helps us further understand, the often neglected context in which medical students' professional development occurs and the strength of the ambient medical culture. However such an approach was not conceived to explain in full how students learn.

Therefore in wishing to examine what and how medical students learn, and how the learning and professional development of students from non-traditional socio-economic backgrounds may differ; a conceptual framework was developed that encompasses elements of socialisation, professional development and also learning theory. The key features of my conceptual framework are initially discussed in Chapter 6 p.170 (depicted in Fig 1, p. 174) and highlight the relationships between the issues that determine a medical student's developing medical habitus and effective participation within the medical field. Both a student's medical habitus and degree of effective participation are seen to be crucial to their learning that is required for them in order to practice.

Outlining the differences and commonality between some of the perspectives within the conceptualisation of medical student socialisation found within the literature formed a basis from which to explore medical students' perceptions of their own and that of their peers' processes of socialisation. My conceptual framework highlights how medical student culture may be better understood

by taking aspects of both a functionalist approach, which facilitated examining the student's developing professional role, with its inherent skills, knowledge and appropriate attitudes, and a student perspective that highlights student autonomy, motivation, formation of student identity and survival through medical school. Furthermore an induction approach which focuses on students acquiring a professional role recognises the influence the faculty has in controlling medical students' professionalisation whereas Becker's symbolic interactionism highlights student autonomy. In determining the factors and processes involved in the socialisation of medical students a conceptual framework that recognises both perspectives and facilitates their exploration is required.

Medical students learn considerable amounts of scientific knowledge before graduating but to become successful doctors they also need to know how to behave in many situations that are initially foreign to them. It is these aspects of medical students' professionalisation or as termed by Luke (2003) their "professional development" that I was specifically interested in. The exploration of the professional development of medical students and in particular those from non–traditional socio-economic backgrounds strongly influenced the design and focus of my study. The theoretical model of the medical habitus presented by Luke contributed to my conceptual framework in order to better understand the issues affecting students' professional development and how best to explore them. Using a similar framework to

Luke helped me to more fully conceptualise what is involved in medical student learning and how they too develop a medical habitus.

Exploring the socialisation and professional development of medical students highlights aspects of how medical students become doctors and sets the scene to go onto examine the academic processes involved in the knowledge production and theoretical learning required of medical students. Such a process benefits from a non-dualistic appreciation of learning that encompasses all the aspects of professional knowledge, scientific, procedural and tacit that medical students are required to learn in order to practice. This perspective stemmed from a personal deeper understanding of sociocultural learning theory and the requirement to make more explicit how both scientific and everyday knowledge are for medical student learning equally important. Developing such a fresh approach in conceptualising what students come to understand as being "knowledgeable" consequently also facilitates the exploration of critical issues involved in their professional identity formation through participatory learning. This involves developing a more expansive conceptual framework that acknowledges and further exams the previously neglected critical role student participation plays within students' clinical exposure that both facilitates creating a professional identity and medical expertise (Morris, 2012). Taking a more balanced non-dualistic view of how medical students become knowledgeable my thesis aims to shed new light on

the learning processes of medical students, and those from a non-traditional background in particular.

A more multifaceted conception of medical student practice is developed that incorporates medical student participation that has at its core authentic clinical exposure and additionally the notion of increasing medical student responsibility (Merton et al, 1957; Stark, 2003; and Dornan, 2007). This builds on the previously discussed aspects of socialisation theory (Chapter 2) that describe how medical students are directed by institutional structures to develop a professional self image which becomes more like that of a doctor as they mature through their undergraduate training. Medical students emulate in a step wise fashion the behaviours and persona of a doctor. By considering Luke's interpretation of the medical habitus the professional development of medical students depends upon students generating a similar undergraduate medical habitus that likewise ensures students also think and act as doctors.

Clinical exposure provides students and non-traditional medical students in particular with opportunities to learn which make them feel more at home in the medical field facilitating their medical habitus development. Students' increasing knowledge directly relates to the effectiveness of their participation within the daily activities of the clinical teams to which they are attached. This process emphasises the relational aspects of medical student learning

particularly between a student's developing medical habitus and their degree of effective participation within clinical settings. For these reasons understanding the challenges highlighted by my research that non-traditional medical students face and must overcome in participating effectively within clinical settings is important in comprehending what is required of these students to learn in order to become doctors.

What remains unclear however is by which processes such a medical habitus develops. As discussed in Chapter 3 p.87 Luke does not fully explain how a medical habitus is generated and specifically ignores any clinical scientific learning exploring only the social aspects. My findings indicate how appropriate clinical exposure that encourages students to participate in authentic activities that anticipate the medical role to which they aspire facilitates both scientific and social learning. Furthermore this outcome is achieved through identifying the critical inter-dependent relationship between a student's effective participation and their medical habitus development. Consequently through appropriate participation within a clinical setting a medical student's developing expertise increases their capital and has a critical effect on their professional identity. Medical students perceive the gaining of both theoretical and practical knowhow as contributing to their "rarefied" knowledge which sets them apart and signifies that they are ready to become doctors. For non-traditional students in particular developing such a knowledge base significantly contributes to developing a professional

identity. Sociocultural theories therefore give a platform from which medical students' scientific and everyday learning can be viewed afresh and how each significantly contributes to what medical students are required to know.

