Surgeon Education, Engaging with the Immanence of Events Of Practice: An Exploration of the Ontological and Ethical Dimensions of Surgical Training and Practice

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Declaration

The work presented in this thesis is my own. The contributions of other authors and their work referred to in this thesis have been clearly acknowledged.

Signed,

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Acknowledgements

Abstract

This thesis contrasts the construction of medical knowledge that surgeons must acquire to practice with the kind of knowing that arises unpredictably, through *actual events of surgical practice*. Such knowing is demonstrated through the research process in which surgeons discuss events of practice and their strategies for coping. As such, the thesis argues that this kind of knowing is central to the onto-epistemological task of becoming a surgeon and is therefore, a crucial pedagogic dimension of such becoming.

In actual situations of practice, surgeons may be forced to respond, act and think in ways that exceed the approved teachings of surgical knowledge and technical skills. This is not to diminish or disregard the structured programmes of education and training. Instead, I advocate reconfiguring the dominant models of surgical teaching and learning to include pedagogies that are sensitive to the *immanent nature* of clinical relations and practice. Whilst established clinical knowledge may be said to be abstracted from actual occasions of practice, knowing that emerges through the contingencies of such occasions is grounded in the 'thisness' of practice. In this practical immediacy, *affective experiencing* is a critical precursor to clinical strategies.

The thesis draws upon theories of affect and becoming from Alfred North Whitehead, Gilles Deleuze, Brian Massumi and Gilbert Simondon. In analysing the policy documentation and training materials, the thesis draws from the theories of Michel Foucault, Judith Butler and Pierre Bourdieu. This investigation identified *affective relations* that form and develop within the local flows of experiencing of an event of practice. These forms of 'thinking-feeling' contribute to the entangled subjectivities and heterogenous obligations that can expand surgeons' capacities of becoming. A *pedagogy of the surgical event* attempts to engage with a learner's ideas and intensities of experience, triggered by the affective connections that arise when coping with the thisness of contingent events of practice. These immanent relations express how an event of practice comes to matter to a surgeon, how it attains significance.

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Chapter 1

Introduction: Autobiography and Background
to the Research Question

1.1 A Stolen Harvest

We change into the scrub suits, I glance at the white, hospital clock, 10.52pm. The night has yet to begin. The operating theatre is large, cold with a faint whiff of detergent. Vinny, the senior surgeon, vigorously scrubs his hands creating an impressive pink froth. Masked, gloved and gowned in sky blue robes, we perch on stools against the theatre door. I ask Vinny, how many retrievals have you done? His eyes betray the years of sleepless nights spent harvesting. An organ procurement or retrieval surgery is an operation in which a person who is dying gives prior consent to have their organs removed on death. The organs are then implanted in patients on waiting lists with liver, kidney or heart failure. It gives these human lives a second chance. Retrieval teams can travel far and wide to harvest organs. However, the destination always remains the same, a place between the portals of life and death.

I request that as both kidneys are to be retrieved, could I watch him remove the right kidney and then he supervise me with taking out the left? I reassert that he must let me do the procedure by myself, how else am I to learn? The transplant coordinator darts her head through the theatre door and sharply orders us, "the donor is here, everyone be quiet!" (the donor is the patient who has been diagnosed with brain death, kept alive by a heart and lung machine.) The whir of the patient trolley wheels can be heard in the distance, growing nearer with each microsecond. I can also hear a shuffle of feet - the donor is being brought to the theatre doors accompanied by a few members of the family and the nursing staff. Outside the theatre door lie the remaining vestiges of a human life in all its fading colours. Inside the theatre room lies the ultimate destiny of this human life - an offering of their tissues and organs.

Death cannot be coerced or hurried into a time of our choosing. Neither will it politely oblige or fall in line with our convenience. The living, however, are required to be punctual. A retrieval team must be ready to swing into action as soon as death has been pronounced. Our philosophy is, 'always early, but never late'.

The breathing apparatus is stopped. The sound of the donor's family softly weeping and their heart wrenching sobs waft through what is supposed to be an impenetrable theatre door - a fierce barrier against the spread of infection and disease, but not, it seems, an impervious screen against the human condition. I feel anxious and uneasy, agitating in my gown. I was not prepared for this?! All that had been discussed was the placement of the incision, "from suprasternal notch to pubis", and " clamp the aorta, move with speed, quickly dissect those tissues, there's not much time to get those organs out. . ." Instead, here I am occupying a limbo land - a place where life has been extinguished but death has not quite taken hold, just yet.

The Hindus believe that after the moment of death has passed, the soul of the deceased floats in the atmosphere, waiting for passage into the afterlife. It's a bit like occupying a seat in a waiting room, biding one's time. I've often wondered what the lingering spirit of a donor patient would make of my surgical handiwork. Would they peer over my shoulder and remark that my hands could be steadier, my dissection more precise and surely I could work with more speed? Would they 'tut-tut' resignedly or 'hmmmm' in approval? Would the surgery school report read, 'has real potential but must try harder!'

The doors swing open abruptly and the trolley is whisked in. The team turn their faces away. Too late. I see her face. Pale, puffy, swollen skin turgid from the weeks of medications and futile life-saving treatments. Brown, disheveled hair, grey-blue eyes, dilated, staring into the blank air. I am rooted to the ground, stunned. Vinny seeing my distress, barks, "cover her face. . . Arundi, come over here and don't look. . ." He knows it is too late to warn me. She will now live in a piece of my brain that frequently wakes me up at night with thoughts and images of things I have seen and done.

Another person to haunt my being. Her body is transferred and quickly prepared for surgery.

There is no time to dwell on those eyes. Brush it away. Bury it. But, it remains, simmering beneath a veneer. Get on with the job. You have the living to contemplate now. Vinny grabs the knife from me. I have failed at my first organ procurement. The stealth with which he cuts and dissects the tissues is remarkable. He enters the abdominal cavity where the stash we have come for is being held. I watch, numb and paralysed. I had wanted to do this operation so much, but right now I have neither thoughts nor words that can articulate just how I feel at this moment. Later when we're finished, Vinny pats me on the back saying stiffly and somewhat awkwardly, "uhh. . . don't worry. . . there'll be a next time. . . you just need to do more, that's all. ."

How do I make sense of this strange harvest? We are errant farmers, appearing in the night to steal and abscond with a harvest that we have neither sown nor cultivated to maturity. We were not present at the time of birth to thrill at the beautifully formed fingers and toes, to take pride when the first few words were uttered, to nurse knees grazed on the school playground or to pack a car full of things to be debunked at a university dorm. Instead, we are robber farmers from a limbo land. Reaping a harvest which is carefully and dutifully implanted in the battered landscape of another human being. This harvest, stolen in the night, can nourish a diseased body and provide hope where there was little to begin with. This is the lived reality of our task. But today, I'm not sure that I have what it takes to be a robber farmer. And, I'm not sure that I want to be a robber farmer, anymore.

1.2   What Is This Thesis About?

a)   The context of the research: the 'speechlessness of practice'

The above excerpt is taken from my surgical journal, one of many stories I have collected over a decade spent training to be a surgeon. The narrative illustrates how I was deeply affected by my first organ retrieval surgery. Prior to the clinical encounter, I had prepared for the experience by reading up on the operative technique, visualising how I would undertake the procedure and discussing the surgery with my mentors. However, when confronted by the reality of the task, operating on a still warm corpse, knowing that the family were grieving outside, I was speechless and paralyzed. The operation I was expected to do, would confer no benefit to the deceased donor—an operation that no-one does, normally. All the preparation I had done and the prior operative experience I had acquired, appeared irrelevant, because when the moment came to act, I could not.

I have described this experience as the *speechlessness of practice*. It is a form of non-cognitive thinking and non-rational behaviour, that has often characterized my initial experience of clinical practice. This has included how I have responded in other situations such as, performing an operation in which there has been an unanticipated finding or outcome, being confronted by a patient who reacts in a manner that I had not expected or faced with a surgical trainee who interprets my instruction or teaching content in alternative ways to how I had intended. My immediate response in the above narrative, characterized by a muteness and physical inaction, could be interpreted as shock, caused by inexperience. The reaction could also be interpreted as a simple failure to perform when necessary.

But, since the organ procurement event, I have frequently reflected on it and come to the following conclusion. The way I immediately responded to the acuteness of the experience, reflected the affective nature of the encounter for me. That is, in the '*thisness'* or the here-and-now of experience, the initial impact of a clinical encounter

procof practice is *affective*.

b) **Affective experiencing: alternative theories of surgical learning**

The notion of affect is a delineation of the feelings and emotions, that arise out of the encounters and events that we experience. These *affectations*, push and pull us in various directions, which have an impact upon our thoughts, actions and decision making processes. Our affective states are involved in controlling and modulating how we perceive and respond to events as they unfold.

Theories of affect are increasingly being applied to aspects of society, culture, art and life in general (Clough and Halley, 2007; Ahmed, 2010; Gregg and Seigworth, 2010; Berberich, 2015; Angerer et al, 2014). I have adopted the notions of affect espoused by Alfred North Whitehead, Gilles Deleuze, Gilbert Simondon and Brian Massumi. These theorists have developed a variety of similar concepts that are premised on the notion that the *initial impact of an encounter is affective* prior to cognitive processes becoming involved. Put another way, actions and behaviours are first informed by affective dispositions that are initially *independent of consciousness or rational thought*.

c) **Research hypothesis**

Based on my earlier observations and thoughts about the affective nature of clinical encounters, I have formulated the following hypothesis, which I present in three parts:

In the acuity or *thisness* of surgical practice, the initial impact of the clinical encounter is experienced as an *'affective learning'*, prior to the development of cognitive and rational processes. This is how the surgeon first comes to *know* the event.

The affective dimension of learning may emerge as 'learner behaviours' that are *not always visible or tangible*. The 'speechlessness of practice' may constitute such a non-visible yet powerful affective component.

The affective nature of an event of surgical practice may be involved in mediating how this encounter comes to *matter* or *attains significance* for the learner.

I will now clarify these ideas by explaining what concepts I am communicating through the terms, 'knowing' and 'mattering'.

d)   Ways of learning: 'knowing' and 'mattering'

In the above surgical narrative, how I experienced the learning encounter was how *I came to know the event*. The literature on 'knowing' and how one 'comes to know' something is a substantial body of work, incorporating amongst others, tacit knowledge (Polanyi, 1958, 2009), situated knowing (Lave and Wenger, 1991) and the knowing that arises through observation and experimentation.

But, in the context of this research study, I use the terms 'know' and 'knowing' to refer to Alfred North Whitehead's (1929) writings on *Prehension*. Whitehead describes prehension as the way in which a subject accounts for something else: how a subject (human/nonhuman) encounters something that makes a difference for her. The difference may arise through language, smell or touch. An example is how I prehended the encounter of the organ procurement, through the sound of the family weeping, the sight of a pair of dilated blue eyes, the warmth radiating from a newly deceased corpse. These elements of the clinical encounter trigger affective relations that form and develop in the local flows of experiencing. Processes of affective experiencing become significant through the ways in which they contribute to create the realities of the event for me. This is how I come to know the organ procurement as an encounter of practice.

Thus, in creating the realities of the encounter, the affective nature of experiencing also mediates how the encounter attains significance for the subject. In other words, *how something comes to matter to a surgeon*, emerges through the temporal realities of an encounter.

e) Hylomorphic principles of learning and practice

The initial construction of meaning and purpose through affective engagement is, I suggest, an alternative and complementary approach to the established thinking on the matter. In the latter, prior categories of approved medical knowledge and formal clinical skills are applied to learning encounters of surgical practice. This method of clinical learning is driven by hylomorphic principles; whereby established form is imposed on matter. In other words, individual experiences of clinical learning, which can differ from encounter to encounter or from trainee to trainee, are homogenised by the application of common principles embedded within existing knowledge and practices. This organizational approach to the chaos of experience is unavoidable. Namely because the structuring of experience in this way is to ensure that medical practitioners acquire the necessary knowledge and skills to practice effectively. However, it becomes problematical if it begins to totalize medical practice. This is best illustrated through the organ procurement example.

An observation of my visible actions using one of the many assessment formats may conclude the following. My performance at a training opportunity was inadequate. I had not displayed the relevant skills, neither had I acquired any new practical skills. Through this lack of performance, I had demonstrated a poor understanding of organ procurement surgery (even though I was fully versed on the technique). This summary of my learning experience, derived from established methods of assessment based on curricular and learning objectives in surgery, raises a few points.

f) Challenges to the hylomorphic model of learning and assessment

The trainee

A narrow emphasis on acquisition of technical skills and clinical expertise at the expense of other skills, risks obscuring the wider pedagogic implications of learning 'in the field'. Clinical encounters have the potential to generate alternative forms of knowing, beyond the knowledge created by privileging technical experience. These

other forms of knowing may express how the clinical experience really *matters* to the surgeon. However, they become invisible in a system that focuses on technical schemas.

This is not to diminish or minimize the critical importance of learning practical skills in a craft specialty. Instead, I argue for an approach that acknowledges the supportive value of affective learning while recognizing its potential to extend existing pedagogic strategies. How would affective learning achieve this? First, by enhancing assimilation of established skills and knowledge. Second, by triggering novel ways of thinking, doing and being which can be complementary and additive to standard clinical practice.

A personal example of the contribution of affective learning is how I developed my future role as a surgical trainer. I had good insights into the educational difficulties facing trainees: predominantly, attempting to learn in contingent clinical environments. I designed inductions and simple simulations to progressively immerse trainees in surgical practice. I initiated new surgical trainees to operative culture by taking them to empty operating theatres, after hours when there were no other staff present. This way they could familiarize themselves with the environment, equipment, orient themselves with scrubbing technique, practice transferring on and off operating tables and so on.

The absence of other staff encouraged the trainees to explore and ask questions without feeling foolish or judged. These initial forays into surgical culture proved successful in building confidence. It also diminished the anxiety that can debilitate or interrupt the learning of important foundation skills such as tissue handling or suturing technique.

The patient

It is also important to build an awareness of how the patient experience of clinical practice can be impacted by hylomorphic structures. The latter may obscure factors

that emerge from the patient-surgeon relations and which really matter to the patient. An example is how a physician may organize a particular test for a patient, in accordance with the principles of good medical practice. But he may still miss recognising the patient's beliefs and anxieties which cause the patient to refuse the test (see Chapter 5). However, the patient's refusal may be attributed to poor communication or a lack of empathy on the part of the doctor. *Good Medical Practice* (2013) which advises doctors on all aspects of their professional duties, presents a didactic format for how communications should be conducted. But, to focus solely on the communication skills of a doctor is to neglect to understand the wider complexities involved in everyday examples of routine care, of which the doctor-patient relation is one, (see Chapter 5).

These are some of the key challenges associated with applying formal knowledge and practices (hylomorphic frameworks) to experiences of clinical practice and learning.

g)   The immanence of form

In the above, I discussed the dominant way of viewing clinical learning and practice namely through hylomorphic principles. However, as already mentioned, learning encounters are fluid and dynamic, by virtue of the fact that it is impossible to fully anticipate how a clinical encounter will unravel, and how a learner may respond to its unpredictable nature.

In situations similar to the procurement of organs, it is not uncommon to dwell on moments of uncertainty, which relate to the intensities of affect: *'what do I do here? how must I think/act? how do I carry on?'* On occasion, as in the retrieval narrative, the states of affect can overwhelm us. However, performance in contingent environments, where events cannot always be adequately prepared for, is a key feature of a surgeon's practice. Focusing on the practical aspects of a task, such as performing a clinical procedure, can provide a way to navigate the turbulence of the unanticipated affective state, and for the physician avoid being incapacitated. This

approach may work because it functions to bring structure or form, to the chaos of unanticipated practice and its associated affective components.

But, these established categories of knowledge and skill tend to exist in idealized forms. As such, they are removed from actual practices of surgery. They are designed to be relevant and applicable to actual encounters of practice. But their ability to anticipate the affective nature of contingent surgical practice is limited. This is because it is impossible to know in advance how exactly a clinical encounter may unravel. In addition, real encounters of surgery tend to exceed what is contained in official practices of knowledge.

Gilbert Simondon's (1964, 1989, 1992, 2005a, 2005b) writings on individuation (processes of becoming) and form bring to light the notion that form and matter cannot be separated. They are indissoluble from each other. Instead, form emerges through individuation. He gives the example of clay used to make a brick. A brick may be considered a 'proper' structure unlike the amorphous clay which requires a mould and a brick oven to convert it into a perceptible form. However, such an approach, neglects to recognise the form that is inherent to the substance of clay. Clay is created from marshy soil that is dried, ground and kneaded (Chabot, 2003: 76). Therefore, form is already intrinsic to these processes of individuation, prior to the clay being moulded into the conventional form of a brick. So, one can suggest, that in the moulding of the brick, the *relations composing the clay* and the *relations between mould and clay*, are constantly individuating. There is no priority of the mould over the clay.

Thus, the immanence of form is a notion that can be used to conceive how trainees cope and make meaning out of the 'matter' that constitutes unpredictable clinical encounters. At present, established practices are applied to learning encounters. This rightly helps to ensure that trainees are equipped with the necessary skills and knowledge to practice. However, if we accept that encounters of clinical practice have an inherent form embedded in the substance and relations of the encounter, then

learning is reconfigured as an attempt to grasp the forms that are immanent to an event of practice. Through this 'grasping' of the event, a learner may begin to construct meaning and understanding out of the chaos of contingent clinical practice. This form of learning, exceeds prior categories of assimilation and understanding. It may contribute to the existing bodies of medical knowledge by deepening the understanding of practice as it becomes more relevant to the individual.

1.3   The Contingency Of Practice

How do surgeons come to terms with the affective realm of practice? And why is it important in clinical practice? One could argue that my narrative above, is an example of an extraordinary clinical circumstance and therefore, an exceptional learning encounter. As a result, it is not unreasonable to expect that a novice surgeon would be so profoundly affected by a powerful clinical experience.

However, while the organ procurement is a special learning event, I would contend that all encounters of clinical practice have the potential to surprise, shock and transform physicians as both practitioners and human beings. Even engaging in clinical tasks that are routine or repetitive such as changing a dressing on a wound, performing a common hernia operation, or discussing therapeutic options with a patient have the potential to disclose new ways of thinking and doing which can transform practice.

a)   What is already known?

Workplace based learning theories

These notions of learning and teaching have already been researched and investigated from different perspectives. First, there is a category of workplace-based learning theories. Prominent among these are theories of situated learning and of communities of practice (Vygotsky, 1978; Lave and Wenger, 1991). These assert that learning is intimately connected to its context and the social relations and practices

that form. Learners are active participants, learning from and with the members of the working community (Billett, 2001, 2004). These activities transform the identity of the learner.

Michael Eraut (2000, 2007), described the informal learning that occurs through experience and interaction with colleagues at work. He identified the tacit learning, which develops as a function of processes of socialisation, observation and participation, and knowledge that develops in the absence of explicit teaching. These theories conceive knowledge as contextually situated. Knowledge arises through the activities and social processes embedded in the workplace. But, these theories stop short of critically examining the nature of the experiencing itself in clinical environs. They do not comment on the processes that constitute how something is experienced by a learner. In other words, the workplace learning theories do not adequately resolve how an encounter attains significance for the learner through the actual experiencing of it.

Experiential and reflective learning

A second category of theories focuses on experiential learning (Kolb, 1984; Boud and Walker, 1998) and reflective practice (Schon, 1983; Moon, 1999). These applications of learning have been strongly embraced by medical education (Mann et al, 2009; Wald et al, 2009; Wear et al, 2012; Ng et al, 2015), forming the foundations of the surgical curriculum (ISC, 2016), systems of assessment (ISC, 2016), as well as processes of professional licensing and regulation (appraisal and revalidation) (GMC, 2013).

The objective of reflective learning is to critically examine experience in an effort to understand why certain forms of thought and behaviour occur. How can this knowledge then be used to create improved practice through enhanced self-awareness and self-monitoring? Trainees and surgeons are required to record on online portfolios their thoughts and views on events in practice. This is a challenging

activity to accomplish, given the other competing interests on a physician's time (Grant et al, 2006; Mann et al, 2009). In addition, enforcing the exercise can lead to a superficial engagement with the activity to meet the requirements of professional regulation (Murdoch-Eaton and Sandars, 2014).

More recently, reflective exercises mandated by medical curriculae have become controversial. This follows a case, in which a trainee's written reflections on their training development were used in legal proceedings against the doctor (Matthews-King, 2016). I mention this incident to illustrate the wider complexities surrounding the activity of reflective practice in our present litigious medical climate. However, while there are a number of concerns regarding how reflective practice is applied and assimilated in learning environments (see chapter 6 for a detailed discussion), I am concerned with its limitations to capture the affective dimension of experiencing.

Reflective practice, as applied in postgraduate medical education, requires surgeons to engage in rational processes of critical analysis. Learners are 'forced' to interrogate examples of their daily practice from a perspective of reasoning and logic. 'Why did I act this way? What can I learn from my actions? How can I improve my awareness and practice for the future?' However, this approach risks totalising clinical experience as a function of cognitive processes. It may also redefine the purpose of reflection as an exercise to identify rationale for thinking and doing in practice.

b)   Summary

Both these categories of learning theory are useful in organising the chaos of experience into meaningful structures that can be reviewed and critiqued. But, they risk suppressing affective elements of the experience. This I suggest, constitutes how the learner comes to know the event, how they 'prehend' (Whitehead, 1929) the learning encounter, and how the learning event comes to matter to the learner (Atkinson, 2016).

These assertions have led me to think critically about how surgeon education considers and attends to the importance of affect within daily encounters of clinical practice.

1.4 What Is Missing From The Research Literature?

At present, research paradigms in postgraduate surgical training, examine learning experiences from a variety of perspectives. These include:

- curriculum design

- assessment strategies to evaluate assimilation of knowledge and development of skill

- how to improve or advance skills acquisition (operative/clinical/behavioural)

- development of professional attitudes and behaviours

- improving selection into surgery or higher surgical specialties

- simulation training to advance the above skills

- the impact of national policies (e.g. European Working Time Directive) and educational reform (e.g. competency based medical education).