My thesis examines neglected areas within theories of medical educational sociology that seek to study the relationships between the macro structures derived from, and also affecting a medical school institution, and the micro processes of medical student socialisation and practice. By describing how the inter-dependent relationships between the institutional structures, principally the medical culture, medical student socialisation, and the effective participation of students in clinical settings, are essential for student learning conceptual rapprochement between socialisation theories and participatory models of learning is sought.

The medical education literature has an enduring tendency to favour a student-centred perspective that focuses on the processes of socialisation where students develop the common values, behaviours and attitudes of the medical profession (Sinclair, 1997; Lempp, 2009 and Mann, 2011). Less is known concerning organisational and institutional structures and their policies and what effect these may have on the learning of medical students. Furthermore medical education research has favoured examining personal agency, the effects of curriculum design, and individual student experience rather than the sociocultural aspects of learning that seem critically relevant to

medical students' clinical learning. These schisms are highlighted by the issues emanating from my work that challenge the absence of research and theory that encompass an understanding of the inter-relationships between institutional structures and individual medical student practice. The examination of how non-traditional medical students learn by focusing on the key relationships between the medical habitus, professional identity and participation, elements contained within the conceptual framework, seeks conceptual rapprochement between socialisation theories and participatory models of learning.

Contribution to the field of clinical learning

Examining the processes of socialisation, professional development and how and what medical students from non-traditional backgrounds learn in order to become doctors provides an opportunity to explore the relational nature of vocational learning as experienced by students within a clinical context. Such an aim necessitates briefly reviewing the relevant concepts concerning what it may mean to be a medical student coming from a non-traditional lower socio-economic background and how these may affect students' learning.

How a non-traditional medical student's professional identity may be contested and how such a student may struggle to develop an appropriate medical habitus has been discussed (Chapter 8 p.303). The findings from the empirical component of my study highlight how both the professional identity

and developing medical habitus of a student relate not only to each other but also contribute to the degree of effectiveness of the student's participation in the clinical field. It is an appropriate medical habitus and professional identity that mediate students' acceptance into the clinical field thereby legitimatising their participation in clinical learning. This has been described by Morris, 2012, as the successful recognition by medical students of the "cultural norms" of medical communities and also how students become sensitive to a range of aspects that I have described as associated with developing a medical habitus. Morris goes on to explain how these "*sensitivities appear to enable students to adopt or express appropriate professional identities in order to facilitate access into these communities and thereby increase opportunities for legitimate peripheral participation*" (Morris, 2012, p.23). It appears that in order for medical students to be invited to participate in the activities of a clinical team and take advantage of the learning opportunities that this offers they have to look and behave according to the expectations of that team.

My research confirms the inter-relatedness of a student's participation, professional identity and medical habitus as it is argued that it is the very acts of participation in clinical learning that ensure the appropriate development of both the student's habitus and professional identity. It is the activities, the clinical environment and acting as a member of the clinical team that students say makes them feel like a doctor and I would add also makes them act like

one. Morris, 2012, highlights the complex "interplay" between an individual student's engagement in learning opportunities and the "affordances of the workplace" and advises further exploration (Morris, 2012, p. 23). Examining the insights that sociological theory and Luke's conceptualisation of the medical habitus can bring to an understanding of how medical students learn emphasises both the commonality of medical student learning but also how some groups of medical students, and in this case students from lower socio-economic groups, may behave differently and have difficulties with this commonly accepted approach to learning. The relational aspects illustrated by how institutional structures such as the durable medical culture inter-relate with medical student practice shed light on what Morris (2012) calls the "affordances of the workplace". Some students feel more welcomed and are invited to participate more readily. The importance of a student's developing medical habitus in determining a student's degree of participation is highlighted. Participatory models of learning that focus on the situatedness of the learner without giving due consideration to the overriding institutional structures that may affect how and what learners are required to know are challenged by my research. For example the contested professional identity and developing expertise of non-traditional medical students can be better examined by both socialisation theory and participatory models of learning that more fully explore these inherent tensions.

Participatory models of learning emphasise that medical students learn to be doctors by practising authentic activities and taking on aspects of the roles played by doctors. By learning through clinical exposure students are taking part in the daily activities of the clinical team including the tasks and roles that doctors perform (Dornan et al, 2007 and Bell et al, 2009). However we are reminded of Becker's description of the medical student's pseudomedical role where he contends students engage in clinical activities such as talking with patients to principally learn what they perceive is relevant to their needs as students, such as examination preparation, and relegate developing a professional role and identity until later (Becker et al, 1961). This tension is illustrated by a more sophisticated view of medical student practice that articulates how medical students grapple with their responsibilities to learn both what is required for them to progress by assessment and also what they perceive as necessary to become good doctors. How students accept increasing clinical responsibility for their interactions with patients and the tasks they undertake palpably increases as they progress towards final examinations which is both expected and condoned by the medical culture. Medical student practice is concerned with medical student learning whilst the practice of doctors is concerned with caring for patients and so clinical responsibility ultimately rests with the qualified medical profession. However for medical students to successfully develop a professional identity the student's role must have some aspects of the authenticity of the professional role and the opportunities to exercise a degree of authority and judgement

within their formative clinical encounters (Egan and Jaye, 2009; Walters and Hirsh, 2011 and Daly et al, 2013). Whilst such student participation is recognised by my research as legitimate student practice the specific issues associated with the participation of non-traditional medical students are also examined.

The critical role effective participation has for a learner wishing to become a member of a profession has been highlighted by Lave and Wenger (1991) in describing how legitimate peripheral participation can be viewed as learning that occurs as an integral component of social practice. Authors within medical education introduced earlier such as Bleakley, 2006; and Swanwick, 2005 and more recently Mann, 2011, and Cook, Daly and Newman, 2012, amongst others have indicated the value of sociocultural learning theories in examining the field of clinical learning. Considering how learning forms part of social practice facilitates examining the learning of medical students from non-traditional backgrounds who may participate differently compared to their more traditional peers.

The familiar habitus and capital of non-traditional medical students influences their participation in the clinical setting. When medical students feel they belong to a clinical team they more easily take part in the daily activities of that team. This sense of belonging and taking part, as well as learning alongside other medical students, facilitates effective participatory practices.

Such effective participation elaborates traditional medical education's overly simplistic understanding of what clinical exposure adds to students' clinical learning by challenging the commonly held assumptions that clinical learning is about applying previously learnt scientific medical knowledge and clinical principles (Mann, 2011).

By using an approach that favours aspects from sociocultural models of learning an insightful conceptualisation of medical student participation that highlights the relationships between students, between students and the faculty, and with patients within the context of medical work can be gained. These insights are aligned with research in other fields that has examined workplace learning and highlights the importance of the relationships between individual workers/learners and their workplace indicating organisational practices and cultures are complex and significantly affect learning. It is also emphasised how the depositions of the learners can encourage taking advantage of opportunities to learn at work, and again how a sense of belonging to a workplace community facilitates developing a professional identity (Hodkinson et al, 2004). Such a premise was the basis for a fresh exploration within medical education of the participation of non-traditional medical students from lower socio-economic backgrounds within their clinical settings. Legitimate participation is understood to be concerned with the development of both expertise and identity and my research sheds light on

the underpinning processes within an undergraduate medical context which lead to these outcomes.

The socialisation of medical students perpetuates a medical student culture that is challenging for some non-traditional students whose patterns of socialisation and social groupings identify them as separate from the main student body. However once in clinical settings all medical students tend to rely on each other for companionship and academic support and generally have no choice in either placement or who they are placed with. This provides opportunities for what Bruner (1996) called "bootstrapping" where each student's progress is dependent on their student partners and students metaphorically drag each other to their goals. Bootstrapping is seen in the examples of where students have felt they have been mentored by other students perceived as being more able or more focused. Some non-traditional students feel very uncomfortable on their first clinical attachments separated from their friends in an unfamiliar sociocultural environment. However medical student accounts from the empirical data confirm that coerced socialising with students who possess a different familiar habitus with personal capital more attuned to participating in clinical learning facilitates non-traditional students developing their own effective appropriate medical habitus.

Exploring the relationship between a student's developing medical habitus and their degree of successful participation contributes to an insightful

understanding of how medical students, and those from a non-traditional background in particular, initially develop such an effective medical habitus. The conceptualisation of the medical habitus as either solely an unconscious engagement with the prevalent medical culture or a predetermined socialised biology related to a student's background as previously outlined by Alexander (1995) and discussed in Chapter 3 is challenged. Whilst my work reinforces the concept of a medical habitus that has an embodied nature which ensures students' behaviours that favour their acceptance in the clinical field are adopted these behaviours and strategies students use have to be learned. Whilst a medical student's familiar habitus as determined by their previous experiences and upbringing significantly influences the development of a student's medical habitus it is contested that at its very core the generation of a medical habitus is no more than a replication of the ambient medical culture and its pervasive hierarchy.

It is argued that appropriate participation within the clinical environment contributes to the processes by which medical students develop such an effective medical habitus. Medical students' development of a medical habitus is strongly influenced by the dynamic processes involved when students participate in clinical activities. Such dynamic processes reflect medical students' interactions with each other, medical staff and the faculty who make up the clinical teams in whose daily activities students participate, and not least with patients. The daily clinical practice of medical students depicts the

"what and how" of medical students' clinical learning and is illuminated by participatory models of learning.