These approaches are concerned with the technical and mechanistic aspects of learning experiences. They are premised on the assumption that there are fixed forms of knowing and knowledge to be acquired.

a) Research into skills acquisition

An example is the research that investigates how novice surgeons develop laparoscopic surgery skills (Hance et al, 2005; Larsen et al, 2009; Mansour, 2012). These studies identify the necessary skills: spatial awareness, ergonomic instrument handling, ability to perform sharp and blunt dissection, port site closure. The research analyses how novice surgeons acquire these pre-defined and established techniques in learning encounters. It constructs a methodology that identifies observable

behaviours associated with the acquisition of a skill. The study design then incorporates ways of measuring and quantifying the attainment of that particular skill.

b)   Dominant methodologies of research studies

The principles that inform this research method into learning experiences are based on two ideologies. The first is the scientific method and quantitative analysis of data, the standard practice in science and medical research, in general. The second is competency based medical education which requires demonstrating the attainment of learning outcomes. The latter identifies specific competencies that must be obtained in accordance with good medical practice, such as 'communication skills' or 'technical proficiency'. Successful acquisition of competencies is checked via a system of routine assessments, which measure and quantify performance against pre-defined norms.

These systems are in part a response of the 'post-Francis' age (see Chapter 2), which demands accountability of physicians, personnel and organizations employed in the daily work of providing healthcare.

The objective of the scientific method and competency based approach to examining learning experiences, is to assess how well the intended content of a learning exercise has been assimilated and understood. It provides a means of evaluating whether surgeons in training are developing into skilled and safe practitioners. This is a necessary and critical aspect of professional medical training.

But, the difficulty arises when research studies into postgraduate training are compelled by an emphasis on outcomes. This channels research studies into aspects of surgical practice that are visible and therefore measurable and quantifiable. The consequences are twofold. First, it favours research that can firmly establish concrete links between observable learning outcomes and evidence of good practice. Second, the narrowing of the research approach, limits the areas of surgical practice scrutinised through a critical lens. I would argue that within research into

postgraduate surgical training, the affective dimension of practice, is a neglected field of inquiry.

I hypothesise that in the haecceties of practice, a clinical encounter comes to matter to a learner through the affective relationalities that form and develop within the local flows of experiencing. These ideas are not developed to oppose or reduce the importance of formal bodies of surgical knowledge and practice—biomedical models of knowledge remain a very important part of the training. However, I am suggesting that to enhance the uptake and assimilation of foundational knowledges and practices, it may be necessary to acknowledge and understand the role of the affective dimension in learning.

1.5   The Theoretical Struggle Of This Research Study

How can the affective nature of clinical practice be investigated? How can its implications for learning and teaching be understood? I propose that it is mainly through exploring the dynamic and complex nature of experiencing. As mentioned earlier, present approaches to learning and practice in Medicine tend towards hylomorphic principles. The reasons for this have already been discussed. Therefore, what I attempted to identify, was a methodological approach that would accommodate the richness of the available information contained in narrative accounts of experiencing. Such an approach would recognise the multiple realities embedded in encounters of clinical practice. This in turn would foster a range of interpretations to emerge from the data analysis, which may better elucidate the complexities of thinking and doing in contingent clinical practice. This contrasts with the prevailing hylomorphic framework in which the data on experiencing is forced into set categories, a procrustean approach.

a)   Developing a conceptual framework for data analysis

I developed a theoretical framework by drawing on the writings of a number of philosophers, including, Alain Badiou, Alfred North Whitehead, Gilles Deleuze, Gilbert

Simondon, Brian Massumi, Michel Foucault, Judith Butler and Pierre Bourdieu.

Deleuze proposes that at a given moment in time, what an individual decides to do or how she decides to act in the thisness of an encounter, is a consequence of actualizing the virtual potential. This is the notion that the intensities of affect produced within the experiencing, spark a virtual dimension of ways of thinking, acting and being. It is virtual because in actualizing a potential, an individual's mode of being is brought into existence, though previously it had neither existed nor been conceived of. It is possible that at the organ procurement, the way I initially responded, was an actualization of the virtual dimension. It represented a mode of being and a mode of thinking, that I had previously not envisaged. This was probably because I attended the organ procurement with a definite plan of action, and had not anticipated how I would actually react.

Massumi builds on the notions of virtualities. He states that while affects can be perceptible (feeling a 'rush' of anger or excitement) they can also be imperceptible. In the latter, the affect is 'felt' through the ways in which our bodies are capacitated or diminished in their abilities to respond to an encounter (Massumi, 2002). In other words, our responses are determined by the affective state we inhabit, allowing us to react in ways that expand or reduce our capabilities. He describes this quality as a ' thinking-feeling' that emerges within experiencing an encounter. My inaction and paralysis at the organ procurement may represent a diminishing of my ability to act, operate and participate in the surgery. However, in the days and weeks that followed, my abilities to think upon the event and reflect on how I would act in the future, constituted a capacitation of my being.

b)   How my practice transformed

In Deleuzian terms, the virtual potentialities were actualized at a later date. The affective relations that formed and developed in the encounter contributed to and transformed my practice as a transplant surgeon as well as my conduct as a human

being. It precipitated a line of questioning which might otherwise have not been fostered by the more established and formal bodies of surgical knowledge. I started to think about the environment in which I developed my operative skills, how I negotiated emotions in practice that had the potential to engulf or distract me from important clinical tasks, how I approached and discussed organ donation with the families of brain dead patients. Today, as a surgeon educator, I am more sensitive to the trainee perspective when contemplating how best to teach organ procurement surgery.

Ten years on from the initial organ procurement experience, I am still actualizing the virtual potentialities of that specific surgical event, still attempting to augment my capacities as a surgeon, not always successfully, but at least with an improved awareness of my individual thoughts and actions.

c)   **The challenges of a singular cognitive approach to 'thinking'**

This approach does not reduce or obviate the fundamental role of established surgical knowledge or critical practical skills. These aspects of surgical education are the bedrock of professional training, ensuring the production of practitioners who are skilled, proficient and safe. However, the dominant ideology in medical education is the premise that clinical teaching and learning is firmly grounded in notions of reasoning and rationality. This is the unquestioned assumption that, 'thinking' is predominantly a cognitive activity. As I have demonstrated in the above narrative, logic and reasoning as functions of cognition, are often not the first faculties to be stimulated, in actual experiences of clinical practice. Therefore, I argue that it is crucial to acknowledge and recognise that the affective intensities of clinical experience can be implicated in how we choose to think and act.

d)   **Coping with uncertainty in clinical practice**

This has two major applications for surgical education. First, the contingency of clinical practice requires surgeons to make decisions in unfamiliar situations, trying to

find a way forward to meet the needs of the patient. An awareness of the affective dimension is particularly important when addressing the uncertainty of clinical situations. It engenders an improved self-awareness in practice, as the learner recognizes how thoughts and actions are precipitated or influenced. This also has important implications for how policy is constructed in healthcare, bringing to attention the ways in which the affective nature of behaviour can impact policy enactment.

e)   Recognising the non-visible and immanent forms of learning

Second, affective modes of experiencing may contribute to the emergence of qualities in surgical trainees which are neither visible nor tangible through the conventional training assessment. An example is how clinical decision making is assessed through a learner's ability to 'talk through' the steps of their process. This relies on a linguistic grammar to demonstrate assimilation of knowledge and an ability to rationalize. The difficulty arises when this assessment format is developed around a learner's language ability. This may mean that what is examined is not the skill of decision making but rather the ability to communicate one's thoughts. As a consequence, the affective aspects of decision making become invisible and are not considered as relevant or valuable by existing pedagogic discourses.

f)   Badiou's notion of 'event'

The intensities I experienced in the opening narrative, can also be interpreted through Alain Badiou's notion of the 'event'. Badiou emphasized an 'event' as an eruption in a situation, which could otherwise have not been predicted to happen (Badiou, 2005a). The clinical encounter caused a disturbance between what I had been taught about an organ procurement and the lived reality of the surgical experience. By choosing to persevere with the uncomfortable reality of the event (Badiou's notion of 'truth'), I attained a new ontological and epistemological state. I came to understand that I was to operate on a dead person, something I had never done before, which triggered an emotional wakening that exceeded the practical nature of the task.

g) Reconciling emotion with notions of effective practice

However, my colleagues at the organ procurement may have been aware of how the experience would affect me thereafter. But they chose to say nothing to warn or prepare me for the affective reality of the retrieval, that I would subsequently experience. I have asked myself why this might be. One reason in particular has resonated with me. Vinny, my mentor at the organ procurement, may have believed that experiencing such shocks in practice was 'part and parcel' of the learning process. It is a way of ensuring that trainees are resilient and hardened to deal with the spectrum of emotions that are precipitated in practice. There is a belief in surgical practice, that emotions need to be banished because they cloud objective thinking and hamper decisive actions. There is a long tradition of this approach in Medicine.

However, modern day principles of good medical practice (GMC, 2013; RCS, 2014b) emphasize the fundamental qualities of empathy and compassion in a physician. These characteristics require a doctor to be strongly engaged with the emotive aspects of her practice at all times. Otherwise, it is difficult to connect with patients on an 'as needed' basis in isolated instances. I would conclude therefore that to establish enduring and caring therapeutic relationships, doctors must try to reconnect with how something matters to them in practice. They must also recognize how factors in the patient-surgeon relation matter to the patient.

1.6   Research Aims And Structure

The overarching goal of my research thesis is to explore the ways in which the affective dimension of practice is involved in how learners experience events of clinical practice. A second objective, is to demonstrate how a theoretical framework constructed from philosophical theory, can be used to develop complementary pedagogic strategies to assist learning that arises from the thisness of clinical practice. This is a novel research venture in the realm of postgraduate surgical education and training.

a)   The research questions

To conduct this investigation, I have posed the following research questions to direct the study and structure the findings:

- How do surgeons make sense of their day to day experiences, *in* and *of* practice, as they happen in actual time?
- What are the educational opportunities embedded in the day to day phenomenology of practice?
- What are the ways in which a trainee constructs meaning in and of routine surgical practice?

b)   The research methodology

To answer these questions, I explored data from three sources; ethnographic data from my own training journals in general surgery and transplantation over a 5 year period based on experiences in the UK and USA, data collected from semi-structured interviews with senior and junior surgeons and finally a detailed analysis of the official curriculum and documentation pertaining to surgical training in the UK as published by the General Medical Council and Royal College of Surgeons of England.

I contrasted the established knowledge of clinical procedures with the knowing that arises from the actualities of practice. I did this by first analysing policy documentation and training materials (curriculum, assessments) pertaining to medical and surgical education. The analytical framework I devised for the critique of documentation was derived from the writings on discourse and power-knowledge by Foucault and Butler. In addition, I used Bourdieu's theories on social reproduction. The second phase of the study involved conducting 8 semi-structured interviews with senior trainees and consultants in a variety of surgical disciplines that ranged from general surgery to neurosurgery. The interviews were analysed using the theoretical framework I discussed earlier which was based on notions of event, virtualities, affect, experience, individuation and ethics.

c) The structure of the thesis

As mentioned above, the focus of this thesis is in contrasting and comparing the established knowledge of clinical procedures and practices with the knowing that arises from being immersed in actual events of surgical practice. The next chapter provides a brief history of surgical education in the UK, the organization of medical training in this country and a summary of the modern-day challenges and issues confronting the profession and its training practices. Chapter 3 describes my methodology including the problems I encountered and how I responded. Chapter 4 presents the theoretical framework that I have drawn on to structure the research question as well as formulate how I intend to analyse the data. Chapters 5 and 6 contain my data analysis of policy documents, training materials and interviews as informed by the analytic method based on philosophical theory. Chapter 7, is the conclusion to this thesis with a presentation of the main findings of the research and the recommendations for surgical training and education.

1.7 Concluding Remarks

The lived reality of affective experiences in clinical practice and the challenges that trainees face in attempting to make sense of these, is an area that I believe at present lacks an adequate and effective educational strategy. One of the important aspects of medical training is to provide a space in which learners and teachers can unpack their experiences with colleagues. This was, I think, the initial motivation for reflective practice which has subsequently been overwhelmed by a rhetoric of standards and accountability.

In this thesis, I attempt to emphasize, alternative yet complementary research approaches which may enhance current pedagogic strategies. I argue that, it is in preparing to manage the everyday transience of surgical practice that surgeons may better confront the uncertainty of clinical medicine and develop an ethics of practice that is relevant to their individual practice and enduring.

Chapter 2

What's The Matter With Surgical Training?
A Discussion Of Traditions, Recent Trends And Controversies In Surgical Education

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2.1　　　　Introduction

The objective of my thesis is an exploration of the phenomenology of training, in an attempt to elucidate how surgeons make sense of their experiences in acute clinical practice. To understand the context of this study I begin with an account of the surgical training system in the UK. I describe the evolution of surgical training from the early apprenticeship system to its current incarnation as a well-defined programme of study with regular assessments. This chapter is mainly devoted to an investigation of how socio-cultural events and priorities in government policy have shaped models of surgical education. This provides a background and context to the themes in education that are explored and critiqued in Chapter 4. In the latter, policy documents are critically analysed with two aims. First, to examine how surgical practice is conceptualized. Second, to compare and contrast these conceptions of practice with narrative examples of actual clinical practice.

I would advise the reader to familiarize themselves with this chapter once again prior to engaging with the content of Chapter 4. I hope that when read concurrently, the reader may develop a deeper understanding of how issues arising in healthcare are implicated in the ideologies of surgical practice and training.

In recent decades, there has been a paradigm shift in surgical education and training. A discipline that was firmly entrenched in the values of surgical culture, has been transformed (along with the rest of medical education) to a competency-based model of training and practice. This has in part been to ensure that incompetent doctors and poor practice are not allowed to flourish within the healthcare system. Surgical

training refers to a period of 'study' concerned with both the academic and technical components responsible for converting novices into technically competent and professional surgeons (Zwierstra, 1994; Nyhus et al, 2000; Peracchia, 2001).

Surgical culture

For several centuries, surgical training and education, the ways in which would-be surgeons were taught and schooled, was defined and shaped by the dominant surgical culture of the time. Surgical culture was synonymous with surgical training. There is a considerable body of literature exploring the traditions and practices of surgical culture through ethnographic studies, experiences of training and clinical practice as well as biographies used to illustrate the challenges and complexities of life as a surgeon (Katz, 1998; Gawande, 2002; Bosk, 2003; Weston, 2009; Marsh, 2010; Kalanithi, 2016).

Pearl Katz (1998) in *The Scalpel's Edge: the culture of surgeons*, defines surgical culture as, "a professional 'subculture'", with its own social organisation, values, theories of disease causation, and treatment, and rules of behaviour." She, and other medical sociologists have documented that the profession perpetuates its values and practices by recruiting candidates to the programme who appear to closely resemble the thinking and behaviour emblematic of the discipline (Mishler, 1981: 205; Helman, 1994; Stein,1990). 'Grit', 'resilience', 'endurance', 'stubborness', 'arrogance', 'the last man standing', are all terms found in the aforementioned texts to describe the qualities of a surgeon. Unsurprisingly, the practices that evolve in training, have in the past centred around ways of promoting and cultivating these skills (Weston, 2009).

2.2   The History Of Surgical Training

a)   Medieval surgeons

700 years ago English surgeons were common barbers (Pelling, 1981, 1998). They would carry out a number of procedures; teeth extraction, blood-letting, setting broken

bones, excision of skin tumours and amputation of limbs on the war wounded. Initially, priests were called upon to perform blood-letting. However, the church discouraged this practice by insisting that handling blood, contaminated the priesthood and thus prevented them from giving the Eucharist. Barbers were hired to perform these "dirty" tasks for a small fee. The red and white striped pole, which is still found today outside barbershops, signified the blood soiled white bandages that were applied after blood-letting (Pelling, 1981).

Surgery, at this time was not considered an elite or academic practice associated with a formal period of university study. Surgical practice was separate to the study and practice of Medicine by medical physicians. Barber-surgeons were often illiterate with no formal learning and would learn their trade as an *apprentice* to an experienced master. The tradition of *apprenticeship* has pervaded surgical education for centuries and only been challenged as recently as the last two decades. In the 18th century, George II separated barbers from surgeons by establishing the London College of Surgeons, which then became the *Royal College of Surgeons* in London following decree by royal charter. Some vestiges of the barber origins are seen in the British practice of addressing surgeons by the title of "Mr" or "Miss". This address reflects the medieval era when surgeons were not considered physicians, had no university education and were therefore not permitted to call themselves "Doctor". Today, all would-be surgeons are trained physicians who subsequently enter a surgical training programme in which they acquire the knowledge and skills to practice as Surgeons.

b)   The 19th century surgeon

In the 19th century, there was no compulsory curriculum and surgeons undertook a 7-year apprenticeship. An oral examination in anatomy and surgery was compulsory for Navy and Army surgeons. However, following the *Apothecaries' Act in 1819*, the College printed its first curriculum and by 1837 a written examination was established for those candidates who had not performed adequately in the oral assessment (Blandy and Lumley, 2000: chapter 3). Over the ensuing years, the curriculum

expanded and George IV (1822) approved a 6-year apprenticeship and a mandatory period of 'walking the hospitals' (Galasko, 2005).

By the end of the century, there was consensus about a curriculum and examination system that would test a candidate's knowledge of anatomy, physiology, surgery and pathology. In addition, it was decided that examination of real life patients should be incorporated into the assessment format. The College started to emerge primarily as an examining body. By the inception of the NHS in 1948, the FRCS qualification or Fellowship of the Royal College of Surgeons examination became a mandatory requirement prior to entering a senior surgical trainee position.

c)   The apprenticeship system: the 'waiting room'

As mentioned earlier, surgeons were typically trained through an apprenticeship system. It was not unusual for senior consultant surgeons in the UK, qualifying from medical school in the early 1970s to have spent on average, fifteen years being apprenticed to various surgeons (Ribeiro, 2006). During this period of apprenticeship, a surgical trainee was expected to learn by observation, assistance and eventually permitted to carry out procedures independently. The latter would often occur with no oversight or supervision, and it was not uncommon for the consultant trainer to not be physically present in the hospital while the trainee operated.

This was a common experience in the apprenticeship system of surgical training, and was considered necessary. The belief underlying this interpretation of 'independent practice' was that a trainee left to manage an operative situation would develop important skills and personal knowledge. This included coping mechanisms in stressful environments, growing in confidence and learning important technical skills and operative judgement when confronted by difficulties or complications that had to be navigated in the absence of a mentor.

Appointment to a consultant surgeon post, was infrequent because new positions were rarely created. If an established consultant surgeon resigned his position or died

while still practicing, a position would become vacant and a younger surgeon could be appointed (Ribeiro, 2006). To be acknowledged as an able and experienced practitioner, ready to assume a consultant position, a surgical trainee was expected to be fluent in a number of procedures (no formal assessment of proficiency) and to have passed the qualifying exams (Fellowship of the Royal College of Surgeons or FRCS).

However, even the attainment of these qualifications was not a guarantee of a job as consultant surgeon. Skilled and knowledgeable surgeons had to bide their time in what I call the "waiting room" - an indefinite period spent as a very senior trainee, waiting for a consultant position to become vacant. As a teenager, I witnessed many surgeons go through this process, including my father and his colleagues.

Eventually, the financial pressures of a young family and mounting expenses plus sheer frustration with a poorly designed professional structure would push these committed and experienced surgeons out of surgical practice and into another career, such as General Practice (Hunter and McLaren, 1993). The apprenticeship system was notorious for the indeterminate time spent in training. There was no assessment structure and an absence of quality assurance mechanisms, to ensure that surgeons emerging from training were diligent, able, caring and professional (Department of Health, 1993).

d)   The Calman era in medical training

The 1990s heralded the beginning of the period of transition in medical (surgical) education. The previously unquestioned structure of training (the apprenticeship system) and the indefinite training period were challenged. In 1992, Kenneth Calman, the then Chief Medical Officer, set up a working group. The aim was to bring postgraduate training in line with the requirements of the European medical directives (Department of Health, 1993). The report proposed a streamlined specialist training programme with a defined curriculum and minimum training period. Successful

completion of the postgraduate programme would result in formal qualification as a specialist in that particular field.

The new training system was to be defined by clear educational objectives, training agreements, and a move towards ensuring that trainees were competent, irrespective of how long they had spent in training (Department of Health, 1995). Crucially, the new proposed system did not address what I believe to be two of the most important failings of training to date. First, trainees who had completed basic training in surgery had to reapply for a very small number of higher specialist training positions. This meant that to continue training as a surgeon and enter specialty training (such as vascular surgery or urology), candidates had to reapply for a limited number of training posts. The additional selection system, made entry into higher specialist training very competitive, and unnecessarily so, in my opinion. The result was similar to the 'waiting room' of the apprenticeship system, it created a *lost* tribe of aspiring surgeons who would move from job to job, till they were successful in their application for higher surgical training (Department of Health, 2002).

Second, having completed specialist training, trainees were now confronted by a lack of available consultant jobs. While the structure of training had been drastically altered, the challenges facing the profession in terms of inadequate workforce planning and funding for consultant posts, had not been tackled by the reforms. It is an exasperating position to be in when, having completed a ten-year training programme and having acquired all the necessary examinations and assessments, a surgeon is then confronted by the fact that there are no vacant positions to be filled.

e)	**Modernising Medical Careers (MMC):**
	competency-based training

In 2005, a new postgraduate training programme was instituted for all disciplines of Medicine called Modernising Medical Careers (MMC) (Department of Health, 2003). The system introduced new ways of training and assessing trainees in all disciplines

of medicine. The house officer grade of doctor (first year post-qualification from medical school) was replaced with the Foundation year trainee. The latter doctor, having graduated from Medical School, was now required to demonstrate safe practice over two years, prior to being fully licensed as a practicing physician.

Specialist training was highly structured and defined with objectives and outcomes forming the introduction of a *competency-based* model of medical education. Competence-based training (CBT) refers to *outcomes-based education* and *assessment*, whereby a trainee is expected to *demonstrate* what they have learned:

> . . not only must doctors have the technical competence to treat a patient but they must also understand why they are doing it; they should adopt appropriate critical thinking to what they are doing; use appropriate decision-making strategies; and adopt appropriate attitudes to their patients. (Davis et al, 2007: 342)

Whilst, competency-based training (CBT) now defines modern medical training, controversy continues as to its appropriateness as a model for medical education and its effectiveness in ensuring the aptitude and safety of trainees (Lurie, 2007; Albanese et al, 2008; Touchie and Ten Cate, 2016). The issues surrounding CBT are discussed further in the ensuing pages of this chapter as well as in Chapter 5.

In addition, to a further restructuring of training grades, MMC established a *certificate of completion of training* (CCT) awarded on successful completion of specialist surgical training. CCT is a mandatory requirement for any trainee expecting to assume consultant duties. I know a number of colleagues who have passed postgraduate exams and attained CCT but have yet to find a vacant consultant post.