Participation is intimately linked with developing a professional identity. A medical student's identity is inexorably linked with not only who they are and what they do but also with what they know and how this is perceived by themselves and others. The central role of clinical exposure as presenting both opportunities for medical students to learn and practise authentic tasks pertaining to their future careers and also develop an appropriate medical habitus that encourages such participation is highlighted. This incorporates the understanding as articulated by Lave and Wenger (1991) that the processes of legitimate peripheral participation leads onto learning that is more centrally placed where learners take part in aspects of central authentic professional or expert practice. The processes of clinical exposure examined in the individual interviews describe how medical students including non-traditional students learn how to increasingly take on clinical responsibility for patient care and shed their previously held student perspectives. This reveals the multi-faceted conception of student practice that encompasses aspects of the role of both student and doctor and how the balance shifts in favour of the role of doctor towards graduation. The student role is concerned with learning whilst the doctor role centres on patient care and demonstrating professionalism. However both roles highlight the core influence of developing the attributes associated with clinical responsibility.

Highlighting such tensions challenges the established nature of the formal undergraduate medical curriculum that continues to favour medical science and factual knowledge over the perceived softer options of medical students developing appropriate attitudes and exhibiting medical professionalism (Kuper and D'Econ, 2011). Historically this has meant that the professional development of medical students has been a neglected feature of the undergraduate medical curriculum (Lempp, 2009). By taking a fresh look at how the professional development of medical students is influenced by both the medical culture as exhibited through the hidden curriculum and aspects of the formal curriculum my findings present an opportunity to consider the relational nature of medical student learning.

The relational nature of medical student learning is reflected by the study's appropriate conceptual framework that respects both macro and micro perspectives involved in the learning of medical students. This enables how what a medical student learns in becoming a doctor, determined by both the structures of the medical school as an institution dominated by the longstanding medical culture and their individual participation in the daily clinical practices of their placements to be both examined. Medical habitus is a conceptual tool that provides a critical way forward in terms of thinking relationally about a medical student's trajectory and offers a means by which the roles of agency and structure can be considered in a more nuanced

manner. By taking a fresh more in depth look at the participatory practices of medical students from both traditional and non-traditional socio-economic backgrounds what can be learned from the clinical environment and what is necessary to learn in order to practice as a doctor can be better understood.

Future medical educational research, curriculum development and policy-making.

This thesis opened with a description of how policy to widen participation to studying medicine at university in the UK has failed to significantly increase the number of medical students coming from lower socio-economic groups (Grant et al, 2002; BMA 2004 and Mathers et al, 2011). It was also stated that the progression and academic experiences of the minority of medical students from such a non-traditional background are largely under-examined (Cleland et al, 2012). It is posed that the preceding discussion of the underpinning socio-educational theory, models of learning and findings from my empirical research begin to address our lack of understanding of how medical students, and non-traditional students from lower socio-economic groups in particular, learn how to become doctors and what they need to know in order to practice. This is important in light of repeated calls and recent government imperatives to increase the inclusivity of medicine (Fair Access to Professional Careers, 2012). My findings indicate that the minority of UK medical students who come from non-traditional socio-economic

groups may have much in common with the socialisation, professional development and learning of all medical students. However the significance of varying patterns of medical student socialisation for some non-traditional students from these socio-economic groups and the importance of networking to their professional development and learning in general is highlighted. An enhanced understanding of the medical habitus facilitates explaining how some non-traditional medical students may struggle to "fit in" and develop effective demeanours that encourage their participation within the clinical environment.

Sociocultural models of learning illuminate the issues underpinning how medical students learn by participating within the clinical environment and challenge medical education's traditional stance about what constitutes legitimate medical knowledge. By contributing to a more nuanced understanding of the dual nature of medical knowledge and how this enhances our conceptualisation of how medical students learn more productive opportunities to further examine the learning of medical students are gained. In addition this study has explored the institutional aspects that affect a medical student's learning that are frequently neglected. By examining how the enduring nature of the medical culture also determines what and how medical students learn provides fresh perspectives from which further exploration of what has been termed the medical hidden curriculum can be achieved.

My study has used a methodological approach that frames the practice of medical students by describing their processes of learning as articulated by their experience of participating in clinical settings drawing on both sociological theory and insights from sociocultural learning models. Such a methodology responds to previous criticisms that medical education research is largely atheoretical or overly focuses on individual student cognition or the teaching methods themselves (Norman, 2007 and Teunissen, 2010). Employing a methodology that used initial focus group discussions to discover the broad concepts describing medical students' perceptions of their learning facilitated the later probing of those issues pertinent to non-traditional students in the subsequent individual interviews. These issues reflected the insights that were gained by a more sophisticated appreciation of the conceptual tools afforded by both sociological theory and sociocultural models of learning that encouraged a more thorough examination of the socialisation patterns, professional identity development and participatory practices of non-traditional students. Such an analytical process involved the development of conceptual tools, such as student perspectives that parallel Becker's work (1961), developing an undergraduate medical habitus similar to Luke's medical habitus (2003) and Sfard's participation metaphor (1998) which facilitate examining the learning of medical students in a more meaningful way. Alongside other researchers it is acknowledged therefore that sociocultural models of learning have much to offer medical education in

exploring new ways of conceptualising how medical students learn (Mann, 2011).

However adopting such an approach may also have limitations particularly as the study was small and constrained by both time and resources. Overall a small number of participants from one medical school took part either within the focus groups or individual interviews. Some of these medical students were familiar with me as their teacher or as a member of the faculty. I, as the sole researcher, have been a medical student, practice as a clinician and am very familiar with both the students' learning environment and curriculum. This presents both an advantage in being knowledgeable about matters that students are concerned about thereby facilitating discussion but also presents a possible bias when my methodology takes such an interpretative approach. Safeguards were employed, such as summarising students' views and checking out initial conclusions in later interviews, ensuring the data reflected the ideas, views and concerns of the interviewed students.

Additionally, with the benefit of hindsight, now appreciating the importance of the relationship between a medical student's developing medical habitus and the degree of successful participation within the clinical field, considering how this pivotal relationship may be affected by changes within the "field", such as current National Health Service reforms, may have been insightful.

A more nuanced conceptualisation of the socialisation, professional development and participatory practices of medical students from non-traditional lower socio-economic backgrounds is gained. However such a conceptualisation is compatible with previous aspects of research and elements of the existing medical educational literature which have espoused the commonality of the medical student experience, medical undergraduate curriculum and durability of the medical culture (Brosnan and Turner, 2009). Consequently I would propose that my findings also have a generisability beyond the setting of the one medical school in which they were generated. This leads to the discussion of several important implications for both the development of the medical undergraduate curriculum and medical education policy in general.

Perspectives derived from my study represent a more sophisticated understanding of the socialisation, professional development and participatory practices of medical students from non-traditional lower socio-economic backgrounds and as such can contribute an insightful advantage to any institution or medical school truly wishing to embrace the more familiar habitus of non-traditional students. Medical students from socio-economically disadvantaged backgrounds lament their lack of personal resources and the opportunities for student mentoring that medical schools can provide for all students but non-traditional students in particular should be promoted. Helping all students, but particularly non-traditional students, to form effective

networks that support their professional development from the onset of their studies would help alleviate some of the difficulties non-traditional students have in forming relationships with other students and the faculty.

Fortunately in terms of student admission and widening participation policies there appears to be a growing recognition that relying on previously delivered knowledge deficit models that seek to top up students scientific knowledge before application to medical school need to be supplemented with initiatives that also take into account the sociocultural aspects associated with coming from lower socio-economic backgrounds (Greenhalgh et al, 2004). These initiatives require medical institutions to question their established structures that often conflict with strongly held personal identities and lower socio-economic group culture so that successful applicants will feel welcomed. However several issues present if medical schools are challenged to modify their institutional habitus which is largely sustained by the prevalent medical culture.

The professional identity of doctors is strongly affected by the medical culture and if this is to change then what it means to be a doctor, how doctors see themselves and the perceptions of society including patients will also be challenged. This may be advantageous facilitating the diversifying of the medical workforce and aligning its constituency more to the population it serves. However the medical culture is long-standing, durable and governed

by hierarchical positions and relations between social structures and to affect any substantial change will present significant challenges (Luke, 2003). Conclusions drawn from my findings indicate that small changes that institutions can make that enhance the academic experiences of non-traditional students without significant destabilisation of the medical culture are possible. For example Thomas (2002) has shown that students seem to be more likely to feel that they are accepted and valued by staff if lecturers and tutors know their names and exhibit other signs of friendship, are interested in their work, and treat students as equals. Treating students as equals is not consistent with the hierarchical nature of the medical culture. However interviewees gave many examples of where they had felt supported and valued by the faculty. The challenge remains to ensure that all medical students, and non-traditional medical students in particular, who frequently lack an informal mentoring system, receive such support that welcomes, does not alienate them by competing with their familiar habitus, and furthermore encourages them to participate. This raises issues of faculty development. However simply informing medical educators and acknowledging aspects of this research will in part facilitate opportunities for curricular change and innovation in student support.

The traditional nature and durability of the medical culture exerts a significant influence over the design and delivery of the undergraduate curriculum and the many policies directing medical education. However as a first step

acknowledging the contested nature of medical knowledge facilitates discussing curricular implications that can address the imbalance between the theoretical and everyday knowledge in deciding what and how medical students need to learn. This challenge in part may be overcome by the increasing acceptance, use of, and research into participatory models of learning. Such a move as illustrated by my own methodology that examines the daily practice of medical students may prove more illuminating than previously firmly held traditional concepts of learning that do not possess the sophistication to explore by themselves the issues facing medical education today.

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Appendices

Appendix I: Focus group prompts

Exploration of students' perceptions of their background (TMS vs NTMS)
Do you think there is a "typical medical student" these days?

What kind of person becomes a medical student?

Do you fit this mode?

Conversely what kind of person doesn't?

Are there cliques or groups of students that hang around with each other at med school?

Why is this? And why do some fit in and others not?