MMC was reviewed in an independent inquiry led by Professor Sir John Tooke in 2008, after the failings and scandals surrounding specialty training recruitment through its online application process, MTAS (Medical Training Application Service). Prior to MMC, entry into specialist surgical training was through a selection system organised by the medical deaneries. For example, entry into general surgical

specialist training required meeting set criteria specified by the deanery such as, completion of the MRCS (membership of the royal college of surgeons) surgical exam, evidence of first author publications, demonstrating research skills (being in possession of a Masters degree or a PhD).

Importantly, surgical mentors had the ability to support their candidates directly, by writing glowing references or using their personal contacts with the selection team. However, under MTAS, all specialist training posts would be advertised under a centralised scheme which did not permit the 'biased' interventions of surgical mentors. Instead points were allocated to each trainee depending on how well they met the selection criteria, leading to shortlisted candidates competing against each other in an OSCE[1].

However, only 18,500 training posts were available for 32,000 applicants, which meant that over 14,000 junior doctors were left without training jobs (Tooke, 2008). Concerns were expressed that without the prospect of training positions, medical trainees would either seek employment abroad or leave medicine altogether (Shannon, 2007; Gordon, 2007). Large protests and rallies were held across the country with doctors striking and marching against MMC and MTAS (Delamothe, 2007; BBC, 2007; Boseley, 2007; Eaton, 2007).

The introduction of the 48-hour work week (the European Working Time Directive or EWTD), was rolled out to hospitals across the UK at the same time. It was voiced by Doctors' Unions and the British Medical Association, that to be compliant with the reduced work hours, hospitals would have to recruit extra doctors into service jobs which carried no training prospects or career progression. Thus, creating, *"a permanent subclass of cheap, undertrained sub-specialists*", (Brown et al, 2007).

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[1] OSCE or objective structured clinical examination is a performance based test of candidates through a series of stations which allows evaluation of clinical skills, decision making and judgement skills, practical skills and knowledge. Candidates are set specific tasks at each station and assessed through direct observation of behaviour.

The Tooke inquiry was highly critical of MMC, stating that it had been an "overambitious" strategy which had not engaged with the medical profession regarding how the recruitment process should be instituted or structured (Tooke, 2008). These findings were supported by the review organised by the House of Commons Health Committee (2008). Following a judicial review of MTAS brought about by pressure from Remedy UK, a junior doctors union, the application system was turned over from the Department of Health to the Royal Colleges and the national deaneries who had, up until then, been responsible for the recruitment and training of all trainees. However, the concepts introduced by MMC were here to stay and continued to cause stress and anxiety for medical trainees in the UK. The impact of MMC on surgical training is a critical issue in this thesis. In Chapter 5, I examine the experiences of Lydia, a surgical trainee as she describes the difficulties and challenges she faced in the post MMC era. To facilitate the reader's understanding of this issue, I have included a summary report from Sir John Tooke's final inquiry into MTAS and MMC in Appendix A.

2.3   Present Day Surgical Training

a)   Intercollegiate surgical curriculum project (ISCP)

In 2003, the Intercollegiate Surgical Curriculum Project (ISCP, https://www.iscp.ac.uk) was introduced as an online resource and educational tool with a clearly defined syllabus for all the surgical disciplines. The resource was developed along educational theories and CanMEDS guidelines (Frank, 2004). The CanMEDS project was commissioned by the Canadian government in the 1990s to assess the implications for postgraduate specialty programmes (see Figure 1 below).

It identified seven key roles of the surgeon; a professional (in terms of humane and ethical practice), a communicator, a scholar (in terms of teaching and research), a collaborator/team worker, a health advocate in wider society, and a manager of resources (people, expertise, time and money).

The ISCP adapted the CanMEDS criteria. A number of stakeholders were involved in its construction; surgeons, the public, government organisations, and medical educationalists. The purpose of the curriculum project was to integrate

Figure 1: CanMEDS illustration of the surgical expert (taken from: Frank, 2004)
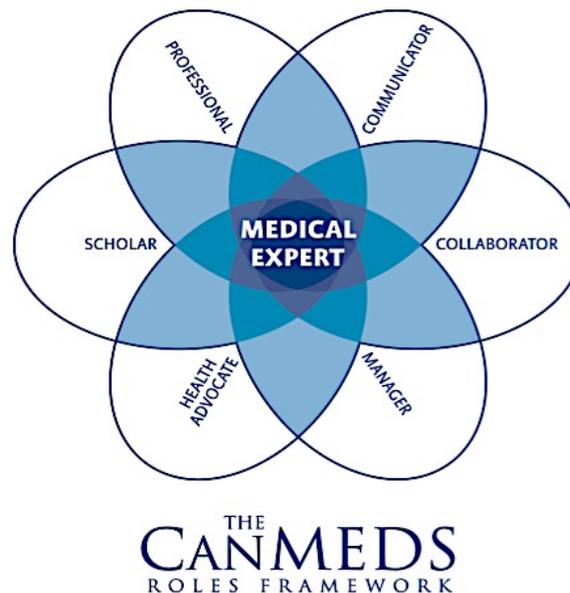
four pre-defined domains of surgical practice: clinical judgement, technical and operative skills, specialty-based knowledge, and generic professional skills. The proposed curriculum, which was called the ISC (Intercollegiate Surgical Curriculum) specified the stages of training and the training pathway including the expected standards of practice in each domain.

However, while ISCP formed the staple of surgical training and assessment, it still remains an educational phenomenon that greatly divides the surgical community, even today. The main criticisms identified by Michael Eraut's inquiry into the curriculum project (2009) are that though it claims to be trainee-led, trainer engagement with the curriculum is variable and often poor, making it a stressful and difficult exercise for most trainees. Eraut (2009) was commissioned by the ISCP to

investigate how the curriculum project was being assimilated. I have included a summary report of his findings in Appendix A, to assist the reader in understanding the challenges that trainers and trainees faced with its imposition.

Eraut found that trainees reported difficulty in achieving the targets set by ISCP due to variability in the hours spent working with trainers, the loss of operative training lists in order to meet urgent hospital targets[2], clinics no longer allow time for trainers and trainees to see patients together[3], trainees spending most of their time performing ward work with little educational value and diminished time in theatre (ASIT, 2009).

b)   Training structure

The standards for postgraduate surgical training, assessment and examination are set by the Royal College of Surgeons which function through the Joint Committee on Surgical Training (JCST) and its ten Specialty Advisory Committees (SACs) and the Core Surgical Training Committee (CSTC). It is the task of the SACs to develop the person specifications for selection into training. Whilst the responsibility for running training programmes rests with the postgraduate medical deaneries and/or Local Education and Training Boards (LETBs) and their Schools of Surgery. The General Medical Council (GMC) is responsible for approving the programmes and setting the standards of training that have to be met by all postgraduate training programmes. (The ISC is further analysed in Chapter 6).

Postgraduate training in surgery begins with a two-year core surgical training programme (CT1 and CT2) followed by entry into a surgical speciality (ST3) through a highly competitive application process (ISCP, 2016). The purpose of core surgical

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[2] A training list is an operating list with fewer cases scheduled so that the trainer has the opportunity and time to teach a trainee. Hospitals struggling to meet government set targets will sacrifice training lists in an attempt to ensure more operations are performed per list. An efficiency saving manoeuvre.

[3] FRCS examiners have reported that candidates are becoming increasingly weak as diagnosticians (Eraut, 2009).

training (CST) is to acquire a strong foundation in the basic principles of surgery which are common to all surgical specialties.

Entry into one of the seven surgical specialities begins at the level of ST3 and continues for five years (ST3 to ST8) and represents the advanced training prior to certification and inclusion onto the GMC's specialty register. Progression through each year of training (ST3 to ST4, to ST5 etc.) is dependent on trainees demonstrating that they have met the required standards or 'competences' in practice expected of a candidate at that particular stage of training. The average medical school graduate may undertake a ten-year period in surgical training before emerging as a specialist. Post specialist training and on gaining CCT, there is now the option to do what is described as a 'post CCT fellowships'. However, there is growing concern that these fellowship are actually a form of '*waiting room*' whereby trainees having completed training are coerced into these roles because of a lack of recognised consultant posts. In effect they are doing the job of consultants without recognition of this fact or appropriate compensation.

The curriculum identifies ten surgical specialities; cardiothoracic surgery, ENT surgery (otolaryngology), general surgery, paediatric surgery, plastic surgery, vascular surgery, trauma and orthopaedic surgery, neurosurgery, oral and maxillofacial surgery and urology. Table 1 below, illustrates data taken from the application process into a surgical specialty in August 2010. The yellow highlighted box draws attention to the general surgery candidates, which is the focus of this research.

Of the 2,178 applicants, 16.2% of candidates were female, 83.3% male. Of the 341 successful candidates, 19.2% were female. This 'pyramidal' system of training, whereby not all trainees who begin on a surgical pathway (CT1 and CT2 signify the entry into surgical training) are accepted onto a completion programme of training still persists in today's postgraduate education structure.

Table 1: Competition ratios for ST3 entry into surgical speciality training (Carr et al, 2011)

Specialty	No. of Applicants	No. of ST3 posts	Ratio
Plastic surgery	148	10	15 : 1
General surgery	735	105	7 : 1
Trauma & Orthopaedics	739	110	7 : 1
Paediatric surgery	60	9	7 : 1
Cardiothoracic surgery	134	22	6 : 1
Ear, nose & throat surgery	173	42	4 : 1
Urology	189	43	4 : 1
Totals:	2,178	341	6 : 1

The US graduate surgical residency programme abandoned the pyramidal system for a 'rectangular system' in which all candidates accepted onto a training programme were able to complete their training, providing their annual performance was deemed satisfactory (Kaiser and Mallen, 2004; Nauta, 2012). Most surgical residents spend five years in surgical training with an additional 2 years in research. On graduating as a qualified surgeon, candidates may decide to pursue a fellowship in a specialist field, such as; colorectal surgery, laparoscopic surgery, vascular surgery or transplant surgery. The fellowship can last between 1 to 3 years.

c)   **Systems of assessment**

The tools of the curriculum are a plethora of workplace based assessments (WBAs), formal examinations (MRCS, FRCS), trainer-trainee learning agreements and the ARCP (annual review of competence progression).   The latter is a panel interview to assess a trainee's progress, which includes a discussion of the operations recorded in their logbook and the results of the WBAs. WBAs were designed to provide feedback to aid learning (formative assessments), however, in practice, they have become a form of examination (summative assessment):

> *I think all WBAs are like driving lessons. You don't need to know the result of the driving lesson. It's probably a good idea to know that you've had some driving lessons because it shows engagement with the task of learning to drive. I don't think you need to say how many driving lessons you've had, because some people learn quicker than others. We don't insist that you take 20 driving lessons before you take your test do you? If you're ready you're ready, if you're not, then you're not. So I think . . . deaneries who have introduced artificial numbers for procedures for trainees to achieve . . . is a bad idea. Again they haven't really understood the purpose. The whole ethos around WBAs was to improve training, give feedback.*

(Professor Jonathan Beard, Royal College of Surgeons)

WBAs were initially introduced to provide trainees with information about how they performed a certain procedure or feedback on their clinical skills and judgement in a situation. However, WBAs are increasingly used to formally evaluate a trainee's abilities. Professor Eraut (2008), states that in the culture of high competition that is surgical practice, it is unlikely that trainee's will grasp that WBAs are not about examining performance but more about helping improve performance. As a consequence, this assessment format will be another 'test' that trainees feel they will have to surpass.

WBAs include; case based discussion (CBD), clinical evaluation exercise (CEX), multi-source feedback (MSF), direct observation of procedural skills in surgery

(DOPS) and procedure based assessment (PBA). In Chapter 5 I analyse PBAs as part of a critique on assessment formats. Figure 2 is a sample of a CBD I was involved in as a trainer. I have changed the patient's clinical data and the trainee's name to maintain anonymity and confidentiality. The example is a case of a frail elderly patient with poor blood supply to her legs resulting in a persistent ulcer that threatens the survival of her limb.

Andrew, the trainee, was responsible for managing this lady's day to day clinical care as well as coping with the complications of her condition and age, primarily a descent into dementia. The aim of the CBD is to encourage the trainee to reflect on their thoughts and actions in practice, with the specific aims of assessing their knowledge base (what are the causes of poor blood supply? what types of lower limb ulcers do you know?), identifying their understanding of treatment options, and asking them to reflect on what elements helped or hindered patient care (what did you do well? what could you improve on for future?). The format assumes a conversation between trainer and trainee after patient care has been completed. The outcome is an agreed action plan for how the trainee can develop the lessons learned from the particular clinical encounter to improve their future practice.

The CBD provides a useful framework in which to structure a learning encounter. My concern with the didactic and prescriptive nature of the assessment is twofold. First, it strongly embraces an outcomes focused approach to learning. A trainee must

Figure 2: An example of a case based discussion (CBD) (ISCP, 2016).

Title / Description of clinical event:	86 yr old man with calf pain and an ulcer on his shinshin ulcer
(max 50 chars)	

Here you can record a brief, anonymous history to allow the SLE to be contextualised:

An 86 yr old woman with calf pain when resting and an ulcer presented to A&E, sent by her GP. She was admitted and treated with IV antibiotics. MR angiogram imaging showed evidence of severe arterial disease and narrowing of the superficial femoral artery. Patient underwent open angioplasty and wound debridement.

Clinical Setting:
- ED
- GP Surgery
- OPD
- Home Visit
- ☑ Ward
- Other
- Admissions

Clinical problem category:
- New patient
- ☑ Circulation
- ☑ Long term illness
- Follow up
- Neuro and visual
- Communication
- Airway
- Psych
- Other
- Breathing
- Pain

Focus of encounter
- Medical record keeping
- ☑ Follow-up and future planning
- ☑ Clinical assessment
- Professionalism
- ☑ Investigations and referrals
- Other
- ☑ Treatment

Feedback based on the behaviours observed:

This was a complex case which required Andrew to follow-up the patient on a daily basis, several times a day and rethink his care plan to ensure the patient progressed and improved. The patient was often confused and frail, which required kindness, thoughtfulness and patience on Andrew's part.

Agreed action:

To read more around vascular disease and the sequelae of complications. To be aware of dementia screening in elderly patients. Learning to negotiate care plans with patients and family - Andrew will benefit from observing his consultant and the ward social worker engage in these communications.

Reflection: The doctor should reflect on this learning event.

This patient spent two months under our care. Her clinical patient failed to improve after treatment and she unfortunately developed a state of persistent hypoactive delirium. It was therefore of paramount importance to optimise her clinical state to ensure she could be discharged home safely. I got to know this patient's family well over her hospital stay. Caring for this patient has taught me the importance of involving other specialities when required to optimise care. I was in regular contact with delirium team nurses and the consultant psychiatrist in order to monitor her mental state and exclude an organic cause. I also learned that I must try and do my best even if I am met with resistance initially.

Reflective notes can be recorded in the above text box area or a separate, structured reflective log linked to this SLE can be created. The option to create a linked reflective log will be presented upon completion / ticketing of this form.

If you have linked any reflective forms to this SLE these will be displayed at the bottom of this page.

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demonstrate what they have learned through reflective conversation. This expectation is underlined by a belief that there are rational explanations for the thoughts and actions that develop within an encounter of practice. But, what about those aspects of performance that are non-visible and intangible? Can these components of experiencing be explained through a cognitive, reasoned approach? These are themes that lie at the heart of this thesis and which are explored further in the remaining chapters.

Finally, the FRCS is now a formal professional examination with clearly defined standards that relate back to the online curriculum. In addition, the 'new' FRCS as opposed to the FRCS of the apprenticeship system, examines professional education that had previously not been recognised (ISCP, 2013); ethics, professionalism and legally compliant practices. Self-directed learning, reflective practice and peer education have permeated surgical culture and been formalised in the curriculum. There is much interest and financial support for research into surgical education that is focused on objective quality measurement and performance benchmarks of surgical skills training (Beard, 2008; Bell, 2011a; 2011b; Arora et al, 2009). The motivation behind these research studies is in part due to pressure to ensure that systems of assessment are appropriate and fit for purpose. It is also part of a movement in medical education that believes all aspects of physician performance must be amenable to measurement and quantification as part of processes of quality assurance (Brooks, 2009; Brice and O'Corrigan, 2010; Brightwell and Grant, 2013). These themes are explored further in Chapters 5 and 6.

d)   Reviews of Medical Education and Training

In the last decade, there have been six major inquiries into various aspects of surgical training and education (Tooke, 2008; Collins, 2010; Cook, 2010; GMC 2010a; Temple, 2010; Greenaway, 2013, 2015). The structure and function of surgical training and education, which has enjoyed relative stability for several centuries, has previously not been subjected to relentless change and constant scrutiny.

The most recent investigation of training, 'the shape of training review' (Greenaway, 2013, 2015), was launched by the GMC to 'ensure that UK medical education and training is structured in a way that ensures it meets the needs of service and the patient population', (GMC, 2015: 3). The inquiry gathered data through consultations with patients, the general public, doctors in training, trainers and the organisations responsible for delivering education and training (ibid., 19). The review made 19 recommendations. The following findings were of particular interest to how curriculum and assessment are realised in actual practice (GMC, 2015):

> We also heard that assessment and evaluation throughout postgraduate training is becoming increasingly bureaucratic – ticking boxes – and is not necessarily demonstrating capabilities or showing that a doctor is consistently working safely. Trainers told us their relationships with doctors in training have been eroded over the past decade. (p. 34)

> A more apprenticeship-based approach to training . . . Doctors would train and work alongside a small number of trainers and within specific teams. But doctors must have more personal supervision, by a named supervisor for at least a year, to get the best training opportunities and build up confidence in trainers about the competence of their doctors in training. (p. 36)

Assessments had become an exercise of necessity, in order to comply with training documentation ('tick box') rather than achieving what they were originally designed to do, facilitate reflective practice, thereby improving performance (see Chapter 6 for further analysis and discussion). Importantly, having removed the original apprenticeship system from training, the review (Greenaway, 2013, 2015) advocated a return to the apprentice-master relationship of training with the caveat that a trainee was constantly supervised in practice.

The review also concluded, along with other international studies that medical education, should be shaped by the health needs of its respective population rather than being defined by an academic focus on scientific principles and clinical skills (Nauta, 2012; Dumon et al, 2012). A training programme should rightly be fit for

purpose. However, striking a balance between a pragmatic form of training and an acknowledgement that medical professionals need to be more than a body of technicians and diagnosticians is challenging (Fitzgerald, et al 2012).

e)   The general surgeon

There are many disciplines of surgery; general and emergency surgery, vascular, orthopaedics, transplantation, colorectal, breast, endocrine, ear nose and throat (ENT), neurosurgery, plastic surgery etc. I have used the general surgeon to illustrate the training practices and clinical duties.

A general surgeon is a physician who operates predominantly on the abdominal area and manages emergency procedures as well as non-urgent surgeries of this anatomical region. A general surgeon may operate on the stomach, large and small bowel, pancreas, oesophagus, spleen, liver and gall bladder. An emergency procedure may involve a patient with acute appendicitis which necessitates immediate treatment and surgery. A non-urgent surgery, also known as an elective surgery, involves conditions which are not life threatening but are sufficiently serious to cause difficult symptoms to the patient and which have the potential of worsening and causing complications. A common example would be removal of the gallbladder because of painful symptoms experienced due to gallstones and the potential for acute pancreatitis (inflammation of the pancreas gland).

On completion of a surgical training programme, a general surgeon may then sub-specialise, and thereby offer an additional area of expertise in her practice, for example; vascular surgery, endocrine surgery, colorectal surgery or transplant surgery (ISCP, 2016). Surgeries can be performed 'open, 'laparoscopic' or 'robotically-assisted'. Open surgery refers to the traditional skin incision and gross dissection of tissue planes with a scalpel or cautery. Laparoscopic procedures, known popularly as 'keyhole surgeries', are performed through miniature incisions, whereby long instruments are passed into the body cavity and manipulated by watching a projected

camera view that displays the operative movements on a screen. Technical surgical training involves learning the techniques of all three modes of operations.

2.4   Women Surgeons

A brief walk along the corridors of the Royal College of Surgeons will inform one a great deal about the dominant traits of the surgical professional. The walls are adorned with the portraits of famous or distinguished surgeons, "all, white, male and middle class . . ." was the riposte of one of the educators I interviewed at the Royal College of Surgeons. In 2014, 29.5% of surgical trainees were women (compared with 24% in 2010) (Royal College of Surgeons of England (RCS), 2011).

However, women are still vastly under-represented in the higher echelons of surgery. The RCS' 2011 surgical workforce census, reported that only 10.5% of consultant surgeons were female with paediatric surgery acquiring the highest percentage of female surgeons, 21.5%, whereas, in general surgery 11.1% of consultants were female.   This compared to the fact that in 2014, 55% of medical students were female (RCS, 2014a). The RCS commissioned research at Exeter University which suggested that the low numbers of women in surgery was not due to a lack of ambition or reluctance at the long work hours but rather a perception held by women that they were unlikely to succeed compared to their male counterparts.

In the USA, 1050 new general surgeons graduate each year from surgical training programmes, with more than a third going onto pursue subspecialty training in the form of a one to three-year fellowship (Stabile, 2008). Thus, 600 newly qualified general surgeons enter the workforce annually, with more than a 100 surgeons retiring or dying each year. Here too, only 7% of associate professors (equivalent of consultant surgeon) are women. However, Recent analysis from the USA shows that the proportion of women entering surgical training programmes has increased from 32% in 2000 to 40% in 2005 (Davis et al, 2007). In July 2014, The Royal College of

Surgeons of England for the first time appointed a female orthopaedic surgeon, Clare Marx, as the president of the college.

2.5 The General Medical Council (GMC)

The GMC is the regulatory authority responsible for licensing doctors to practice in the UK. However, in the last two decades, its remit has widened. It is now the principal organisation with responsibility for setting the standards for professional practice (GMC, 2013), managing a doctor's fitness to practice, and setting the standards that all organisations and individuals involved in undergraduate and postgraduate medical education must meet (GMC, 1993, 2016).

In the mid 1800s, Britain was overflowing with a variety of 'healers': men and women who provided an assortment of services for all that 'ails one'. There was staunch competition in the medical marketplace and allopathic practitioners (the predecessors of modern day physicians) who had undergone an expensive period of training and possessed qualifications of their knowledge and skill were resentful of their less qualified competitors (Stacey, 1992; Irvine, 2006).

The Medical Act of 1858 was motivated by discontented allopaths and it established the GMC (known then as the General Council of Medical Education and Registration) as an organisation that would implement order by distinguishing the 'qualified' from the unqualified practitioners. From this point onwards, the scene was set for the emerging medical profession in later years to be in sole charge of the licensing and regulation of practicing doctors. A consequence of this arrangement was that what constituted professional medical practice would be determined by the values and beliefs of doctors themselves (Irvine, 2003). The power in the doctor-patient relationship firmly lay with the physician and this is exemplified in the paternalistic model of healthcare that prevailed following the inception of the NHS in 1948 (Irvine, 2006). Doctors were increasingly powerful, unquestioned and free from the scrutiny of politicians and NHS management.