Exploring professional identity
What does it mean to you to be a medical student?

Do you see yourself more as a student or more as a doctor?

What factors influence this view?

Do you think this view has changed as you have progressed through the course?

In what ways do you think you will be different when you are a doctor?

Exploring how students learn
How did you feel you coped on entering medical school?

What helped you learn?

Tell me about how you used your learning from lectures and PBL?

How did you find moving from the preclinical to the more patient centred ward based curriculum?

How do you learn from clinical encounters?

What do you find hard to learn?

On reflection is there anything in the curriculum that you seem to struggle more with than your peers?

Exploring the concept of "becoming knowledgeable"
What knowledge do you think you need to become a doctor?

What do you think will make you a good doctor?

How do you think you will know when you are ready to practice?

How do you think you will get there?

Have you had any difficulties in learning what you think is necessary in order to practice?

Appendix II: Information Sheet

Exploring the academic experience of non-traditional medical students

I would like to invite you to participate in this research project. You should only participate if you want to; choosing not to take part will not disadvantage you in any way. Your decision will not affect your education in any way. Before you decide whether you want to take part, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information.

Details of study
The research aims to describe the transition from lay person to graduating medical student from the students' perspective in order to gain a more comprehensive view of the processes involved in successfully becoming a doctor. Models of professional development and knowledge production are examined within the undergraduate medical curriculum to inform me of what and how medical students learn that enables them to practice as doctors. In discovering whether these processes differ for students from non-traditional backgrounds curriculum development can be informed.

Participating involves taking part in a group discussion and/or one-to-one interview, each of which lasts approximately 45 minutes. The personal details required for this project are your year of study, age, gender and ethnic group. These details are not compulsory, but completing them you will be consenting to their use in the project. We will also discuss by which criteria students consider themselves or others as traditional or non-traditional medical students. The results from the interviews will be anonymised so that no names appear on any publication or record of the data. Individual participants' comments will be identified by number code.

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

Sandra Nicholson s.nicholson@xxxx.ac.uk

Consent form

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Title of Study: Exploring the academic experience of non-traditional medical students

"The Medical School's" Research Ethics Committee Ref:

. • Thank you for considering taking part in this research. The person organizing the research must explain the project to you before you agree to take part.

. • If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

. • *I understand that if I decide at any other time during the research that I no longer wish to participate in this project, I can notify the researchers involved and be withdrawn from it immediately.*

. • *I consent to the processing of my personal information for the purposes of this research study. I understand that such information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.*

Participant's Statement:

I _____ agree that the research project named above has been explained to me to my satisfaction and I agree to take part in the study. I have read both the notes written above and the Information Sheet about the project, and understand what the research study involves.

Signed: Date:

Investigator's Statement:

I _____ confirm that I have carefully explained the nature, demands and any foreseeable risks (where applicable) of the proposed research to the volunteer

Personal Details (to be obtained at the time of consent)

Year of study: (Please tick the appropriate box)

Year 1	Year 2	Year 3	Year 4	Year 5	Intercalating year

Age: ＿＿＿ years

Have you studied a previous degree? Yes / No

Gender: M / F

Socio-economic classification - National Statistics Socio-economic Classification (NS-SEC) is an occupationally based classification. Please select one of the following and tick the most appropriate classification of your family or household.

Higher managerial and professional occupations (includes traditional white collar occupations)	
Lower managerial and professional occupations	
Intermediate occupations (clerical, sales, service and intermediate technical occupations)	
Small employers and own account workers (includes self-employed)	
Lower supervisory and technical occupations (usually have a form of 'labour contract' and includes lower technical craft and process operative occupations)	
Semi-routine occupations (includes a modified form of a 'labour contract' in sales, service, technical, operative, agricultural, clerical and childcare occupations)	
Routine occupations (have a basic labour contract in sales and services, production, technical, operative and agricultural occupations)	
Unknown	

Ethnic Origin

	White	
	Asian	
	Mixed	
	Chinese	
	Black	
	Other	

Please tick against the ethnicity that most closely matches you

Appendix III: Interview prompts

Overarching Research Questions

- What perceptions do current medical students have of students who come from non-traditional lower socio-economic backgrounds?

- Are the patterns of socialisation within this medical school different for non-traditional students from lower socio-economic backgrounds (NTS)?

- 'What' and 'how' do medical students learn as they progress through the undergraduate curriculum? Are there any significant differences for non-traditional students?

- Considering any subsequent findings what implications are there for future research and policy making concerning the medical undergraduate curriculum and widening participation?

Prompts 1:1 interviews

Exploration of students' perceptions of their backgrounds and issues pertaining to widening participation

Do you think there is such a person as a "typical/traditional medical student" these days?

What do you think WP means?

If I asked you to describe the differences between a middle class and working class medical student what would you say?

What do you understand by the term "working class"?

Are you familiar with students who come from such a background?

What are they like?

What kind of school did you go to?

Have other members of your family gone to university?

Are you the first in your family to come to uni?

Do NTMS work harder?

Exploring the socialisation of medical students and the development of their professional identity

What does it mean to you to be a medical student?

Is there anything special about being a medical student?

Do you see yourself more as a student or more as a doctor?

What factors influence this view?

How important is clinical experience/responsibility in how you see yourself

Any differences in either short or long term student perspectives for students identified as NTMS?

Is the conflict between a student and a doctor self identity worse for NTMS?

How important is networking?

How did you make your friends? What are they like? Are they like you? I.e. same background?

Are there cliques or groups of students that hang around with each other at med school?

What maintains these groupings?

What does "fitting in" mean and why is it so important?

Why do some fit in and others not? Is fitting in more important for some students? Union activities for example?

Does the group you belong to affect your study habits

What are the consequences of not fitting in?
Do you think NTMS fit in with the student body?
If not why not?

Professionalisation –becoming a doctor
Exploring capital, field and habitus

Tell me about the clinical environment?

What do you understand by "ward etiquette" and how did you cope?

How was this different from the etiquette of being a non-clinical student ?

Tell me about the medical culture

What does the "medical hierarchy" mean?

What makes the transition to clinical medicine easier or harder

What does "playing the game" mean to you? Who's best at it?

What are the rules?

Are some students naïve? Do some students know the rules better?

Do some students struggle more in developing an appropriate way of going about things (medical habitus)?

I was told that students understand when they need to be professional, for example with patients, they don't need to be told. How do they understand?

Do NTMS find it harder to move from a student culture to a medical culture? Ask -when on the wards what do they find difficult, explore their integration into medical teams, whether they feel part of things or alienated

How important is it for commonality between doctors and students?

Are NTMS relationships with faculty different?

Exploring the concept of "becoming knowledgeable"

How did you feel you coped on entering medical school?

Have they felt disadvantaged amongst their peers when being taught?

What helped you learn?

Tell me about how you used your learning from lectures and PBL?

Exploring any differences between formal and informal learning

How did you find moving from the preclinical to the more patient centred ward based curriculum?

How do you learn from clinical encounters?

What do you find hard to learn?

On reflection is there anything in the curriculum that you seem to struggle more with than your peers?

How do you think the curriculum could be more responsive to your needs?

Have you had any difficulties in learning what you think is necessary in order to practice?

Exploring WHAT students learn

What knowledge do you think you need to become a doctor?

What do you think will make you a good doctor?

How do you think you will know when you are ready to practice?

Is knowing how to behave more difficult/important than knowing medical facts?

Are their reasons for failure different for some students?

Appendix IV: "The Medical School's" Research Ethics Committee

To: Dr. S. Nicholson (Principal Investigator)

<table>
<tr><td colspan="1" style="text-align:right">Ref no: XXREC2008/65</td></tr>
<tr><td>

Title of study: Exploring the academic experience of non-traditional medical students.

was considered by XXREC on 8th October 2008

</td></tr>
<tr><td>

Your application was **approved** with advisory points.

</td></tr>
<tr><td>

The Committee advised that:-

   a) That the researcher ensures that all ethnic groups were represented in her 'Ethnic Origin' question and that the box called 'frequency' was removed.

   b) The researcher was also advised to cut down the length of her recruitment mail and the subject header for it; in order to encourage participants to read and respond to her invitation.

   Subject to these points being made to the researcher, the Committee **approved** this application.

</td></tr>
<tr><td>

Further action:

None.

In the event of any problems or queries, do not hesitate to contact Ms XXXXX direct – 020 7882 2207.

</td></tr>
<tr><td>

Signed: XXXXX CCCCC, Secretary to XXREC
(on behalf of the Committee)

Dated: 17th October 2008.

</td></tr>
</table>

Appendix V: Main themes, and their associated themes and variables (focus group data)

Who becomes a doctor?

❑ Characteristics of TMS
- o <u>Work hard play hard mentality</u>
- o <u>Vocational motivation</u>
- o <u>Passion</u> and <u>drive</u>

❑ Characteristics of NTMS
- o <u>Not fitting in</u>
- o <u>Lack of interpersonal skills</u>
- o <u>Socialising less</u>

❑ Identifying the structures that maintain student groups
- o <u>Student groups</u>
- o <u>Bonding</u>

Developmental processes underpinning becoming a doctor

❑ Perceived self-identity
- o <u>Medical student identity</u>
- o Professional (<u>doctor) identity</u>
- o <u>Conflict</u> between student/doctor identity

❑ Student socialisation
- o <u>Transition</u> from school
- o The <u>medical school journey</u>

❑ Professional development
- o Effect of <u>clinical exposure</u>
- o Attitudes and behaviours
- o Influence of <u>medical hierarchy</u>

Issues underlying medical students learning

❑ Knowledge –describing what they learnt
- o <u>Factual</u>, <u>procedural</u> and <u>tacit</u>
- o <u>Amount</u>
- o <u>Hot</u>/Ready to practise