At this time, the GMC was one of a number of medical corporations involved in the governance and regulation of practitioners. The other institutions were; the Royal Colleges, university medical schools and the British Medical Association (BMA), all of which were older, more established and powerful organisations. The GMC however was the more passive member and functioned as instructed by the other medical corporations (Richardson, 1983). This pattern of behaviour continued till 1998 when the first of a series of scandals, the Bristol Heart inquiry, rocked the profession and set the GMC on a path that led to its current transformation as a powerful regulator of practice and education. Prior to this time, the protection of the public was not the primary concern of the GMC. For example, disciplinary charges in the 19th century comprised adultery, criminal behaviour or anything that contravened professional etiquette (advertising one's medical services was frowned upon).

In the 1970s, due to a combination of events, the GMC lost control as doctors revolted and refused to pay an annual fee. The government became involved in the dispute and the matter of professional self-regulation now rose to the fore. The vast majority of doctors provided competent and compassionate care, however the GMC was woefully inept in dealing with physicians who were clearly underperforming and even dangerous. In 1998, an inquiry into 29 deaths of babies at the Bristol Royal Infirmary paediatric heart surgery unit found a culture of incompetence and neglect amongst doctors and nurses, with poor measures to ensure clinical accountability or patient safety (Bristol Royal Infirmary, 2001). There were further inquiries over the years-- Ledward, Shipman, Neale, Alderney—which supported a widely held view that the GMC was failing as a regulator of physicians by being tolerant of poor performance (Irvine, 2006; Delamothe, 2007).

The perception of a culture of 'cover up' in the profession when errors are made and adverse events result, has been a powerful influence in the way medical registration and fitness to practice are structured (Irvine, 2006). The 1990s saw the initial move towards a standards-based model of medical licensure. *Good Medical Practice*

(2013) became the profession's bible, clearly defining and stating non-negotiable standards of professional practice. Annual appraisal and five yearly revalidation processes are routine for all doctors in the UK, who wish to retain their medical license and continue to practice. In essence, appraisal is a documentation process to monitor and ensure that a doctor has met the minimum standard of practice by engaging in the required activities and meeting the basic criteria. There are four areas of practice which a doctor must demonstrate activity in:

- domain 1: knowledge, skills and performance
- domain 2: safety and quality
- domain 3: communication, partnership and teamwork
- domain 4: maintaining trust

For example, when I completed my appraisal this year, I provided the following evidence of my compliance with domain 4 — 18 patient feedback surveys, 12 colleague feedback surveys, letters and cards from patients I had treated, written reflections of complex clinical events that I had engaged in and which tested my coping mechanisms and knowledge. Revalidation is a cyclical process which reviews appraisal data and affirms that a physician should be permitted to continue practicing within the NHS.

2.6 Challenges to Surgical Education

Professional accountability, reduced work hours, patient safety and satisfaction, cost containment, the economic drives to reduction in hospital beds, plus the public expectations for same day procedures have all borne various forces and impacts on the ways in which surgeons are trained and nurtured. This thesis explores how some of these factors impact upon the actualisations of clinical practice.

There is an emphasis on the curriculum being outcomes based. Therefore, what is measured is the competence of a trainee in a number of skills rather than the actual time the trainee spends in training, which was previously thought to equate to

proficiency (Frank, 2004; Dumon et al, 2004). The curriculum is designed to ensure that these competencies are met at each stage to permit progression to the next stage of training. It ensures a form of quality control by providing a number of ways in which proficiency can be measured; online assessments, simulated procedures, logbooks, feedback forms and a surgeon portfolio.

a)   Tensions between policy and practice

Healthcare in the United Kingdom has in recent decades become a highly emotive and politicised area. Since its inception in 1948, the NHS is portrayed as a bastion of Britishness, a shining beacon of all that is good and noble, the best of British values. A brief examination of Department of Health (DoH) policy text illustrates this pervasive discourse of sentimental rhetoric and nostalgia and nationalism:

> […] a service founded in adversity, from which were established enduring principles […] it has been a vital friend to millions of people, sharing their joy and comforting their sorrow. (DoH, 2008: 7-9).

> […] the NHS has come to embody values of fairness, compassion and equality. (NHS England, 2013: 3).

> […] it is an expression of British values of fairness, solidarity and compassion. (NHS England, 2013: 5).

Successive governments have, in my opinion, 'fiddled and meddled' with the mechanisms by which services are funded, organised and structured. The reasons cited for this include; an expanding elderly population, a changing demographic, increasing numbers of people living with chronic medical conditions, the growing expectations of the public in terms of the quality and convenience of care, the rising costs of medications and therapies technologies (DoH, 2000, 2008; 2013). What a patient may undergo in terms of diagnosis and treatment has radically altered in the last twenty years. Lord Darzi commented in 2008:

Ten years ago, my patients would sometimes wait over a year for treatment, and now they wait just a few weeks – and even less if cancer is suspected. My patients are treated using keyhole surgery enabling them to leave hospital in days rather than weeks. My team's conversations about quality take place in weekly multidisciplinary meetings rather than in corridors. Together, these changes have meant real improvements for patients. (DoH, 2008: 13).

Advances in science and technology, improved team working and an agenda that prioritises patient need has transformed the patient experience for better. The way in which healthcare is conceived, organised and delivered has a direct impact on the content and structures of medical training and education.

It is therefore unsurprising to find that the aims and priorities of the NHS are increasingly shaping the goals and aspirations of medical (surgeon) education. On initial inspection, this may seem ideal: a close relationship between the prerogatives of health care and the objectives of the medical training programme. Such collaboration should develop education programs that are current and fit for purpose, training doctors to provide appropriate medical care for patients.

However, the difficulty arises when the purpose of medical education is obscured by the policies and practices associated with the *business* of delivering health care (NHS policy). The main objective of medical education is to cultivate professionals imbued with the knowledge and skills needed to provide compassionate and appropriate care. NHS policy is concerned with the delivery of care, how the systems and services are best organised and managed to ensure patients receive the necessary care in safe and caring environments. Certainly, it is critical that doctors in training are grounded in the practicalities of providing health care, as this is the reality of clinical practice in the NHS. There is also good evidence to demonstrate that professional development situated in a clinical context is necessary for meaningful learning (Lave and Wenger, 1991).

To provide an example of the above I recount the ward rounds I would undertake as a surgical trainee. These were usually conducted at 8 am and included making decisions on which patients were fit for discharge from hospital that day. It was not unusual to be called mid-morning by the Bed Manager and asked if I would discharge more patients. The hospital was low on unoccupied beds and this would affect the admission of patients through the emergency department (without sufficient beds available patients would be kept waiting on trolleys or referred to another hospital providing their condition was not urgent).

As a junior doctor, I would feel pressure to 'create' more unoccupied beds in the department. I was aware that prolonging a patient's hospital stay either by not expediting their treatment or by maintaining them on a ward when medical care was no longer required, was both inconvenient to the patient and placed an unnecessary financial burden on the hospital. However, a doctor's prerogative is to her patients and their clinical care: I could not discharge patients earlier than their clinical needs would permit. Undergraduate studies in pathophysiology had equipped me with an understanding of the natural history of diseases. Therefore, I could not send home a patient whose illness I had learned would require a longer period of inpatient care. Second, a commitment to ethical practice would prevent me from prematurely discharging a patient in good conscience.

The reality of a doctor's routine practice and the care involved in a patient's hospital stay are constituted by these multiple issues, often conflicting. They are not explicitly taught either on undergraduate or postgraduate training programs. However, they remain important tensions in practice that a newly qualified doctor must learn to negotiate. For this reason, (one of many) I would strongly agree that curriculae must reflect the actualities of clinical practice in the NHS. But, these are not grounds for focusing medical education on the business of delivering health care.

Doctors primarily provide specialist medical (surgical) care for patients and as such education programmes should be oriented around questions of *how* to cultivate the

knowledge and skills to achieve this. In particular, to foster professionals who are compassionate in their care and thorough in their investigative processes, one may need to inquire as to what *kind* of doctor we hope to meet in health care? This would pose similar questions as to the character of training; *what is a surgical (medical) education for? What is its purpose?*

At present, it is a challenge to answer these questions because the goal of healthcare we are told is the 'pursuit of excellence'. Therefore, one can assume that the purpose of medical education must be to create 'purveyors of excellence'. My personal belief is that such a paradigm confuses the role of clinicians from autonomous, ethical professionals to workmen labouring under the promise of excellence.

b)   The Francis Inquiry: patient safety

The Mid Staffordshire inquiry, led by Sir Francis (2013), identified serious failings in health and social care at the NHS trust which led to unacceptable patient harm resulting in 'appalling suffering' as well as patient deaths. This inquiry in addition to many other incidents over a decade (Bristol heart inquiry, Shipman, Winterbourne etc.) placed an intense scrutiny on harmful practices in healthcare. The Francis report (2013) attributed the failures partly to a working culture that lacked openness, transparency and honesty in practice. It created a decaying environment that was fertile for wilful neglect, poor practice, mistakes and errors.

Recommendations were made that would increase the surveillance and checks on hospital systems and regulatory authorities (see Prof. Francis' letter in Appendix A). Government policy and further inquiries explored measures to combat dangerous attitudes and practices in healthcare, (DoH 2014a, 2014b). An example of the proposal included the overall objective to create 'a culture of candour' in clinical environments (DoH, 2014 a, 2014b, 2014c; RCS, 2015), that would make unsafe and potentially harmful situations unacceptable. The overall outcome was the widespread initiative to place 'patient safety' at the centre of all systems, practices and training.

Patient safety has become a blanket term in modern medicine. In my own surgical practice, I understand measures to ensure patient safety as: checking the correct site has been marked for surgery (for example; the left groin for a left hernia repair), that the equipment is working correctly, the patient is appropriately positioned on the operating table with the electrode pad correctly applied and adequate padding of their limbs to prevent injury, checking medication doses prior to administration, watchful care of the elderly to prevent falls from hospital beds. These are a sample of the everyday tasks associated with making sure a patient comes to no harm whilst in hospital or undergoing medical treatment. However, 'the ethos of the safety culture', has come to encompass all aspects of patient care. This theme is examined closely in Chapter 5.

Surgery, unlike other disciplines within Medicine, is defined by the risks that are quoted and in turn taken by the surgeon. The modern awareness of adverse events and the procedural inquiries that follow have required that surgeons be fully accountable for all their actions. Analysis of international data and literature has indicated that as much as 10% to 15% of patients admitted to hospital experience an adverse event not directly related to their underlying condition, around 50% of which has been classified as avoidable. The majority of these patients have been identified as surgical, with half of all adverse events occurring in operating room (Vincent et al, 2001; Flin and Mitchell, 2009).

International adoption of checklists has gone some way toward diminishing the incidence of adverse events (Vincent et al, 2001). However, it is not an answer in itself, and it has refocused attention on the value of improving non-technical skills to ensure optimum outcomes for patients. Non-technical skills are defined as those skills relating to attitude and behaviour, for example, team building, leadership, conflict resolution, listening ability.   One North American study demonstrated that poor communication was a causal factor in 43% of errors made in surgery (Gawande et al, 2003). Teamwork and decision making have also been shown to be causal in these

adverse events (Flin et al, 2007a, 2007b; . This has led to the curriculum embracing the formal teaching and assessment of skills that previously had either been assumed inherent in a trainee or forgotten altogether.

2.7   Challenges to *Surgeon* Education

If *surgical* education is the enculturation of a surgical trainee into a prior defined, age old practice, then I propose that, "*surgeon* education" refers to an individual's unique development and experiences through training. But crucially, it is an account that derives from their personal perceptions and thoughts. In a surgeon education, the focus of the educational theory shifts away from perpetuating a culture of surgery to exploring concepts that may unpack or expand an individual's notion of professional practice.

A *surgeon*-in-training will also study and experience knowledge and content not explicitly specified or even considered by the conventional curriculum. As such, I am proposing that *surgeon* education goes beyond *surgical* education. The lived reality of *becoming* a surgeon provides powerful educational opportunities which have been neglected and overlooked by conventional surgical education research. How a surgeon in training understands and embodies the study and practice of the discipline, I propose, goes beyond an assimilation of the technical knowledge and theory.

I argue the concept of a surgeon in training developing along trajectories that may not be understood or acknowledged by the present curriculum, must be strongly considered and embraced. This development may occur independently of time, so that certain understandings of practice may be acquired prior to the expected stage as defined by the formal curriculum. However, it can also be dependent on time, since it is through the passage of time that meaning may be constructed around some experiences.

These different factors experienced in the lived reality of becoming a surgeon, create a co-existing and parallel affective training manual that has yet to be explored in the

research on postgraduate surgical education. How this affective training manual shapes a surgeon's sense of who they are becoming and how they choose to practice surgery both as a trainee and as a consultant surgeon is the key area of enquiry in this thesis.

2.8　　　　Summary

The objective of this chapter is to locate the enquiry of this thesis within the broader context of surgical training and education. I have presented a historical account detailing the evolution of Surgery as a medical discipline. In addition, I have identified issues that impact on training.

The poor regulation of the profession combined with investigations identifying unacceptable practices in healthcare created an urgent need to radically alter professional regulation as well as medical training schemes. The aim of these measures was to make the profession more accountable to the human lives under their care.

The difficulty arises in how the various forms of regulation have manifested in training and assessment programmes. There is a rigorous system of assessment which has created tensions between how doctors are expected to perform and the reality of their everyday clinical interactions.

I have concluded by identifying the *surgeon-in-training* as opposed to the *surgical-trainee*. This distinction exceeds pure semantics to argue for a recognition of the actual experiences of clinical practice that an individual surgeon-in-training undergoes routinely. This 'lived' understanding of encounters of practice may reside in tension with the demands made by the more prescriptive, mandated aspects of clinical practice. The latter is 'forced' to reflect the concerns of government policy as well as new developments in educational practice. This may be necessary to ensure transparency and effectiveness of training schemes. However, how it influences and

potentially changes learning encounters must be considered and reviewed critically, in order that trainees feel supported in their everyday practice.

2.9   Statements Towards A Literature Review

The next chapter examines how to explore these issues and the potential challenges posed by an unconventional methodological approach to *investigating experiences of surgical practice*. The paucity of research literature in postgraduate medical education, which examines issues of experiencing from a philosophy derived theoretical base, has led to my decision to provide an alternative to the traditional literature review. In Chapters 3 (methodology) and 4 (theoretical framework for analysis), I combine a limited review of surgical education literature (which is predominantly concerned with skills acquisition) with a more in depth analysis of philosophical discourse, to develop arguments that support my study rationale and research strategy.

Chapter 3

Statements Towards a Methodology

3.1 Introduction: My Methodological Position

Physicians engaged in clinical medicine, whatever their specialty may be, are confronted by the same dilemma everyday: how to negotiate the contingency of *actual events of clinical practice*. Put another way, clinicians are engaged in a daily struggle, to accurately predict, anticipate and control how a clinical event unfolds and manage its consequences. This daily challenge is the incontrovertible reality of clinical practice, despite the best laid intentions and motivations (the meticulous efforts of the doctor and the desires of the patient to find answers and 'get better') and the most up to date scientific evidence and technical wizardry.

However, the *uncertainty of practice* is dealt with in specific ways both by the official clinical guidelines and manuals as well as the medical training practices. An example is the development of protocols, 'clinical pathways' and algorithms, which collectively constitute formal epistemologies to combat the uncertainty of medical practice. These elements represent an application of *rigour* to structure and order the unexpected and unanticipated aspects of practice. After all, doctors must be able to act decisively and effectively when caring for sick patients in risky and unpredictable situations.

But, as I hypothesized in chapter 1, it is in these moments of uncertainty that clinicians first come to *know* the event of practice, through the affective force of the clinical encounter. Through an engagement with the affective dimension, the *form of the clinical encounter* begins to emerge. The surgeon can now grasp the experience, so that the event of practice begins to *attain significance* for the clinician, the encounter starts to *matter* to the doctor in ways that cannot be predicted or adequately anticipated. These affective aspects of actual practice arise from the immanence of

clinical encounters, and lie in tension with the established protocols of transcendent medical practice.

Therefore, at the heart of this thesis is an exploration of *actual events of practice*—the paradoxical relationship between the transcendent elements of practice and the immanence of actual clinical encounters. To investigate how events of clinical practice *affect* surgeons, I propose a research strategy that unpacks clinician accounts of *actual contingent practice*, whilst, comparing and contrasting it with what is set out in the *official guidelines and ethical codes* of clinical practice.

Given the above statements on my proposed research project, it is my contention that the traditional approach to writing a methodology chapter is not appropriate here. That is, a formal critique of the literature on established research methods and practices, with reference to my research strategy. In addition, as I have stated in Chapter 1, medical education research has not explored events of practice from the perspective of the affective dimension. For these reasons, I advocate an investigative method that is open and unconstrained by the hylomorphic frameworks of established research methodologies.

My assertion is not to diminish prior research investigations, nor suggest that current methodologies are ineffective as a whole. Rather, what I am proposing is a research strategy that recognises existing categories of medical education research (MER) and known or established analytic methods, but attempts to move beyond the limits of hylomorphic schemes. Instead, I put forward narrative statements in this chapter that explain and discuss my research methodology. It is a descriptive account of my PhD journey, which includes how I came to develop and organize my research question and strategy.

I begin with a summary of my research strategy, followed by a review of the problems that need to be considered when developing this type of research enquiry. I conclude with a reflexive account of the methodological approach I have developed to.

3.2   Summary of My Research Strategy

To explore the research question, I collected specific accounts of clinical experience gathered from individual surgeons as well as my own clinical practice. I employed a mixed methodology which comprised a philosophical discourse analysis of; policy documentation, training materials, semi-structured interviews with surgeons and educators and finally ethnographic field notes from my own experiences of clinical practice.

I decided on a mixed research methodology, as I thought that this would foster the richness of detailed analysis as well as an approach that would consider the data from different perspectives. Schifferdecker and Reed (2009) have supported this approach and concluded that it strengthens the conclusions reached by the project. Interviews were transcribed from audio recordings prior to an analysis using the theoretical framework.

3.3   The Challenges To Developing A Research Strategy

The pedagogical concerns of this thesis, as demonstrated in the organ procurement narrative (see Chapter 1), are concerned with expanding what is known and understood about how surgeons cope and learn in the *thisness of unexpected clinical encounters*. This amounts to an exploration of the *affective force of actual clinical encounters*.

I believe that such an undertaking is a complex endeavour because it delves into the *messiness* of lived experiences of practice. For this reason, my research study does not concern itself with establishing the 'truth' of surgical training and practice. Although, I am interested in actual encounters of clinical practice, as expressed through the lived experiences of surgeons, my intention is not to explore notions of reality. What I am concerned with is how 'knowing' and 'mattering' emerge from encounters with unexpected clinical practice.

a)   Examining aspects of experience that are obscured

As discussed in Chapter 1, forms of knowing and mattering that arise from the uncertainty of clinical experience, can be expressed through thoughts and actions that are non-visible or intangible within the parameters of standard pedagogic practice. Therefore, established practices of teaching and learning may not consider these aspects of learning encounters or even disregard their pedagogic significance to the learner. An example of this, is the 'speechlessness of practice' I exhibit at the organ procurement. To the casual observer or indeed surgical trainer, my state of physical paralysis would not alert him to the *intrinsic affective processes* that had been triggered by the event of practice. The affective force of the organ procurement encounter had a powerful impact on me, which is ongoing to this day. Therefore, the question arises as to how the affective nature of clinical experiences can be identified and explored.

In the realm of medical education research, an affective project that explores experiencing within events of practice has yet to be conceived. 'Experiencing' tends to be examined from a dual perspective. First, skills acquisition, measured through quantitative means (Arora et al, 2009; Beard, 2008; Bell et al, 2011a, 2011b). This approach views experiencing as an uptake of discrete skills such as technical proficiency or clinical judgment.

Second, through reflective exercises that require verbal explication or written documentation (Sumsion and Richardson, 2000; Boud and Walker, 1998; Mann et al, 2009). However, the difficulty arises in how reflection and reflective practice have been applied to the curriculum—influenced by the wider discourses of assessment and evidence. Paradoxically, clinicians must prove their reflective dispositions. The nature of reflection is as an open, considered and thoughtful activity. It cannot be confined by time constraints or defined by the demands to prove evidence that one has engaged in 'rational' reflection. In addition to the below section, these themes are discussed further in Chapter 6.

b)   The limits of reflection

Schon (1983) coined the term 'reflective practice', drawing on Dewey's notions of reflection (1910). John Dewey defined reflection as: 'Active, persistent and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the further conclusion to which it tends, constitutes reflective thought' (ibid., 9). These ideas have been used within professional practice, to develop a practice-based knowledge that derives from carefully considering how one thinks and does within specific situations (Moon, 1999; Redmond, 2004). The outcome is reflection as a process of knowledge creation which is then checked (to ensure that learning has occurred) through an array of assessments (Hall et al, 2012; Ng, 2012).

However, these notions of reflection conceive thinking as a rational activity and behaviours and conducts in practice as premised on prior cognitive processes. But, what about the 'speechlessness of practice', the 'physical inaction of practice' or other responses visceral or otherwise to the *thisness* of clinical practice? How do these initial reactions, which may lack a cognitive foundation, be interpreted through the current framework of reflection in practice? As I discuss in Chapter 4, 5 and 6, these responses to the immediacy of practice tend to be categorized as anomalies or as associated with inexperience in clinical practice.

Ng et al (2015) argue for a reorientation of reflective practice as more than a pedagogic tool or technique to acquire knowledge:

> 'Reflective practice as a *way of being* transcends traditional assessment; it is
> an orientation through which one practices, continually challenges one's own
> assumptions, and builds new knowledge. . . reflective practice demands a
> space to broaden understandings of reflection at an epistemological and
> theoretical level. . . understanding inquiry and experimentation within practice
> as opportunities for the generation of knowledge, and as avenues for
> navigating uncertainty and complexity.' (p. 464, original emphasis).

The authors emphasise reflection as a theoretical framework in itself with which to analyse the complexity of practice, and develop ways of practicing that can be personally transformative and clinically effective.

However, while these efforts to re-engage with reflection as a theoretical orientation and an epistemology of practice (rather than submitting to the reductionism of the assessment agenda) are welcome, they stop short of providing answers to my questions regarding the affective force of events of practice. Therefore, I looked beyond traditional and well established methods of analysing data gleaned from surgical experiences.

c)   **The search for an appropriate research methodology: my PhD journey**

I consider how I developed this research study, over a period of 6 years, as a culmination of personal struggles with institutions, supervisors, negotiating conflicting tensions between the paradigms of medical science and social science, relearning critical analysis through the lens of sociological and philosophical discourse. In the first year of my PhD I moved from the original institution in which my research degree was based, Imperial College London (ICL), an institution that specializes in technology and science, to the other end of the educational spectrum, Goldsmith's College, a smaller liberal arts school.

Capturing the multiple realities

My shift in institutions was partly motivated by a dissatisfaction with the research approach advocated by Imperial College academic staff. I embraced the scientific mode of enquiry, a demand for rigour in all research processes and an ability to rationalize and justify all decisions pertaining to methodology and analysis. But, paradoxically I found the scientific approach limited and ineffective when exploring the *messiness of actual experiences of practice*. The scientific method forced an artificial and hylomorphic order onto the chaos of human experience through an application of

numerical scales and calculations. I concluded that an investigation of the experiencing that occurred within events of practice required a broader approach. One that could accommodate the *multiple realities* embedded within an encounter of practice.

One of my supervisors at the time, accepted a new position at Goldsmith's college, and I decided to follow him to this institution. Once a student at Goldsmith's college, I was exposed to the various research philosophies and methodologies that constitute the social sciences. In addition, I started to explore the spectrum of qualitative tools that were available to examine experience; autobiography, ethnography, surveys and interviews. Over the course of the next year, another four supervisors came and went! Some left because of new job opportunities or a change in personal circumstances. Others, because our respective visions of how the research should be developed and conducted were too different to be reconciled.

An example of this was one supervisor's resolute belief and inclination towards developing my study along feminist epistemologies, as a piece of feminist writing. Although I am a female surgeon, with an educational and practical experience of surgical training that was often influenced by my status as a woman, I was very clear that my research questions pertained to all surgical trainees regardless of gender. In the course of conducting this research investigation, I have read many feminist writers and theorists, Judith Butler, in particular informs my approach to discourse analysis. However, my exploration of surgical training and practice transcends possible gender divides and issues that may specifically confront female trainees, such as the machoism evident in some practices.

When I finally settled on my present supervisor, Dennis Atkinson, we shared a common vision of how philosophical theory and discourse could help me unpack the intricacies and complexities of experiencing within clinical environments. A theoretical framework constructed on the writings of Alain Badiou, Michel Foucault, Alfred North Whitehead, Gilbert Simondon and Brian Massumi, to name a few, promised the

necessary analytic rigour to address the affective force of clinical encounters of practice.

Personal documentation of practice

I had kept field notes throughout my surgical training and consultant practice, to describe events of practice and my associated thoughts and actions. I returned to these ethnographic accounts of surgical practice and explored themes such as, providing care in complex environments, negotiating uncertainty in practice, emotions in practice (feelings of humiliation, surprise, anger and grief), learning in difficult situations. I used these themes to guide my reading of the above philosophers. For example, Alain Badiou's (1992) *notion of truth and event* when struggling to understand and conceptualise ideas regarding conduct in contingent environments.

The reading of theoretical philosophy texts informed my analysis of training materials and policy documents. In addition, the philosophical discourses also helped to construct my research questions, as well as the later interview questions. In the below sections, I elaborate further on these elements of my research strategy.

d)   Using interviews to examine 'experiencing' and 'events of practice'

I decided to collect data on events of practice through a series of interviews with surgeons. I felt this approach would allow me to look at how clinical practice is experienced as reported by the individual surgeon's encounter with it. I decided on an interview as opposed to a survey because my aim was to attempt to capture the breadth and range of thoughts, emotions, *affectations[4]* and actions experienced in practice. I reasoned that an interview approach would provide me with narrative accounts that were rich in data and amenable to a closer scrutiny.

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[4] Derived from Spinoza to capture how a being affects and is in turn affected by the encounter.

Although, I had decided that interviews would be the best method for the collection of data around experiencing, I was also aware that interviews in and of themselves never actually capture living experiences (Kvale, 1996. Hammersley 1989; Silverman 2006). However, the focus of my research is precisely on the thisness of experience. How then would I reconcile these two facts? I discovered in the pilot interviews, that the narrative accounts hint at the affective nature of experiencing. Therefore, I developed an interview technique around eliciting further these affective nuances. In addition, the theoretical analysis is also oriented on illuminating notions of affective thinking. These challenges demonstrate the difficulties of researching lived realities (Van Manen, 1990).

Interviews: capturing lived experiences

> A lived experience does not confront me as something perceived or represented; it is not given to me, but the reality of lived experience is there-for-me because I have a reflexive awareness of it, because I possess it immediately as belonging to me in some sense. Only in thought does it become objective. (Dilthey, 1985: 223).

The above statement refers to the here and now of experience, to be aware of an event as one is going through it. This is best illustrated by the interview process. In posing questions to the surgeon, I am 'putting him on the spot'. He becomes aware of his experience of being interviewed while he is still experiencing it. Therefore, lived experience has a *temporal structure*: 'it can never be grasped in its immediate manifestation but only reflectively as past presence, (Van Mannen, 1990: 36). Thus, interviews can attempt to appropriate the meaning of lived experience, but it can never fully capture the richness or depth of the experience.

Pilot interviews

I conducted pilot interviews, for the purpose of investigating the scope of data available to this study and to inform the question design. Three pilot interviews were conducted with very senior surgeons (more than 15 years of consultant practice).

These early test interviews helped me to finalise the duration of each interview (1 hour), the structure of the questions, to identify potential difficulties with acquiring responses and to be cognisant of the practical challenges of the interview process.

Interview questions

I divided the interview into two halves. In the first fifteen minutes, I pursued a light form of questioning which allowed the interviewee to 'settle' into the process by responding to questions about their biography: when they decided to pursue Medicine, where they trained, what aspects of surgical practice they enjoyed/disliked and so on. Appendix B contains a list of the questions, surgeon profile document, interview letters and consent form.

Once a rapport was established and the interviewees felt comfortable and relaxed, I moved on to questions that concerned areas of training that interested me. This primarily comprised how the surgeon gathered or developed her knowledge for daily practice. In answering these questions, I probed subjects about whether they relied on textbooks, research papers, peer discussions and support or independent experience of practice to inform and develop their knowledge of practice. I asked the surgeon to give examples of events of practice, if they could remember any, which had led to some new learning or understanding of surgical practice. In effect, I was inquiring about transformative events of practice which had influenced or shaped thoughts, actions and future conduct. I used my first experience at the organ procurement as an example to communicate what I meant by my question.

Interview analysis

Common approaches to interview analysis (Kvale, 1996), include an application of grounded theory to draw out shared themes, such as; 'honesty', 'depression', 'grittiness' (Strauss and Corbin, 1998; Charmaz, 2007; Bryant and Charmaz, 2007). However, it is not my intention to quantify certain behaviours or ways of thinking, in an attempt to draw conclusions about what it means to be a practitioner (Schon, 1983;

Hammersley and Atkinson, 1983; Elliot, 2005). This refers to my earlier comments on establishing the 'truth' of surgical training and practices.

Instead, by eliciting narrative examples of clinical experience, I am not concerned with establishing these accounts as representative or typical of clinical practice and as such containing objective truths. Instead, my purpose is to explore the accounts of clinical events from the perspective of how they are recounted. That is, to examine the 'telling', 'structuring' and 'reasoning' of the stories, which may illuminate how the clinical experience matters to an individual. My main preoccupation in this research, is how the content of the story indicates what matters to a trainee in that moment and in the time that has passed.

Therefore, my analysis of the interviews begins from the premise that clinical practice is uncertain and requires responding in the moment as the event of practice unfolds. I then look to see how my theoretical framework can be employed to unravel and unpack events of practice, to understand better what is implicated in the described thoughts and actions. The objective is to gain a deeper understanding of what factors are involved in how a doctor affectively experiences an event and therefore makes sense of it and learns from it.

e)   Selecting participants and organising interviews

Practical difficulties in organizing interviews

The early pilot interviews demonstrated the main difficulty I would face when selecting participants for the study: finding surgeons who could spare the time from the demands of busy and unpredictable NHS practice. Frequently, interviews were cancelled at the last minute due to surgical operations that had required more time than had been initially expected or supporting a colleague (senior and junior) with the care of a patient or surgeons finding themselves oncall suddenly and so on.

In total, I contacted 15 surgeons, 8 were consultants and 7 were trainees. While all showed appropriate interest and a genuine desire to help me with my enquiries, the reality was that I was only able to successfully complete 8 interviews. This was mainly due to the difficulty of negotiating complex work schedules and oncall commitments.

Two of the interviews were conducted 'face to face', while the remaining five were conducted via Skype or Facetime. This again was due to difficulties experienced in finding appropriate times to speak about complex topics which would require both time and a lack of interruption. In the end, I collected interviews from 4 consultant surgeons and 3 surgical trainees.

Who were the participants? Why were they chosen?

The four consultants I interviewed had been appointed between 2011 and 2015, whilst the trainees were in the final years of surgical training. I decided to use interview subjects who were in the latter stages of training or had become consultants recently for the following reasons.

First, both senior trainees and junior consultants were the group most likely to have the time and inclination to speak about training experiences. I believe this was because these surgeons had either finished, or were finishing training and therefore, had a tendency to reflect on their training experiences with eloquent and thoughtful descriptions.

Second, they were also the group of surgeons who had the least busy schedules. Although, I would emphasise that the standard of 'busy-ness' was already very high across the profession. But, this cohort of subjects was marginally less busy than their counterparts.

Third, I felt that junior trainees might struggle to describe events of practice that were memorable, given the shorter number of years they had spent in training,

comparatively. Senior trainees were more likely to have varied experiences that they could draw on to illustrate their thoughts and opinions. This assumption was based on my own practice as a surgical trainee and trainer, observing the levels of experience that were demonstrated by trainees at all stages of training.

Fourth, senior trainees and junior consultants tend to engage in training other doctors more readily. This is for different reasons which I base on my own experience and observations as there is a paucity of research to support these ideas. Senior trainees are often charged with observing or assisting other junior colleagues through procedures, as they are expected to act in a more senior capacity. Junior consultants tend to be enthused about training, having recently completed their own training years.

Finally, I was aware that my own position as a surgeon could influence the course of the interview or the answers provided because of the relations of power. As a junior consultant, I was unlikely to pose a 'threat' or cause discomfort amongst the senior trainees, who as it happened, considered me a peer in the interview process. A more junior trainee might feel intimidated or paradoxically demonstrate a need to show how robust or capable they were when managing the complexities of clinical care. I noted in the pilot interviews that the senior consultants tended to treat me as an ingénue, a junior colleague who would benefit clinically from stories of their experiences, rather than viewing me as a researcher engaged in a study.

I attempted to balance the gender and ethnicity amongst my interviewees, 3 are male surgeons and 5 are female. Five participants are classed as white British and three as Asian. In addition to the surgeon interviews I also conducted a further two interviews with educators at the Royal College of Surgeons, involved in the delivery of training programmes and development of educational policy. Both educators are white British, one female, the other male.

The pilot interviews demonstrated the importance of establishing a good rapport with the subject to assure confidence and confidentiality in the reporting. Often sensitive issues were discussed. I found that my opportunity to probe and question the answers was improved by the existence of some prior familiarity between myself and the surgeon. This was particularly important when encouraging honest accounts of practice which risked admissions of errors or other oversights (see below for further development of this point). I therefore developed a network of potential surgeon interviewees. Every interview subject was either known to me directly through a prior working relationship or was referred to me by a colleague I was familiar with. This helped to create a confidential environment that encouraged the interviewee to speak openly and honestly about their experiences of clinical practice.

All interviewees were contacted by telephone initially to establish availability and interest. I then sent emails with details regarding the format of the interview, examples of the types of questions being asked as well as a consent form to participate in the research study. The interviews were on average 75 minutes long and recorded on audio files, which I later transcribed. Interviewees were offered the option of access to transcripts of the interviews if they so desired. None requested a transcript (see appendix B for consent forms and letters of introduction).

f)   Ethics and honesty

Central to the investigation was the attempt to uncover *honest* accounts of practices (as opposed to *truthful* accounts). These stories might include admissions of perceived 'negative behaviours', such as; clinician failure or error, poor judgement, shock, sadness, inexperience, incompetence, disillusionment, disappointment and guilt. These 'felt qualities' can have unfavourable associations with practice, though I hypothesise that they are implicated in how an individual experiences an encounter of practice and makes sense of it.

I described the aforementioned thoughts, emotions and feelings, which may or may not be grounded in cognition as 'felt qualities' - 'felt'[5] because they are perceived by the individual but not always in ways that are conscious or captured by language. The objective of my research was not to judge or cast aspersions on an individual's conduct, I was interested in what had motivated the felt qualities and how practice was shaped and influenced by these, if at all.

To gather such sensitive data, *trust* was critical in establishing a rapport that led to surgeons speaking frankly about their experiences and relating honest insights. For this reason, I requested interviews from surgeons I had either worked under as a trainee in the past (3 of the 8 interviewees) or knew through my training days though we each belonged to different specialties. For example, I trained in transplantation but the interview subject may have trained in orthopaedics or ENT and therefore our paths may have crossed when we referred patients to each other in the hospital.

Stephen Ball describes how when addressing the 'organisational underworld' (Hoyle, 1982; 87) it was those interviewees whom he knew who trusted him: 'not surprisingly the better I knew my interviewee the more candid the disclosures tended to be' (Ball, 1991; 178-179). As each of the surgeons knew me in some capacity there was a sense that I had shared similar experiences of practice and would understand their thoughts and feelings. I discovered that my position as a 'familiar face' and 'insider' was instrumental in gaining the trust of a respective interviewee and facilitated a form of questioning that could be probing even if it elicited feelings of discomfort in the interviewee. From a practical stance, ethics approval was acquired for this study, given the confidential nature of the responses.

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[5] In developing this term, I take inspiration from Whitehead and Massumi's writings on 'feelings' and 'affect'.

3.4 A Reflexive Stance: My Thoughts On The Research Methodology

a) The interview process

I was pleasantly surprised by how willing surgeons were, in general, to assist me with my research efforts. Most were intrigued by the opportunity to speak freely and confidentially about how they conceived their practice. My initial difficulty once engaged in the actual process of interviewing was getting interviewees to realise that the interview was not about their awareness of official protocols and hospital policy or an assessment of their surgical knowledge!

For example, one interviewee proceeded to speak in great length about the hospital protocols for monitoring and reporting adverse events. However, the question I had actually posed was what was *his personal experience* of adversity in practice and how did he cope with it. This did make me realise how as medical practitioners we become 'institutionalised' in our thinking and acting, in assiduous ways that are not apparent to us at first. This echoes Foucault's (2002) writing on power in which he states that we come to desire the power relations which entangle and subjugate us. In the case of this interviewee, the hospital protocol on adverse events had been adopted by him to explain and cope with the consequences of medical error.

I found that giving my own example of the organ procurement story a helpful tool in orienting the surgeon about what exactly I was keen to know about their practice. This seemed to clarify the questions and it produced accounts of experiences that I was hoping to uncover.

All the surgeons spoke with an impressive level of honesty and thoughtfulness. They were keen to remain anonymous and I assured them that I would mask all identifiers in their stories. This included their names, where they worked, their ethnicities as well as the specific details of the clinical stories. The surgeon narratives I subsequently

chose to use, contain patient details that have been altered, so that there is no recognizable link to the actual patient.

b)   Active interviewing

Holstein and Gubrium (1995) introduce an approach to the process of interviewing which 'activates narrative production' (p. 39). This is the theory that interviews are a 'meaning-making practice' (ibid., 4) between researcher and interview participant: a co-constructive exploration of meaning. I undertook this research project from the perspective of understanding experience as initially constituted by affective forces. I have identified themes and ideas in the interviews from this research position. This has allowed me to theorise how surgeons experience events of practice. In a similar way, my research subjects participated in the interviews to express their thoughts and opinions on how they learn and grow in practice. The cooperative nature of the interview has provided a discursive space in which to extend and hypothesise aspects of clinical practice which hitherto have not been examined or theorised.

c)   Philosophical discourse to construct a theoretical framework

Surgical education research has yet to embrace philosophical concepts as a way of exploring and analysing events of practice and the notion of experiencing in clinical environments. The complex nature of providing surgical care in unexpected and unpredictable situations of clinical practice cannot be overcome or managed by a singular approach that emphasizes the protocols and guidelines extolled by official manuals of surgical practice or clinical policy. The interviews demonstrated this fact to me very clearly. I believe that philosophical theories may help to enhance how the medical profession can engage more *affectively* and effectively with the contingency of clinical encounters.

Pickering's (1993) notion of 'the dance of agency' in which he examines the real-time understanding of practice as an interplay between human forms of agency (patient, doctor) and non-human forms of agency (medical technology, procedural equipment,

hospital policies, waiting times and so on) is particularly relevant to an analysis of events of practice. It expresses clearly the complex nature of the reciprocity between the thoughts and actions of the doctor and the patient. The clinical practice that constitutes this encounter is the milieu of the dance—the diagnosis given by the doctor, the treatment plan organized, the patient's questions and understanding of what is occurring and yet to happen. Attempting to understand the layers of this 'dance' is the struggle of my research methodology. I believe that philosophical discourse may help provide an alternative method of examining how surgeons think, do and act in the acuity of events of practice.

In the next chapter, I present a theoretical framework based on philosophical discourse to unpack the objects of my research (interviews, policy documents and auto-ethnography). Chapter 4 is an extension of the themes outlined in this discussion on methodology. It examines how best to achieve the aims that have been set out in the research strategy.

Preface to Chapter 4

Chapter two provided an account of the factors involved in how medical pedagogies in practice are conditioned and structured. This included, transcendent frameworks, historical events, as well as political and social issues. Medical education research (MER) has explored the impact of these factors through specific methodologies.

Evidence based medicine (EBM)

An example is the growing tendency in MER to use research methods that reflect the principles of evidence-based medicine (EBM). What is EBM? In brief, EBM is an approach to clinical problem solving that involves searching for evidence from randomised controlled trials, systematic reviews, and meta-analyses.

This thesis is not a critique of EBM. However, the difficulty in MER is that the EBM approach has pre-determined *what is* and *what is not* deemed to be relevant in educational experiences, as well as, what activities constitute 'evidence' of learning and assimilation. But, I want to emphasise that certain practices, ways of thinking, doing and being are obscured or considered irrelevant by an approach that views the diverse activities in education through a singular lens.

An example of this is how quantitative approaches have been adopted to analyse behavioural components that underline skills acquisition, abilities to communicate and work in teams or clinical decision-making (Reznick et al, 1997; Rosser et al, 1997; Rosen et al, 2002; Schwind et al, 2004; Leblanc et al, 2009; Richstone et al, 2010). There is also an expanding body of research which investigates the role of simulation to recreate the reality of clinical experiencing (Buck, 1991; Kneebone, 2010; Kneebone et al, 2001, 2004; Beyea, 2004; Kassab et al, 2011).

The shortcomings of traditional pedagogies

As mentioned in chapter 1, the difficulty with these investigative approaches is that

they apply hylomorphic principles to studying experiences of learning and practice. This method of analysis can be problematical, if it functions in ways that recognise and legitimize only those aspects of performance that are already known, or defined by prior approved categories of learning and practice.

I therefore suggest, that traditional pedagogical methods, with their transcendent forms of knowledge and practice, are inadequate to disclose the subtle and intangible elements of practical clinical experience (Frank, 2013; Whitehead, 2013; Martimianakis and Albert, 2013). Why might this be? Established teaching and learning models tend to focus on what is visible and demonstrable in a clinical setting. This includes, a trainee's expressed communication and observable behaviour. Such a conception of clinical education and training may neglect the unseen and unspoken aspects of an actual clinical event of practice: the affective forces that arise and are difficult to predict.

'Knowing' that is immanent to clinical events

Thus, I am not proposing a body of established external or transcendent knowledge, as generated by the above research regimes, to judge learning and practice. Instead, I attempt to work with the notion of a kind of *knowing on the inside,* as it emerges in events of practice. But, externally applied knowledge, although useful, tends to presuppose a particular subject of knowledge. One that is grounded in an epistemology created from past experiences. Whereas, in the process of knowing on the inside, or *knowing which is immanent to events*, knowing and the subject are not prior established entities. Rather, they emerge through the flux of experiencing that constitutes the event.

Applications of social theory in medical education research

What I emphasize in this approach, is the knowing that emerges through the *intensities of affect*, which form and develop in an encounter of practice. As mentioned, this is not how clinical knowing or learning has traditionally been examined

or understood (i.e. through a framework of EBM). Nevertheless, in recent years, aspects of social theory are increasingly being used to research medical education. What are the ways in which this approach is used in MER?

First, an exploration of the MER literature, identified the widespread use of specific methodologies associated with social theory. This included semi structured interviews, case studies and surveys (Bourhis et al, 1989; Keddy et al, 1986, Weller et al, 2008; Arora et al, 2009; Singh et al, 2013; Bhatti et al, 2015; Cope et al, 2015, 2016). Second, some studies used well established qualitative techniques such as grounded theory (Glaser and Strauss, 1967; Strauss and Corbin, 1990) or thematic analysis (initially introduced in psychology) (Braun and Clarke, 2006). However, aside from established methodologies, how are the actual philosophies that underpin social theory, being used to critically examine issues in medical education and training?

An investigation of the research literature into *undergraduate* medical education demonstrated a fledgling appeal and movement to use social theory as a conceptual framework for critical analysis (Frank, 2013). This has included an application of the writings of Bourdieu and Foucault to critique undergraduate programs in medicine (Brosnan, 2009; 2010, Frank, 2013; McNaughton, 2013).

By contrast, there appears to be no such approach to research in postgraduate surgical education. I was not able to uncover any research studies or editorials in the surgical education literature, that use philosophical concepts and theory to critically examine issues in training. As a consequence, I have included a limited literature review of specific research focused on the education of surgeons.

An alternative research approach in postgraduate surgical education

In this research study, I intend to draw upon selected philosophical literature in order to explore how learning emerges through actual events of practice. In addition, I investigate how such learning may effect changes in surgical practice, in contrast to the learning that emerges through the acquisition of established clinical knowledge

and procedures in surgery.

Throughout this chapter, I introduce a philosophical framework to explore the notion of 'experiencing' in contingent surgical practice which I described earlier as a 'speechlessness of practice' (see Chapter 1).