❑ Identifying the students' motivation
- o <u>exam vs. clinical</u>
- o <u>guided</u> learning
- o peer <u>benchmarking</u>
- o increasing <u>patient responsibility</u>
- o students become <u>strategic</u>

❑ Importance of <u>Clinical Exposure</u>

❑ <u>Faculty relationships</u>

❑ Reasons for <u>failure</u>

Who becomes a doctor? -Student perceptions of TMS vs. NTMS (appendix a)		
Table of variables		
Theme	Sub-theme	Variables
TMS	"Middle Class"	CLASS SCHOOLING
	Motivated	ACADEMIC WORKS HARD MOTIVATED AMBITION
	Family Influence	FAMILY PRESSURE DOCTOR IN FAMILY
NTMS	"Working Class"	CLASS HOME AREA PARENTAL OCCUPATION SOCIAL NORMS LACK OF WEALTH QUANTIFY NTMS
		SPEECH
	Goals	WORK HARD TRAJECTORY
	Family Influence	FAMILY INFLUENCE/SUPPORT FAMILY PRESSURE

Developmental processes underpinning becoming a doctor -Student Socialisation (Appendix b)		
Table of variables		
Theme	Sub-theme	Variables
Socialisation	Social groups	ACCOMMODATION CLUBS UNION ACTIVITIES LATE NIGHT EVENTERS CULTURAL ETHNICITY FIRST PBL GEPs
	Maintaining structures	COMMONALITY BACKGROUND CULTURAL ❑ ETHNICITY ❑ PARENTAL INFLUENCE SEATING STUDENT HIERACHY WORK ETHIC DECREASING SOCIAL ADHESION
	Networking	ACCESS TO RESOURCES MENTOR/ LACK OF MENTOR ADVICE CAREER GUIDANCE NO Dr IN FAMILY ACADEMIC RESOURCE PEER NETWORKING HOW TO NETWORK

Developmental processes underpinning becoming a doctor -Medical Student Culture (Appendix c)		
Table of variables		
Theme	Sub-theme	Variables
Bonding		CHILLING SOCIALISING SHARED UNDERSTANDING SOCIAL EXCLUSIVITY PEER SUPPORT COPING WITH STRESS ACADEMIC SUPPORT SIMILAR TECHNIQUE
Student Identity	**Student vs. doctor**	RESPONSIBILITY CLINICAL EXPOSURE SPECTRUM LEVEL OF KNOWLEDGE
	Segregation	SOCIAL EXCLUSIVITY PHYSICAL EXCLUSIVITY SHARED UNDERSTANDING/VOCATIONAL

Developmental processes underpinning becoming a doctor -Neo-Bourdieuian Framework for analysing medical students' adaptation to the medical culture (Appendix d)		
Table of variables		
Theme	Sub-theme	Variables
Undergraduate Medical Habitus	Interactive -Playing the game	(RULES) -(SUCKING UP) -(BEING KEEN AND SEEN) (INCREASING CAPITAL) -(NETWORKING) - (HOT KNOWLEDGE) (BETTER AT GAME)
	Developing the appropriate personal attributes -Fitting in	(FITTING IN) (ETIQUETTE) (SPEECH) (BEHAVIOUR) (CHLOTHES) (ROLE AMBIGUITY) (LACK OF MENTOR)
Medical Field	Medical Culture	(MEDICAL RELATIONSHIPS) (BOTTOM HIERARCHY)
	Clinical Environment	(UNSTRUCTURED) (LACK GUIDANCE) (LACK OF ROLE) (BUSY)
Student Capital	Financial	(LACK FINANCES)
	Social	(COMMONALITY) (LACK OFMENTOR) (LACK OF NETWORK) (LACK NETWORKING SKILLS)
	Cultural	(PERSONAL ATTRIBUTES) (CONFIDENCE) (SPEECH) (PARENTAL INFLUENCE) (EDUCATIONAL BACKGROUND)

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Issues underlying medical students' learning (Appendix e)		
Table of variables		
Theme	Sub-theme	Variables
Motivation (why)	Long and short term perspectives	PERSPECTIVES COMPETENCY GRADUATE PASS THE YEAR GOOD DR
	Work ethic	WORK HARD HIGH WORK ETHIC EARLY LATE STARTERS 50%ers LOW WORK ETHIC
	Faculty	NO DIFF MOTIVATING
Deciding what and how much to learn	Student benchmarking (how much)	CONSENSUS PACING EXAM FAILURE EXAMS vs INTEREST
	What	MED SCIENCE PROF SKILLS CLIN COMM SKILLS DIFFERENCE TMS/NTMS
How to learn	Peer led	GROUP WORK COPY CONSENSUS DIFFERENCE TMS/NTMS
	Student's approach	PROACTIVE UNSTRUCTURED CONFIDENCE INDEPENDENT
	Learning pole	ACQUISITION SOCIOCULTURAL DIFFERENCE TMS/NTMS
	VALUE OF CLIN EXPOSURE VALUE OF CLIN EXPOSURE	HOW WHAT WHY