I have hypothesized that this *eventful learning* has important implications for how surgeons in training construct meaning within actual encounters of practice. It entails a response to a clinical encounter that accommodates how the event presents itself and how it is sensed and interpreted.

Chapter 4

A Theoretical Framework: Part One

4.1   Entangled Subjectivities

AOM: *I'm interested in your encounters of daily practice and how you are able to cope in the immediacy of a clinical event, the moments in which it unfurls and the minutes or hours that are consumed by this particular event. How does your clinical training prepare you for such situations? How do you make sense of it?*

R*:   I think you're referring to what I call 'emotional moments'. To think that we are non-emotional creatures is not true. Our emotion and mental being affects our operating. From the simplest thing of when I go into an operating list, I don't fight with the children that morning! No arguments. Just a chilled breakfast. I get into my Zen because that WHO‗ checklist which states in the last question, "is everyone well in the team? Or is there anything bothering the team that's going to affect the list?" That's an important one. And I would declare that I have been up last night on call, or I want to go for my-whatever-children's thing in the evening. I think that emotional state is important, you know. I guess there are times when you're operating as a consultant and its basically emergency surgery, because elective surgery is very much follow these ten steps, systematic. But when you go into an emergency, that is when all the uncertainty arises and sometimes you get called into someone else's operating theatre because they've damaged something and they need your help to fix it or sort it out. . .*

I remember going to see a female patient in ITU. She had had a horrendous, horrible, horrible experience and ended up losing parts of her body and had bled so much. I wasn't present at her original surgery but even just hearing about it was itself so traumatic.   I got told about this woman at 7.45 in the morning to say she was being taken to theatre at any moment. But that morning was my daughter's school

assembly, and I was all set to go for that for ten minutes. I called back home and my daughter was in tears when I told her that I was not going to make it. Then I had to speak to my husband to tell him, please video it or whatever. But it was bothering me that I wasn't going to be there. And then I got told off by the medical director because I had rushed into the hospital, holding my bag and I wasn't appropriately 'bare below the elbows'! So when I started that operation I wanted all of that out of my head . . . so I basically told the team of doctors who were with me, and for me just telling them this, was enough to get it out of my head. I can't be there, I just can't. I'm oncall and this is my duty, I have to be here for the patient. For me, telling someone else was enough to transfer the guilt if you like and get on with the task at hand. I needed to focus because this patient had suffered a terrible injury, a significant one. Operating that day, the surgery was very difficult, there were two other surgeons in the room . . . and you realise that you've tried all the manoeuvres that you know about, but NOTHING has worked! Then what do you do? You call for help. . . You realise at that point that you have to stop. You have to close up, it might be absolutely fine and if you need to go back in, then you need to go back in. If you need to do more investigations, then you need to do more investigations. But that thing of learning to stop, which you do learn in very small ways . . . It's then having to sit it out for the next three days and watch her, all the parameters (urine output, haemoglobin, creatinine). . . Do I think about what she's going through? Of course . . . On the drive into work that day and the drive home and days after that, when I see her later in clinic, I can't help but think that she has been through a lot and how can anyone understand what she has been through?! I don't think about it too much in a way, especially when you're dealing with the surgical problem. You have to dissociate it, that emotional bit of it. And dealing with the emotions is the really important bit, because otherwise I think it would overwhelm me. Just hearing about the story starts to make you upset . . . you know . . . as a fellow human being.

4.2 Introduction

How surgeons sense or cope with the immediacy of practice, *the ways in which unanticipated encounters of clinical practice inform the knowledge or knowing* that arises from the event is the central preoccupation of this thesis. I use 'sense' to mean two things: an *interpretation* of clinical practice and the *sensations* experienced within a clinical encounter. In pedagogical terms, this question has implications for a learner's mode of learning as well as how an educator orients and conceives teaching practices. As explained in the preface to this chapter, 'making sense' of daily clinical experience is an area that has been developed in specific ways within medical education. Two specific points stand out.

a) Thinking and doing as cognitive processes

First, pedagogic attempts to reform and better comprehend medical education start from a premise that clinical learning and understanding are primarily rational processes. That is, how trainees experience clinical practice is principally through cognitive processes of reasoning and logic which can be fragmented into discrete component parts. For example, the work on 'uncertainty' in medical practice is widely conceived through a biomedical discourse of clinical reasoning (Mattingly, 1988; Little, 1995; Logan and Scott, 1995; Wilson, 2000; West and West, 2002; Yuill et al, 2010; Guenter et al, 2011) (see also chapter 4). It states that uncertainty can be reduced or eliminated by an application of evidence-based medicine (EBM) and standardisation of health care processes to create predictability and objective knowledge (Sacket et al, 1996; Timmermans and Berg, 2003).

As illustrated in the above as well as other narratives in this thesis, the uncertainty that arises in clinical practice, is the eternal condition of all medical practice. It is impossible to adequately control and fully anticipate how any clinical interaction in the realm of doctor-patient relations may unfold (Greenhalgh, 2013, 2014). As such, it is also difficult to predict how the event may proceed to transform the clinician by

triggering new worlds of interpretation, understanding, and knowing.

b)   Clinical learning occurs in contingent environments

Second, what a learner needs to know (derived from the educational, historical and social priorities of society at this time) such as, demonstrable proficiency, anatomical theory, physiological principals, clear and concise communication, are crucial to developing competent and safe medical practice. A comprehensive and replicable approach which can be used with ease in situations of uncertainty, utilising appropriate skills, is a necessity. This is not refuted.

c)   An expanded approach to learning in contingent environments

But, to extend the understanding of what patient care and surgical training can become, requires going beyond established ways of thinking and doing, to break open the pedagogic confines of what is known and accepted. Such a pedagogic 'explosion' may permit *new* knowledges, practices and ways of being to emerge from local events of learning (Atkinson, 2011, 2016). A *pedagogy of the surgical event,* as proposed here, is grounded in the contingency of surgical practice, acknowledging the immanent nature of clinical relations and practice. Such a pedagogy, has the potential to 'rupture' what is already known and assimilated by recognising that actual events of practice are unplanned and unpredictable.

d)   'Mattering' in encounters of clinical practice

The key objective of this chapter, is to provide the theoretical foundations for a pedagogy, that prioritises, *how something matters to a surgeon within a learning encounter.* Put another way, the aim is to emphasise how an event of practice is affectively experienced by the surgeon and how it attains significance for the practitioner. As opposed to what is prescribed and valued within official training materials of surgery.

In the above narrative, Radha, a consultant surgeon who works in a teaching hospital

outside of London, describes how she responded in an acute event of surgical practice, when she was the oncall surgeon. Her narrative raises three points in particular, that I wish to examine, through a number of philosophical writings that I have selected.

e)   Entangled relations in actual events of clinical practice

First, Radha asserts the importance of 'keeping in check' her emotional state. She identifies the need to *control* her emotions, which range from "guilt" and anxiety about her daughter, to feeling "upset" about the fate of the female patient. Her rationale is that these emotions will overwhelm her, and negatively impact on her need to focus on the patient.

Her description clearly illustrates the *entangled relations* intimated in how a doctor thinks and acts in clinical practice. These involve personal concerns and commitments, professional duties as well as the relationships formed in the working environment with organic (patients, colleagues) and non-organic (operating theatre, wards, medical equipment) entities. These *intra-actions* between the complex layers of practice, are identified by Karen Barad (2007), as a *metaphysics of relationality*. These connectivities deepen the existing contingency of clinical encounters, by adding a further dimension of complexity to events of practice.

f)   The impact of uncertainty in clinical practice

Second, Radha refers to the notion of "uncertainty" in clinical practice, particularly in the context of emergency surgery. As discussed earlier, it is impossible to fully anticipate how uncertainty may manifest and Radha's narrative exemplifies this. How a surgical oncall may unravel is unknown, with implications for both her personal commitments (attending her daughter's assembly) as well as her professional duties as a surgeon (abandoning the exploratory surgery for a watchful waiting approach). This condition of contingency in clinical practice, has a powerful impact on the thinking and 'doing' that emerge within events of actual practice. It is critical that the

development of pedagogical strategies recognise and accommodate the ways in which uncertainty shapes and influences teaching and learning, even though, paradoxically we cannot predict when uncertainty will arise!

g) '*To affect* and in turn *be affected*'

Finally, Radha's story is an account of the state of *affectations* at a given moment. This relates directly to my initial claims regarding the effects of the affective realm of practice, in clinical encounters. As illustrated in the above narrative, Radha is *affected by* the encounter with the female patient and in turn, she *affects* the clinical event through her position as the on-call surgeon charged with caring for the patient and as a "fellow human being" trying to contemplate the traumas that the woman has suffered. How these affectations are implicated in the beliefs and behaviours manifested in clinical practice is at the heart of this research study.

h) Aims of the theoretical framework

To explore these areas, I present in the following pages a theoretical framework that functions to loosen the ideological framings that currently structure medical education. Put another way, my objective is to explore what unravels in actual clinical encounters through notions of prehension, affect, individuation, virtual potential, ethics, transcendence and immanence.

Through this conceptual framework, I attempt to illuminate the multiple realities embedded in experiences of clinical practice to create new ways of contemplating surgical practice and to develop novel approaches to learning and practicing. The overall aim is to discover what can be inferred about the nature of pedagogic relations and opportunities embedded in real experiences of surgical training: a pedagogy of the surgical event (PSE).

4.3 Pedagogy Of The Surgical Event (PSE)

a)   What is missing in the research literature examining postgraduate surgical training (PGST)?

Criticisms of social theory

There have been increasing attempts to adapt social theory as well as educational theory to aspects of medical education as well as medical education research (MER). The field of social theory is interdisciplinary, drawing on disciplines that include philosophy and sociology. However, the applications of social theory tend to be limited to particular sociological methodologies. An example in medical education is the widespread use of reflective practice to structure and organise the curriculum at both the undergraduate and postgraduate levels (GMC, 2016; RCS, 2014b). Reflective practice is also a core component of the system of appraisal and revalidation that underlines the licensing of doctors in the UK.

However, the difficulty arises, when reflective practice or other sociological methods are applied as forms of external knowledge, that are used to categorise ways of acting and thinking that arise immanently from the clinical encounter. What I emphasize is the limitation of using a static format to capture the immanence of clinical learning, which by nature is dynamic and fluid.

An example of this is taken from the case based discussion (CBD), a staple amongst the growing spectrum of assessment exercises. The CBD is used to assess clinical judgement, decision making, and the application of medical knowledge in an encounter of practice (ISC, 2016, Mehta et al, 2013, Phillips and Jones, 2015; Phillips et al, 2016). The assessment poses three questions to make the trainee reflect on the clinical encounter: 'what did I learn from this experience? what did I do well? what do I need to improve or change and how will I achieve it?' All these questions serve to force the learner into structuring their experience through rational categories of conscious thought. This is a necessary process to ensure that the learner is acquiring

the required skills for professional practice. However, what is not known is how well the assessment form captures those aspects of the clinical experience which are not easily accessed or verbalized: the affective response that arises from the immanence of practice. (Reflective Practice is further examined in Chapter 6).

Criticisms of educational theory

The same criticism can be levelled at how educational theory is applied in PGST. In recent decades, the teaching and learning of surgical skills and knowledge has been formalized and strengthened, through an application of educational theory (Lave and Wenger, 1991; Reznick and MacRae, 2005; Moulton et al, 2006; Arora et al, 2009; Mitchell and Arora, 2012). This has included the work of Piaget (1971), Vygotsky (1978), Kolb (1975, 1984) and Ericsson (2004, 2006) to name a few. But, I would argue, that these theories have primarily been used to structure or extend existing educational practices, rather than creating the conditions for novel ways to contemplate the thinking, doing and being that emerges when engaged in actual encounters of practice.

Examples include, the notion of 'deliberate practice' or the 'zone of proximal development'. In the former, repetitive practice of specific components of performance are associated with the acquisition of technical expertise (Ericsson et al, 1993). The concept of the 'zone of proximal development', refers to the potential for development that arises when a learner is provided with a teacher's guidance. An individual's independent ability to problem solve is furthered by such an intervention. In Chapter 6, I explore how Kolb's theory of experiential learning (1975) has been treated in the widespread practice of reflection, a core pillar in medical education and practice.

'Affective learning'

For the reasons stated above, I assert that the notion of 'affective learning' is a pedagogical domain, that has been neglected by research studies into PGST. In

addition to being poorly investigated, this aspect of learning and practice lacks a strong foundation in educational theory and strategy. Therefore, what I propose is a research methodology that is informed by a range of philosophical concepts and discourses that can accommodate how an encounter presents itself, and how it is sensed and interpreted.   Such an undertaking is a unique and novel approach to examining the entangled relations that form and develop in the contingency of surgical practice.

b)   The rationale for a theoretical framework grounded in philosophy

Conceptualizing the notion of experiencing through a philosophical lens may permit a more in-depth and nuanced interpretation of learning in clinical environs. This includes an exploration of the multiple realities embedded in encounters of practice, relations of the self and of practice, construction of values that mediate and shape what is understood, and an appreciation of the knowledge created through intra-actions (Barad, 2007) between the knower and known. This may allow for experiences of surgical training to be problematised and explored through an approach that is more 'open' and not subject to fixed criteria (Schaviro, 2012; Atkinson, 2016).

Such a project has the potential to consider dimensions of practice that are not self-evident and may otherwise remain *invisible* or even be perceived as *'harmful'* by the dominant biomedical discourses in Medicine. An example of the latter is the perception of emotion in practice as detrimental to objective thinking and decisive action (McNaughton, 2013; Orri et al, 2013, 2015; Pinto et al, 2013).

The objective of a pedagogy of the surgical event

A pedagogy of the surgical event acknowledges the importance of transcendent frameworks of established knowledge but focuses on how an actual learning encounter comes to matter for a trainee. An examination and analysis of the *surgical*

event requires an approach that is sufficiently nuanced to accommodate and account for the human lives in which unpredictable clinical encounters occur. With this in mind, I developed a method based on particular philosophical theories exploring society and the nature of reality and experience.

How I plan to use theory

Bordage (2009: 313) describes conceptual frameworks as, 'ways of thinking about a problem or a study, or ways of representing how complex things work the way they do.' He bemoans the absence of explicit statements on the conceptual framework used by experimental studies in medical education (see also Cook et al, 2007).

> Conceptual frameworks are like lighthouses and lenses . . . Whereas the lighthouse illuminates certain parts of the ocean at any given time, other parts are left in the dark. Each framework highlights or emphasises different aspects of a problem or research question . . . Any one conceptual framework presents only a partial view of reality. By contrast, conceptual frameworks are also like magnifying glasses; each individual framework magnifies certain elements of the problem'. (Bordage, 2009: 313)

The concepts and ideas described and discussed below are used in this study, to guide and inform the analysis of education policy documentation, consultant and trainee interview transcripts, as well as ethnographic field data.

4.4 Contents Of The Chapter

This chapter is divided into two parts. In the first part, the onto-ethical dimensions embedded in experiencing surgical events of practice are illuminated and magnified using key concepts from:

- Alain Badiou: 'truth' and 'event'
- Alfred North Whitehead: 'experience' and 'affect'
- Gilles Deleuze: 'immanence and transcendence', 'actual-virtual' and 'ethics'
- Gilbert Simondon: 'individuation' and 'metastability'

- Brian Massumi: 'intensities' and 'thinking-feeling'

I describe, analyse and apply these concepts, with reference to the opening narrative of the organ procurement and the above excerpt from Radha's interview.

In the second part, the ways in which educational policy documentation captures and constructs professional surgical identity and conduct is examined through a conceptual lens that draws on the philosophies of Pierre Bourdieu, Michel Foucault and Judith Butler.

4.5 'Rupture': Alain Badiou's Theory Of Truth And Event

> A truth is solely constituted by rupturing with the order which supports it, never as an effect of that order. I have named this type of rupture which opens up truths 'the event' (2005a: 12).

For Alain Badiou an 'event' is an eruption in a situation of something that could not be predicted to happen in that situation (2005a). An example of an event in my experience as a trainee surgeon, is the intensities surrounding the lived reality of the organ procurement, which I described in the introductory chapter. How the encounter unravelled for me, could not have been adequately anticipated, despite the preparation I had put in and the prior information I had access to. An event is characterised by its ability to rupture 'that which is known': established frameworks of knowledge and practice.

a) The notion of 'event'

I had mentally rehearsed the surgical steps of the procedure and assumed I knew exactly what the clinical situation would yield. However, the culmination and intensities of the unfolding phases of the procedure, constituted a disturbance. This is the event that could not have been predicted by official manuals of surgery and which created a 'rupture' for me, with the assimilated knowledge and practice. The colours and odours of the operating theatre, the contrasting sounds of the theatre team's impatience with the soft wails of the deceased donor's family, the perception of a still

warm corpse, all combined, almost concatenated, to pierce my prior understanding of what I was tasked with. It was a lesson beyond the established curriculum.

An actual encounter or 'event' of practice, reconfigured my understanding of a surgical procedure. Prior to the 'event', this encounter had been assimilated through pre-defined and established categories of surgical knowledge and practice.

b)   The notion of 'truth'

Persevering with the consequences of the event, and committing to what follows from the event, is described by Badiou as a 'truth' process: 'it is what exceeds, in a given situation, the knowledge that accounts for the situation', (Leclercle, 1999: 8). It is important to distinguish 'truth' from 'knowledge'. Truth arises *beyond* what is known or taught. Truth is not an absolute, it is what is triggered following an event, and therefore, punctures established knowledge on the matter. As I discuss in chapter 1, the consequences of that initial organ procurement experience are ongoing for me, and my opportunity to learn and further my understanding and knowledge from this and other events is dependent on 'staying true' to consequences of such moments of disturbance.

Persevering with the consequences of the *event* was a deeply uncomfortable experience. However, it caused me to re-examine how I dealt with emotions in practice that had the potential to overwhelm me. It led to my devising coping mechanisms that would allow some preparation for potentially difficult clinical interactions both intra-operatively and in non-operative environments. This was my truth process, which followed the encounter of the organ procurement.

c)   Applications of Badiou's theory

> To be faithful to an event is to move within the situation that this event has supplemented, by *thinking*... the situation 'according to' the event. And this, of course—since the event was excluded by all the regular laws of the situation – compels the subject to invent a new way of being and acting in the situation.

(Badiou, 2001: 42).

At this point we can further explicate this standpoint by exploring Badiou's idea of *excess* (Badiou, 2005b), which is implied by the notion of an event. *An event is always in excess of the existing state, of knowledge, of practice*. This refers to the notion that a subject is conceived beyond any particular situation, as it submits to the consequences of a truth procedure and thereby passes beyond the limitations of what is already known.

From a pedagogical viewpoint, this refers to the relation between *being* and *becoming.* Through a learning encounter a student enters a new and previously unknown learning space, with the potential to become, and thus realise the potential which has yet to be actualised. But, it is the truths that proceed an event, that is to say, the consequences of 'sticking with it', that reconfigure the relationship between a subject and the world.

d)   'Real learning'

Atkinson (2011), further develops this Badiouian idea of experience, in what he terms *real learning*: 'this project is articulated around the notion of becoming, where real learning is conceived as self-encounter, an event that projects a learner into a new or modified ontological state' (p. 30). He suggests that, an event involves an encounter which disrupts our current ontological state and modes of representation, our ways of knowing, thinking and acting. Through the event, a 'new subject' emerges, a new ontological and epistemological state is precipitated which present new possibilities of being.

Atkinson comments that for Badiou: 'the idea of truth is related to the idea of *being truthful to something,* and this truth process denotes a process of subjectivization which in other terms can be viewed as a 'commitment to'', (Atkinson, 2011: 30). Therefore, in any situation, the existing knowledge can neither account for nor produce a truth, truth is a disruption of and a furthering of this knowledge.

A truth is, first of all, something new, what transmits, what repeats, we shall call knowledge. Distinguishing truth from knowledge is essential" (Badiou, 2005a: 45).

Badiou suggests that, it is in these moments of ontological and epistemological struggle, that we emerge as subjects who acquire newly formed subjectifications. We pass beyond our routine existences, and act and think in a way that extends what we know and who we become. Atkinson (2011), applies Badiou's concept to create what he terms *real learning*: 'what learning can be beyond the parameters of reproduction, packaged knowledge, traditional skills and the pragmatic and predictable application of knowledge,' (p. 5-6).

e)   Being and event

There is a strange temporality to Badiou's event as regards the ontology of a subject. It is as though, in the event, there is no ontology. Perhaps this is signified by the title of Badiou's book, *Being and Event* (2005), where there is an implied separation between being and event. Being suggests a mode of existence prior to an event, a state, governed for example, by knowledge frameworks, established practices and values. An event however, disrupts such modes and projects being into new modes of becoming, reconfiguring its relationship with local worlds. A subject becomes a subject by submitting to a truth procedure and therefore opening up possibilities for new ontological states, some of which may not be predicted or recognised by the existing educational or training framework.

f)   Surgical trainee versus Surgeon-in-training

If we view a subject as a fixed entity, this would tend to assume that there are established epistemologies and ontologies that define or predicate a subject. This restricts other possibilities of what they can become or of what it means to be a learner or a teacher. This is a key point, which again highlights the difference between what I propose to call, a *surgical trainee* versus, a *surgeon-in-training.* The terminology alludes to different pedagogical approaches: one concerned with the

induction of established bodies of knowledge and another with experiences and encounters of a surgeon-in-training, through which learning occurs and produces knowledge. This is also known as 'practical wisdom' or what the Greeks termed *phronesis.*

g) Application of Badiou's theories to surgical practice

It is not uncommon for patients to be taken to surgery only for the original operative plan to be diverted or subverted. This may be due to several reasons, including an anatomical anomaly, a complication during surgery, or medical information about the patient, which for various reasons were not known or available prior to surgery.

I contend, that every day, surgeons (and other doctors) are confronted by encounters that are consistent with Badiou's 'event'. These events can often be categorised as 'complications' of surgery or, a consequence of inadequate preparation or, a lack of resources. However, I believe that they constitute the actualisation of uncertainty in practice. That is, they occur because it is impossible to fully prepare for contingencies.

Persevering with implications or outcomes of the event of surgery is consistent with Badiou's notions of truth. Radha describes needing to stop when she had exhausted every intervention she knew of. Her knowledge in this area may have been constructed from textbooks, research literature, surgical conferences as well as her prior intra-operative experiences and the information she had gathered from her colleagues' surgical experiences. However, in moments such as these, the specific patient situation demands an approach that marries her existing knowledge with 'facts' that she comes to *know* as a consequence of the 'rupture'. In other words, committing to the *truth process* in this event of surgery, may extend the knowledge that she is already in possession of. An example is how she commits to closely observing and monitoring the patient through medical parameters. From this surveillance of the patient she may glean vital information that triggers thoughts or actions about what

else she is able to do

4.6 Alain Badiou's Ethics Of Practice

Badiou asserts that, events do not always lead to truth procedures. He identifies five subjective spaces; the shock of the new, a faithful space in which the truth and its consequences are persevered with, a reactive space in which the event is denied or glossed over, an obscure space in which the event is morphed onto the past so that what happens is always read in terms of the sense of past events. Finally, a space of resurrection, in which a previous truth is reworked in a new context.

a) The shock of the new and persevering

At the organ procurement, the rupture I experience and the 'new' understanding that emerges, can be categorised by Badiou's first two subjective spaces. Initially, I am overwhelmed by the subjective space of 'shock' and this later contributes (days, weeks and years after) to a consideration of how training could be organised. By 'persevering with the truth and its consequences', I commit to the truth of event for me. This involves contemplating what needs to be done to reconfigure training, along a paradigm that incorporates the unexpected and unforeseen aspects of clinical practice.

b) A reactive space, an obscure space and resurrection

The 'reactive' one-way conversation between Vinny and myself after the organ procurement may indicate his 'denial' of the event. He does not acknowledge my speechlessness or paralysis. Instead, he alludes to it as a function of my lack of procedural exposure. He may have believed that being shocked by certain surgical practices, was a natural and possibly fundamental part of learning to become a surgeon. He may have rationalized it, as inculcating in trainees, a 'hardiness' and necessary resilience. Through this approach, he 'resurrects' what actually occurred at the surgical encounter, to be 'reworked in a new context'. The 'new context' he

establishes is the importance of repetitive practice to foster fluent technique and competent skill. In other words, if he noticed the impact it had on me, he appears to have denied its meaning, by focusing upon skill and technique.

c) 'An ethics of singular truths'

The five subjective spaces outlined above represent an ethics of becoming. For Badiou, ethics is not about compliance with an existing moral code. He views ethics as unique to a particular situation and is therefore singular: 'I maintain that there can be no ethics in general, but only an ethic of singular truths, and thus an ethic relative to a particular situation.' (2001: vi). Badiou emphasises, that ethical decisions have to be made relative to the unique circumstances one finds oneself in. Put simply, ethics is transformed from the position of what one *should* do or *ought* to do, to what one *can do,* what it is possible to do in a unique and particular situation. Such a concept of ethics has implications for the relationship between ethics and knowing.

d) Applying Badiou's ethics to clinical practice

In a complex situation, when a trainee is unsure how to proceed, a form of 'knowing' can arise, which assists one's passage through the encounter. Ethics in this approach, is inseparable from *knowing,* that is specific to individual situations and not necessarily generalisable: an *ethics of immanence*. In contrast, where ethics is related to established knowledge, the situation a trainee may find themselves in, must be made *to fit* into the framework of formal knowledge. Otherwise, it may be viewed as completely mysterious or irrelevant.

For a surgeon-in-training, the ethical code may be strongly influenced by the reality of actual situations. By contrast, surgical trainees are expected to conduct themselves along established moral codes and expressed bodies of knowledge. The internal dialogue of a surgeon-in-training involves negotiating a tension between the expectations of the established training programme and the realities of clinical practice as experienced acutely by the individual trainee. How a surgeon emerges

from the internal dialogue and the subjective space(s) that is consequently occupied has implications for the ethics of practice.

The relation of event and truth, must involve an engaged subject. This is someone who believes in, and is therefore, able to perceive the event and its subsequent truth in their local situation. This leads to a reconfiguration of this space (Atkinson, 2011). 'Thus the event-truth relation is immanent to the functioning space of an engaged subject', (Atkinson, 2011: 25). It would therefore follow that in denying the event and not demonstrating fidelity to the truth procedure one is unable to access the new worlds and reconfiguration of this space.

To return to the example of Vinny, my mentor at the organ procurement, I have wondered in the past as to whether he had experienced a similar disruption at some point in his training career. I have queried whether he had chosen to *not show fidelity* to the truth procedure that could follow. In this way, surgeons may often refuse to be faithful to clinical events, because following through can be emotionally uncomfortable. The event can also be viewed, as a microscopy of their personal failings, rather than the production of new learning and knowledge that has the potential to enhance practice. In such cases, where events do not happen for these individuals, the encounter may be experienced as an anomaly or variable.

e)   Implications for pedagogies in surgical education

The challenge for the surgical trainer when responding to the 'evental' experiences of a surgeon in training is to work with the '*thisness*' of the situation for the surgeon in training. That is, to develop a pedagogy that is grounded in the haecceties of practice, which allow a learner to persevere with the consequences of the event in a given moment. Such a pedagogical strategy can assist a learner to make sense of the acuteness of surgical experience.

The teacher is challenged by the task of recognising an event, *as perceived by the learner*, and then to know how to support and facilitate the student's truth procedure.

The *thisness* of a clinical learning environment, poses numerous challenges to both learner and teacher. At the organ procurement, I was confronted by the haecceity of the event which revealed the reality of what I was about to do. This comprised operating on a dead person, a reality that had not dawned on me till I found myself entangled in the actual event of an organ procurement. I was stunned by the thisness and the developing intensities of the clinical scenario, which manifested as an inability to carry out the surgery.

In everyday pedagogical scenarios in an operating theatre, how does a surgeon educator negotiate the thisness of an episode of catastrophic bleeding which may constitute an event for some surgeons-in-training? There is the immediate clinical emergency that must be dealt with absolutely, yet at the same time, one should not lose sight of how this event will unfurl unknown trajectories for the learner. The event may disrupt the ontological state of the learner in ways that are not explicated by established clinical knowledge or the teacher's experience of an exemplar scenario.

4.7   Theories of Experiencing

a)   Haecceity

Radha in her narrative describes how she coped, thought and functioned within a given moment of clinical practice. My purpose in this research is to explore the 'thisness' of experiences of practice, the here-and-now or to use Greek terminology, the 'haecceity' of practice. It is in this acuity of experiencing, the immediateness of an event, that one may begin to be affected by an encounter.

> You will yield nothing to haecceities unless you realize that that is what you are, and nothing else (. . .) You are longitude and latitude, a set of speeds and slownesses between unformed particles, a set of non-subjectified affects. (. . .) It is the entire assemblage in its individuated aggregate that is a haecceity; it is this assemblage that is defined by a longitude and a latitude, by speeds and affects, independently of forms and subjects, which belong to another plane. It is the wolf, itself, and the horse, and the child, that cease to be subjects to

become events. (Deleuze and Guattari, 2004: 289).

Deleuze and Guattari are pointing here to the difference between lived experience, the speeds and affects of experience, in contrast to how experience is fixed or tied down in language. Language is situated in a static discourse. Deleuze and Guattari state that words, such as 'child' or 'wolf' create specific and defined entities. That is, they are fixed ('subjects') or intractable in terms of their character and what the entity can be or become. This facilitates our ability to grasp the entity and visualise it.

However, Deleuze and Guattari argue that the universe is in perpetual motion, dynamic and in flux. Language or any other discourse which interprets the world through static terms is problematic because it fails to acknowledge and capture the dynamism of all entities. Their notion of haecceity overcomes this difficulty by acknowledging that everything is in flux and composed of 'speeds' and 'affects'. They advocate an approach that incorporates 'longitudes' and 'latitudes' so that entities can be spoken of in terms of *becoming* and as *events.*

I investigate how trainees and surgeons emerge from clinical practice, how they are constituted in the 'thisness' or haecceities of practice. This has implications for the relations that form within an encounter and extend beyond that specific event of practice, transforming and reconfiguring the subjectivities of the professionals.

b)   'Affect'

My son, Mahen, was born eighteen months ago and his arrival in this world taught me to *see* things in a manner that I had not done since my days as a small child, most likely. Most parents will experience, as I did, how those first days at home with a newborn are fascinating. I watched him squirm, cry, or wrinkle his tiny face in displeasure, see the curl of his lip hint at a smile when fat and contented upon being fed. He was awash with physical expressions of how he felt at any moment in time. By studying his display of *affect*, I learnt about my child, I developed an acute sensitivity to his demeanour and how he would communicate his needs even before

they were conscious thoughts.

There are many definitions of affect formulated by affect theorists and neuroscientists. I have adopted the view held by Whitehead, Deleuze, Massumi and others that the *initial impact of an encounter is affective,* prior to cognitive processes becoming involved. This means that actions and behaviours are held to be informed by affective dispositions that are independent of consciousness or rational thought.

c)   'Affective thinking' versus cognitive thinking

The pedagogical implications of the affective realm are a complex and understudied area of clinical surgical practice. I have hypothesised that *how something matters* to a trainee/surgeon (the *immanence* of learning) within a learning encounter, is intimately connected to the affective forces evoked in that same clinical experience. As an example, the ways in which I experience the organ procurement (encounter), hearing the soft wails of the donor family, agitating in my sterile gown, confronted by the sight of a still warm corpse, cultivate how I begin to feel, think and act in the moment.

At a later time, the affective relations that formed and developed in the encounter transformed my understanding of the surgery and my future practice as a transplant surgeon. This is not to minimise or diminish the fundamental role of established surgical knowledge and practical skills which are critical to the development of skilled and proficient surgeons. What I want to emphasise, is alternatives that complement the dominant model of clinical experiencing.

The established biomedical model, asserts that thought is grounded in reasoning and confined to rationality, cognitive processes. I want to recognize the importance of this approach to practice but, also advocate a view that advances the importance of affect in the practice of surgical work. Put another way, I am proposing a notion of affective thinking in encounters of clinical practice.

I join those philosophers (Whitehead, Deleuze, Simondon, Massumi) who argue that,

reasoning and rationality are over relied on and overvalued, to account for, how all judgements are formed and all understandings of practice are reached. Nowadays, there are considerable pressures on the profession to expand and develop concepts of patient care and what it should mean and how it can be achieved. I suggest that to think creatively and effectively about surgical care in the modern climate requires traversing the confines of established bodies of knowledge and assimilated codes of practice. This may allow the surgical profession to extend and reconfigure what it means to offer 'surgical care' to those who need it. One way of achieving this goal, may be to embrace the concept of affective experiencing, and consider how it may enhance and expand what is already known.

Below I explore the works of philosophers who attempt to theorise on how affect is relevant to how we think and act.

d)   The wider use of affect

There has been a move towards affect and emotion in social sciences, in media, film and gender studies, in cognitive psychology and neurology, in ethnography as well as in philosophy. In these disciplines, it is presented almost as an antidote to the privileging of language and representation (Hall, 1997; Clough and Halley, 2007; Gregg and Seigworth, 2010; Angerer et al, 2014). Affect has come to adopt many different meanings and connotations and is used differently in areas such as neurobiology compared with philosophy.

An example is how Tompkins and Ekman (Ekman, 2007) have conceptualised affective processes as independent of intention and meaning, while Freud considered emotions (he used affect and emotion interchangeably) as embodied, intentional states governed by beliefs, cognition, desires. Affect can refer to the 'senses' and that which moves us whether this occurs in everyday routine events or in extraordinary circumstances. Kathleen Stewart, an American anthropologist and leading affect theorist describes affect as:

The varied, surging capacities to affect and to be affected that give everyday life the quality of a continual motion of relations, scenes, contingencies, and emergences. They're things that happen. They happen in impulses, sensations, expectations, daydreams, encounters, and habits of relating, in strategies and their failures, in forms of persuasion, contagion, and compulsion, in modes of attention, attachment, and agency, and in public and social worlds of all kinds that catch people up in something that feels like *some*thing. (2007: 1-2)

Cultural geographer, John Wylie states:

An affect is an intensity, a field perhaps of awe, irritation or serenity, which exceeds, enters into and ranges over the sensations and emotions of a subject who feels (. . .) Affect thus denotes the shifting mood, tenor, colour or intensity of places and situations. (2005: 236)

For Deleuze and Guattari, affect goes beyond being affected by something:

Affects are no longer feelings or affections; they go beyond the strength of those who undergo them. Sensations, percepts and affects are beings whose validity lies in themselves and exceeds any lived. They could be said to exist in the absence of man because man as he is caught in stone, on the canvas, or by words, is himself a compound of percepts and affects. The work of art is a being of sensation and nothing else: it exists in itself. (1994: 164)

Deleuze and Guattari assert that whilst affect can invoke new meaning to things, it can also be independent of the very thing that attributed meaning to it in the first place. This means that as the affects form and develop, they also become independent of the encounter which initially brought them into existence.

An example of this from Radha's narrative is her state of affections in the encounter with the female patient. She is aware in the days and months that follow, that the affects precipitated by the specific conditions of the encounter are still present, even though the encounter itself has passed. The affective states occupy a contradictory position, existing both as remnants of the encounter and at the same time exerting an independence from the original precipitating event. But, what is the significance of these persisting affective components? The affective intensities and resonances

condition beliefs, thoughts and behaviours, influencing the ways in which practice is conceived and carried out.

Massumi (2002, 2015) and others (Berelson and Murphie, 2010) have warned that, ignoring the effect of affective intensities is dangerous, because it conceals the harm that manipulation of affective lives can do. Massumi gives the example of '9/11': the collapse of the twin towers in New York, following systematic terrorist attacks. He describes and asserts how the endless playing of repetitive images of the disaster, created an 'affective cut' in political discourse, laying the groundwork for a foreign policy of pre-emptive attack.

Eric Shrouse (2005) states that:

> The importance of affect rests upon the fact that in many cases the message consciously received may be of less import to the receiver of that message than his or her non-conscious affective resonances with the source of the message. (no pg numbers)

He adds that the power of many forms of media lie, "not so much in their ideological effects, but in their ability to create affective resonances independent of content or meaning." A comprehensive understanding of the power of affect can also create the potential for ethical creativity and transformation, or equally ethical manipulation and coercion.

Massumi states that affect can be studied by examining the traces it leaves in narratives and meanings. It is actual because it occurs as an intrinsic process of alteration. It is virtual because it is independent of the things or forces that trigger it. *Affect functions to bring about form to things*.

4.8   Alfred North Whitehead's Theory Of Experience

> An act of feeling is an encounter—a contingent event, an opening to the outside—rather than an intrinsic, predetermined relationship. . . It isn't anything that is already. (Shaviro, 2012: 62).

The theories of subjectivity described later in this chapter according to the writings of Bourdieu, Foucault and Butler, hinge on how a subject is constituted as an *effect of language*. At the core of Whitehead's philosophy is the assertion that, 'apart from the experiences of subjects there is nothing, nothing, nothing, bare nothingness", (Whitehead, 1929: 167). For Whitehead, experience is all that there is. A subject, comes into being in and through experience, this is how they emerge into the world. The subject is supplemental to the experience, 'for Kant, the world emerges from the subject; for the philosophy of organism-, the subject emerges from the world—a *superject* rather than a *subject*' (ibid, 88, my emphasis). The subject is not devalued, rather reconfigured in terms of how it relates to the environment it finds itself in.

Thus, Whitehead denies the ontological privileging of the *human* subject. An example is how Radha, as the event unfolds, becomes a surgeon, through the relations she forms in the work place and her actions in the operating theatre. This is not to deny her professional qualifications or training, but it is to emphasise how her subjectivity emerges through the encounter. For Whitehead, it is through *experiencing* in the world that things come to matter. Through experiencing, a subject acquires a meaning and therefore emerges as a being in the universe.

Whitehead proposes an *affect* based account of experience: 'the basis of experience is emotional' (1933: 176). Every experience of perception is imbued with an 'affective tone', (ibid, 176). A subject first perceives through a bodily response, this is below a threshold of conscious thought: the response is not influenced or organised by cognition or reason. Therefore, *'feeling'* is a basic condition of experience.

a)   **'Prehension'**

He positions aesthetic inquiry at the heart of Philosophy as opposed to a reliance on epistemology or ontology: questions about *how we feel* or *what we feel*. 'Aesthetics is the mark of what Whitehead calls our *concern* for the world, and for entities in the world' (Shaviro, 2012: 47). The way in which a subject accounts for something else;

how one encounters something that makes a difference for them. This difference, which might arise for example in terms of language, smell or touch is referred to by Whitehead as *prehension* (1929: 33). Prehension relates to how a subject encounters an event or object or in broader terms, how something takes account of something. This might be, for example, how an entity or an event affects us through language, smell, touch and how this experience matters to the subject and in what forms or states it matters.

In the case of Radha, how she prehends the patient in the clinic room, connected to monitors and various intravenous therapies, the swollen state of her face and skin, can all be viewed as experiences of prehension. Once in the operating theatre, Radha prehends the open abdomen through, the traumatised and injured tissues and viscera, the smells and sights of the surgery and the behaviour of her colleagues in the room. These elements of the encounter, create the *thisness* of the experience, which is how she grasps the situation in ways that come to matter to her.

Every prehension comprises three elements; the subject which is encountering an entity ('doing' the prehending), the datum which is prehended in that encounter, and the 'subjective form', which refers to how the subject prehends the datum (ibid, 23). It is the concept of a 'subjective form' which underlies Whitehead's theory of experience. I discussed earlier the process of affectation (using the example of a Radha) whereby, a subject can affect something and in turn be affected by it. The subjective form is 'the immediate novelty; it is *how that* subject is feeling that objective datum' (ibid, 232). The 'novelty' arises from the fact that a perception, at any given moment in time, can neither be reproduced (re-lived or re-created), nor can one subject replicate the way in which another subject prehends something. Shaviro summarises Whitehead's approach to being in contrast to Heidegger's:

> If Being is a substantive for the classical metaphysicians and a verb for Heidegger, then for Whitehead it is adverbial. "*How* an actual entity becomes constitutes what that actual entity is. . . Its 'being' is constituted by its 'becoming'". (Shaviro, 2012: 56)

Subjects can also be inanimate; a scalpel, the operating table, the scrub cap or mask worn by theatre personnel, the asleep patient, as well as the surgeon herself. 'The whole universe . . . consists of elements disclosed in the experiences of subjects', (ibid., 166). The scalpel in the hand of the surgeon, 'perceives' the firm pressure applied by the index finger of the surgeon, preparing to incise the skin. This way the scalpel is *affected* by the surgeon through the power of the force exerted upon it, and this *being affected* is 'its experience' of the world of the operating theatre at this moment in time.

b)   Thinking as feeling

For Whitehead, *thinking* within experience, is in the first instance sensing or feeling something. Crucially this notion of the 'sentiendum', occurs before the sensation is organised or given meaning through cognitive or rational thought. This theory contravenes the earlier writings of Kant. Most subjective experience (even for human beings) is described by Whitehead as non-conscious, 'implicit, below consciousness, in our physical feelings' (ibid., 229).

Shaviro (2012) uses the term 'sentience' to describe Whitehead's concept of feelings: 'because it does not presuppose that mental processes and experiences are rational, nor even that they are necessarily conscious' (ibid., 9). Whitehead asserts that experience is defined purely by the physical reaction to an event. An example from the organ procurement is my speechlessness and inaction. I cannot accurately rationalise or reason, with complete confidence, why I behaved this way.

What I do know, is that the reaction was both immediate and automatic, and in that moment, not motivated by *conscious thought*. I have reflected on this event countless times. It is possible to derive an explanation of my actions (my first organ procurement, I was shocked and inexperienced), as is the goal of reflective practice in medical training. This activity requires the search for reason and purpose in all interactions. But, such an approach is premised on the notion that we are primarily

rational and thoughtful beings.

Whitehead however, disabuses the notion of thought as akin to cognition. Instead he (and others) propose that thought can arise experientially or from sentience or cognition: thought can be 'simple physical feelings' (Whitehead 1929: 236). I explore the non-cognitive version of thought later in the chapter through the notion 'thinking-feeling' (Massumi, 2002).

c)   The conditions of experience: 'constantly perishing'

Whitehead proposes that through the act of experiencing, a subject while being constituted is also constantly perishing. By this statement, he intends to emphasise how in any moment of time, no event can be re-lived or re-created, because the subject cannot outlive the feelings it experiences at any given moment:

> In any case, the subject constitutes itself in and through its experience; and thereupon it perishes, entering into the "objective immortality" of being a "datum" for other experiences of other subjects. (Shaviro, 2012: xii)

Whitehead derives his theory from Kant's original conception of experience as, "constructive functioning" (Whitehead 1929: 156). By this notion, Kant rejects the idea that we know something independent to our experience of it. For Kant and Whitehead, we (as individuals) come to know something by being constructively involved in whatever it is we are observing or experiencing; this interaction is a *dynamic process.* 1n this way, our subjective experience *of* the world is itself the reflexive process through which the world, including ourselves, gets constituted', (Shaviro, 2012: 48).

However, from this point onwards, Whitehead criticises Kant's approach to subjective experience, as overly concerned with cognition. Kant believes, that we rationalise and organise the chaos of experience according to categories of thought;

> The understanding, with its categories forcefully imposes a conceptual order upon an otherwise disconnected and featureless flux of individualised

impressions. In resolving the matter in this way, Kant relies exclusively upon "the higher of the human modes of functioning," and ignores the more "primitive types of experience. (Whitehead 1929: 113)

Whitehead's principle critique of Kant and philosophy in general, is an over reliance on *cognition* to explain the nature and basis of experience. For Kant, experience itself cannot be used to create categories of understanding, though, he concedes that cognition begins with experience (Kant, 1996: 43).

4.9   Brian Massumi's Theory Of Affect

Brian Massumi in an interview states that:

> [..] a power to affect and be affected governs a transition, where a body passes from one state of capacitation to a diminished or augmented state of capacitation. This comes with the corollary that the transition is felt. A distinction is asserted between two levels, one of which is feeling and the other capacitation or activation. But the distinction comes in the form of a connection. This separation-connection between feeling and activation situates the account between what we would normally think of as the self on the one hand and the body on the other, in the unrolling of an event that's a becoming of the two together. (McKim, 2008: 1-2)

Massumi describes affect as an event, or a 'dimension of every event' (ibid., 1). He writes about affect from a Spinozan perspective. The body has a capacity to affect and to be affected. In making this 'transition' from one state (to affect) to another (being affected), the body responds by changing what it can now do: there is a change in its capacity ('diminished' or 'augmented').

a)   Capacitation

Spinoza theorises that every transition is accompanied by a feeling of the change in capacity. Capacitation is used by Massumi to describe what we are now able to do following the affectation, a form of *enabling* that marks the individual. To illustrate these concepts, I return to Radha's narrative. She is affected by the female patient, as she comes to see her in the intensive care unit, and hears about the traumatic

events that she has suffered. Her mode of being is affected and through her position as the duty surgeon, she is in some ways obligated to the woman (patient) and the event.

Thus, the encounter that affects Radha, is in turn being affected by her obligatory position (as a surgeon). The difficulties arise, when the 'inescapable' existence of the woman (a human being in front of Radha) becomes reduced, unavoidably, to the *medicalisation of the patient*. In other words, the woman is totalized by her identity as a patient, for the surgical team around her. The emerging relations between surgeon and patient mix, mingle and become productive in ways that reconfigure the mode of being of the patient to a reductive set of medical parameters.

The medicalisation of the human being that occurs, is often very difficult to avoid. For example, the relationalities that arise between Radha and the body of the patient, how Radha relates to the patient as a woman, the relations she forms with the surgical 'paraphernalia' around her such as equipment, instruments, her relations to the theatre staff, may reinforce this conception of the patient.

Another example is the organ procurement. I am *relationally activated* (McKim, 2008: 5), by how *I affect* the encounter and how *I am affected by* the encounter (through my obligatory position as a surgeon and a peer of the deceased), triggering a profound understanding that transforms how I view my personal practice. I am *enabled* to see the donor as a live female with a life story (that I compose in my mind) as opposed to the deceased cadaver before me.

My understanding of the work of a transplant surgeon is reconfigured to reflect the reality of operating on a dead person. I am apprised of how this is a unique surgical procedure—the operation confers no benefit to the deceased individual herself. This is the transition I undergo and the augmented state of capacitation that I subsequently assume. However, the initial impact of the encounter was 'without cognitive thought', it was affective in its effect, my response was a 'thinking-feeling' (Massumi, 2008: 1).

b)   **'The affective hit'**

Massumi specifies that there are three corollaries to the transition to an augmented or diminished state (McKim, 2008). First, that the transition is *felt*, or that it is sensed by the individual. What is felt is the quality of the experience. Second, the feeling encountered in the experience leaves a memory or trace of its passage. It creates the past of the body. Finally, they exist in relation to each other. Massumi asserts that affect is similar to a 'microshock' (ibid., 4), an interruption to the way that life was proceeding.

Sometimes this cut, 'can pass unnoticed, striking imperceptibly, with only its effects entering conscious awareness as they unroll' (ibid., 4). This means that whilst an affect may not be detected, the effects that flow from it may be what is noticeable or picked up. Deleuze and Guattari (1994) described this characteristic of affect as a '*microperception*'. This is the idea that something can be felt without conscious awareness. It is a continuous process, whereby, events interrupt the flow of life and cause us to stop, re-position ourselves again in relation to the interruption (or as Massumi puts it, 'to re-jig around the interruption.') and brace ourselves for what is to come. Massumi calls this '*in-braces*', in the sense that it returns to its potential for more of life to come, and that potential is immanent to its own arising', (ibid., 4). This is in some way similar to Eric Shrouse's (2005) thoughts:

> The transmission of affect is about the way that bodies affect one another. When your body infolds a context and another body (real or virtual) is expressing intensity in that context, one intensity is infolded into another. By resonating with the intensity of the contexts it infolds, the body attempts to ensure that it is prepared to respond appropriately to a given circumstance. Given the ubiquity of affect, it is important to take note that the power of many forms of media lies not so much in their ideological effects, but in their ability to create affective resonances independent of content or meaning.

An *inbrace* is an 'infolding' of a context. An example of inbracing is how I am startled and motionless, at the sight of the face of the deceased donor. This response was what happened first, prior to any conscious thought or cognitive activity. This

inbracing of the context of the organ procurement is immediate. In the next few moments, I started to 'think through' what had caused this reaction. Massumi concludes that this is when:

> (. . .) You own the feeling as your own, and recognise it as a content of your life, an episode in your personal history. But in the instance of the affective hit, there is no content yet. All there is, is the affective quality, coinciding with the feeling of the interruption, with the kind of felt transition I talked about before. That affective quality is all there is to the world in that instant. It takes over life, fills the world, for an immeasurable instant of shock. Microperception is this purely affective rebeginning of the world (. . .) A body is a complex of inbracings playing out complexly and in serial fashion. The tendencies and capacities activated do not necessarily bear fruit. Some will be summoned to the verge of unfolding, only to be left behind, unactualized. But even these will have left their trace (. . .) The concept of affect is tied to the idea of modulation occurring at a constitutive level where many somethings are doing, most of them unfelt. Or again, felt only in effect. No less real for passing unfelt. (Mckim, 2008: 5)

In the immediacy or acuity of an encounter, all there is, is 'the affective hit', a collection of affects that mediate our response to an event. Massumi is emphasising that in any event there are the potentials for 'things' to happen (the Deleuzian 'virtual'), which may or may not be felt, but nevertheless are suspended within the event.

d)   'Negative prehensions'

Whitehead (1929) calls these potentials, that are not actualised, 'negative prehensions'. This is something that is 'not felt' but can still influence the experience of the impact.

There were other members of the scrub team who were *affected* differently by this event. Massumi explains that what happens in an event is distributed across all those bodies: 'each body will carry a different set of tendencies and capacities, there is no guarantee that they will act in union even if they are cued in concert', (ibid., 6). For instance, my response to the sight of the deceased's face was different to Vinny, who

proceeded with the surgery (perhaps because he had experienced this sight before and therefore it did not constitute an event for him). Massumi draws on Daniel Stern's (1985) description of 'affective attunement', to introduce his concept of *differential attunement*, which resonates with notions of 'negative prehensions'. Before looking specifically at Massumi's writings on the matter, I shall briefly introduce Daniel Stern's concepts to provide a background for the former's writings.

e) 'Affective attunement' and 'vitality affects'

Stern researched (1985; 1987) aspects of the mother-infant relationship. His notion of *affective attunement* describes how a mother matches some aspect of emotion observable in her infant child in specific 'external ways'. But, Stern emphasizes that what is reflected by the mother is the infant's inner state of emotion not the infant's physical response. Stern explains that the way the mother captures the internal state of the child is through an external behaviour that incorporates *vitality affects*.

Vitality affects are a form of implicit relational knowing, ever present in the background of all behaviours: 'they are experienced as dynamic shifts or patterned changes within ourselves', (Stern, 1985: 57). Stern is describing qualities of feeling that infer the internal state. Examples include subtle changes in body posture, or an alternation in the vocal tone, which may communicate an internal state of tension. These qualities cannot be easily captured by the 'static' vocabulary used to describe categories of emotion such as 'sadness' or 'joy'. However, these expressions or vitality affects are the subjects of affective attunement.

In summary, affective attunement can reinforce and affirm an unconscious inner state, which may reflect a true sense of self at a given moment.

f) 'Differential attunement'

To return to the organ procurement narrative, although the entire team inhabited the same affective environment (an empty operating theatre, waiting for a donor to

expire), the affects of the situation were *felt differently,* and responded to in different ways by the members of the team.

Why might this be? As discussed earlier in the section on Badiou, the organ procurement constituted an 'event' for me, a rupture with what I had come to know and assimilate about this particular procedural experience.   However, for the other members of the team, it did not appear to constitute an 'event' for them. It is possible that my response to the surgery may have affected other members of the team, such as Vinny. But, the way in which the team conducted themselves during and after the organ procurement suggested that it was not an event for them. However, I would still assert that the affects of the situation precipitated by this clinical encounter would have been felt differently by all of us.

I suggest therefore, that Massumi's notion of differential attunement, offers a way of exploring the differences. He describes differential attunement as:

> A collective in-bracing in the immediacy of an affective event, but differently in each case. "Attunement" refers to the direct capture of attention and energies by the event. *"Differential" refers to the fact that we each are taken into the event from a different angle, and move out of it following our own singular trajectories, riding the waves in our own inimitable way.*
>
> It's the idea of an event snapping us to attention together, and correlating our diversity to the affective charge that brings and that energizes the whole situation. And it's the idea that this happens at a level where direct bodily reactions and our ability to think are so directly bound up with each other that they can't be separated out yet from each other, or from the energizing of the event. (Manning et al, 2011, my emphasis)

He summarises his view as: 'we're all in on the event together, but we're in it together differently,' (ibid.) Massumi uses the term 'event' here to describe a single encounter that is experienced differently by different people.

I shall unpack Massumi's above statement, with reference to the organ procurement surgery. In the acuteness of an event there is a form of collective in-bracing. In this

case, as the team listens to sounds of movement and breathing from outside the operating theatre door, and then observes the deceased donor being quickly brought into the operating room, the organ procurement team 'readies' itself to spring into operative action.

This notion of 'readying' represents an attunement of the group's collective focus and energies, which are immersed in the *imminence-immanence* of the event (Manning et al, 2011). Massumi uses the 'imminence-immanence' dyad to describe how our physical bodies are 'resonating chambers' for the impending perturbations in the environments we live in. I find this particularly relevant for the discipline of clinical medicine which is characterized by unpredictability and the ever-present potential for trauma, catastrophe and adversity. I would assert that healthcare workers are immersed in a form of immi(a)nence, which sees them continually braced for events.

However, how these inbracings are then experienced and the responses they create vary from individual to individual. Massumi cites this outcome as in part due to the different set of tendencies, prior experiences, habits and beliefs we 'bring with us' to the encounter. In short, how we collectively inbrace the affects may be attuned, but our responses to the affective experiencing is different.

g)   Pedagogical implications of affective/differential attunement

The question then arises as to how it may be possible to capture the intensity of the in-bracing, so that there can be more solidarity and affective coordination between the group? What I am querying, is how it is possible in clinical learning environments, to affectively attune with the learner, or draw alongside the trainee. Such an affective correlation between trainee and trainer may have a few important implications for learning. First, from a trainer's perspective it may provide an improved ability to recognise and understand what the learner is experiencing. The latter may not be reflected in the established teaching practices. Second, the affective attunement may enhance pedagogic strategies aimed at supporting learners engaged in contingent

and complex practice. Third, it may also facilitate a learner's exploration of the event to identify new ways of thinking and acting that may emerge from the experience of clinical practice.

h)　　　　　Affects are autonomous

Massumi explores the above question by proceeding to investigate what can modulate the thoughts and actions that emerge from affective states. In his book *Ontopower* (2015), he explores the post 9/11 discourses in the media and politics. He concludes from his analysis that Politics, is distinguished by how it acts to capture and manipulate affective states. He theorizes that in the days and months after the attack, the Bush administration forged enduring and powerful links with the affective states that erupted, leading to a political rhetoric around notions of security.

Massumi gives the example of how repeated images of the towers being attacked and subsequently collapsing were played relentlessly on news and other media for days and months after the event. People were seen to be watching these images upright and agape. There was no tolerance for a discussion around what factors may have been implicated in the possible motivations underlying that attack. Instead, the affective states were cultivated around discussions of horror and shock.

It could be argued that the images are powerful because of the emotions they stir. However, Massumi asserts that emotions would not be stirred if the images did not first have the capacity to trigger affective states:

> Affect is autonomous to the degree to which it escapes confinement in the particular body whose vitality, or potential for interaction, it is. Formed, qualified, situated perceptions and cognitions fulfilling functions of actual connections or blockage are the capture and closure of affect. Emotion is the most intense (most contracted) expression of that *capture*—and of the fact that something has always and again escaped. (Massumi, 2002: 35)

Similar to the approach taken by Deleuze and Guattari (1994), Massumi also considers affect to be a quality that is dependent on an event for its coming into

existence but at the same time, it becomes independent of that very event. This means that it has the potential to be organized and given meaning, through various states of emotion that can capture it at a given moment and claim it as their own.

Querying how certain forms of thought and behaviour arise from a given affect may be important in two ways. First, in identifying what conditions are conducive to generating forms of learning that reflect what matters to the learner. Second, creating 'lessons' that are enduring.

h)   Intensity

Massumi in "The Autonomy of Affect", an essay from the book entitled *Parables of the Virtual* (2002) describes intensity as an arousal produced by the central nervous system, evoking an uncontrolled reaction: 'intensity is embodied in purely autonomic reactions most directly manifested in the skin—at the surface of the body, at its interface with things', (2008: 25). Massumi defines intensity as an immediate response, which may not be visible, but occurs all the same. He ascribes it as, 'pre-personal' which means that it arises before thought and has no association to our autobiography or previous experiences.

Massumi describes *intensity* as 'a non-conscious, never-to-be-conscious autonomic remainder', which relates to language through, 'interference, amplification or dampening', (Massumi, 2002: 24-25). Affect is an experience of intensity that is prior to or outside of consciousness and not subject to will. It comprises moments of unformed and unstructured potential. According to Massumi, affect allows us to 'feel' feelings: it determines the intensity of a feeling. For a baby, subject to thousands of stimuli every day, for which she has no previous experience to help make meaning of it, nor the language to organise the sensations, the body responds by infolding the sensations and acknowledging them as intensities. "In the infant, it is pure expression; in the adult it is pure potential (a measure of the body's readiness to act in a given circumstance) (Shrouse, 2005)."

i)   'Thinking-feeling'

Massumi illustrates this concept by using a three-dimensional object, a cube. When presented with an object, what we see is the surface that faces us. However, we also see the sides and the back of the object without walking around the object to see these qualities. Massumi calls this a perceiving of the 'object's voluminousness' (2008: 4). When we see an object's shape we are not seeing around to the other side, but instead, we 'imagine' these other sides due to previous experience with such objects. We are seeing, in the form of the object, the *potential* our body holds to walk around, take another look, extend a hand and touch.

Thus, seeing an object involves a whole set of active, embodied, potentials that constitute such experiences. By 'potential' Massumi is referring to the way in which our bodies can relate to objects on different levels. We see objects directly as they appear before us. But, we also imagine the form, invisible to us from the perspective we view of objects, according to previous experiences.

An example of this is when Radha iterates, "how could anyone understand what she (the patient) has gone through?" This is a reference to what Radha can conceive in her 'mind's eye' as the traumatic experience of the patient. In front of Radha is the damaged and worn out body of the patient. But, Radha can still imagine and tries to visualise what the patient would have been through when the surgical operation deteriorated into dangerous complications. Radha's perception of the patient's journey, which is invisible and yet suggested by her current physical state, allows her to relate to the patient in ways that can potentially exceed the doctor-patient relation. This may have implications for how the demand of the patient institutes itself in the medical situation. How does Radha recognise this demand? How does the surgeon become 'response-able'?

Massumi (2008) argues that we never register only what is actually present before us (i.e. the object as it stands in front of our eyes). With every sight, imperceptible

qualities are 'seen', we abstractly see potential, we perceive a 'life dynamic' or 'virtually live relation' (ibid., 6). Massumi therefore concludes that what we see are not 'objects' but, 'events'.

An object conceptualised in this manner, is dynamic, or full of all sorts of virtual movement. He calls this state of capacitation, being 'relationally activated'. To answer the above questions, Radha is 'relationally activated' as a consequence of the states of affectation triggered by the encounter, she is poised for what may come: 'we don't just look, we sense ourselves alive', (ibid., 5). It is this immediate perception of an encounter, which is felt, that Massumi refers to as 'thinking-feeling' (ibid., 6).

4.10   Gilles Deleuze's theory of immanence

Through the above story of Radha's on-call encounter and my narrative of the organ procurement surgery, aspects of practice are problematised in terms of the *immanent* nature of relations. That is, the subjects of both narratives emerge through local flows of experiencing, in which the intensities that form and develop facilitate how the individual makes sense of the clinical encounter and comes to think and act (Massumi, 2002; Atkinson, 2016,).

I have drawn from Deleuze and Guattari's writings in *What is Philosophy?* (1994), to explore notions of *transcendence* and *immanence.* Deleuze argued that much of philosophy was committed to transcendence, by which he means a concern with what informs the way we perceive the world. This lies outside of actual experience and is a constant (Colebrook, 2015: 71). Transcendence thus means, that experience is considered or judged from established concepts, categories or criteria.

In contrast, Deleuze advocated a philosophy of immanence that locates itself *within* experience. This would emphasise a knowing of *how* we experience rather than submitting experience to external established categories that constitute experience.

In surgical training, transcendent frameworks of practice refer to the established

curriculum (the Intercollegiate Surgical Curriculum), the assimilated training practices and the approved forms of assessment. These forms of knowledge and skills are essential to orienting learners in a subject, so that they are taught the necessary skills and theory to perform complicated tasks. Crucially transcendent frameworks in Medicine ensure a standard of practice, which has important implications for the safety of patients.

The key point regarding a philosophy of immanence is that it attempts to capture particular ways of knowing, as they emerge in practice, rather than exclusively predicating practice upon established criteria or frameworks of knowledge. Immanence places emphasis upon an openness to processes of becoming, their intensities, affects, ways of knowing and seeing in their specific milieus of practice.

a)   **'Actual-Virtual'**

> Thus, at every moment, my experience […] is objectively problematic, which means that it has the structure of a problem, constituted by virtual elements and divergent series, and the exact trajectory that "I" will follow is not predictable in advance. In a moment from now I will have actualised certain of those virtualities; I will have, say spoken or gestured in a certain manner. In doing so I will not have "realized a possibility" (in which the real resembles an already-conceptualised possibility) but will have "actualized a virtuality" - that is, I will have produced something new, a difference. (Smith, 2012: 253)

Daniel Smith (2012) explains Deleuze's actual-virtual dyad as a consideration that every moment is 'objectively problematic'. An example of this is the series of 'events' that are implicated in how Radha's practice is actualised. I use the Deleuzian notion of 'events' in this instance. Whereas, earlier in the organ procurement narrative, I referred to Badiou's concept of event to describe a moment of rupture in a situation from which a subject emerges: a subjectivation according to the truth of an event.

An event as defined by Gilles Deleuze is something that dissolves the subject. It undoes the subject and its parameters as a consequence of the 'new' precipitated by the event. In Radha's case, when she walked into the hospital to deal with the

emergency surgery, she could not have fully known with certainty what would unfurl: she would be chastised by the medical director, disappoint her daughter by not going to the school assembly and be 'stumped' in the operation by an inability to identify a cause for the patient's surgical problem. These events, have the potential to control how Radha's practice is actualised. This is seen in how she feels guilt about her daughter or irritation created by the medical director's scolding. These affective-emotive states could constitute a distraction or impediment to Radha fully engaging with the serious task ahead of her.

Radha shows good insight into how these aspects could detract from her very important goal to provide surgical care for the patient. She is aware of the impact of these 'emotional moments', as she calls it, without being fully cognisant of how exactly they may impact her thoughts and actions.

The actualisation of the virtual for Radha comes in two phases. First, in the moment when she stops operating, realising that she has exhausted all the possible options she knows of and has been taught. Second, in the days after the surgery when she occupies a 'watchful waiting', carefully monitoring the patient to see how the woman progresses. 'Does the patient deteriorate? does she improve?'

Deleuze (and Smith, 2012) distinguish the virtual from the 'possible', because in the former new knowledge is created. To apply this to Radha, her thoughts and actions contribute to producing an understanding or appreciation of the event which had not pre-existed her experience with the encounter. Radha told me that she had been taught and had also heard stories about the 'importance of stopping' in surgery when all interventions had failed. However, she had not truly understood that concept until she found herself in that particular situation: 'virtual difference has the power to become in unforeseen ways, always more than this actual world and not limited by its already present flow', (Colebrook, 2008: 96).

In this situation, the virtual is partly derived from the relations that Radha forms with

what she has been taught and heard in the past, and how she then decides to act in the present. Atkinson (2016: 7) describes these forms of knowing as a 'necessary transcendence'. It is implicated in how the content of her surgical training in emergency situations *comes to matter to her* in this particular event of practice:

> Here the actualisation of learning takes the form, or the morphology of a necessary transcendence, a transcendence emerging not from external epistemological frameworks but from the *intrinsic relations* of how something matters for a learner in a particular learning encounter. (ibid., 7, original emphasis).

b) **'Necessary transcendence'**

Surgical training has played a critical role in equipping Radha with the necessary skills of judgement and technical proficiency to bring order to the chaotic nature of emergency practice. However, what Radha has demonstrated in her thoughts and actions is the necessity for a particular pedagogic strategy that creates connections between transcendent knowledge and the immanence of real events of practice. Assimilated practices that overwhelm or totalise a surgeon's actions through a specific understanding of emergency surgery, risk ignoring the 'local curations' (Atkinson, 2012) of learning that occur in unanticipated events. What is demanded in such situations are pedagogic schemes that work alongside a learner's attempts to resolve or answer a particular problem.

4.11   Gilbert Simondon's Theory Of 'Technical Mentality'

Gilbert Simondon (1924-1989) was a French philosopher from St. Etienne who wrote extensively on information, communication and technology. His work has only recently been translated into English text, reaching a far wider audience. Deleuze drew on Simondon's writings when developing his own theories.

I have drawn upon Simondon's writing on 'technical mentality', to explore how a surgeon emerges from the technical and practical complexities of clinical practice. I have done this by applying his analysis on the development of technological systems

to the formation of training systems in clinical medicine. Simondon himself drew comparisons between the emergence of technological systems and the creation of systems of reasoning and logic ('cognitive schema') in society (Massumi, 2006: 43-45).

In the following account, I look at four key principles of his theories; hylomorphism, individuation, metastability and affect. I conclude with a brief explanation of what a Simondonian ethics would involve and how the notion of a 'technician' may be applicable to surgeons in training.

a)   The challenge of imposing cultural values on new technologies

Heidegger, viewed technological development as a distortion of the ways of ordering the world as well as our cognitive perception of reality (Heidegger, 1977).   He asserted that technology was alienating man's sense of authentic being. Simondon however, considered this perceived crisis a consequence of society's efforts to impose existing cultural values to technological systems (Coombes, 2012; Sauvagnargues, 2012; Mills, 2016; Bardin, 2015). But, he concluded that this application of a system of fixed cultural values onto novel technologies was problematical.

Below, I present three reasons consistent with Simondon's concerns, elucidating why he felt this approach was difficult.   I have used the example of in vitro fertilisation (IVF), as a modern technology to illustrate Simondon's ideas.

First, the application of an existing system of cultural values onto a novel technical object, is based on a *hylomorphic principle:* form is imposed on matter (see below for further explication). An example is the application of society's moral beliefs onto new innovations in fertility and conception. The introduction of in IVF in the 1970s, to enable infertile couples to conceive, was considered highly controversial at the time. This was predominantly because it challenged the religious, cultural and moral beliefs of that era, which had remained static and constant.   One such belief was the view

that IVF techniques contravened the sanctity of life—only God could create and destroy.

Second, application of a hylomorphic framework can obscure the *individuation of* potentialities that are inherent in the system itself. These potentialities contribute to the *intrinsic form* of the technical object. In the case of IVF, rigid application of cultural values to fertility procedures might conceal the other ways in which the technique can be expanded. For instance, IVF technology has enabled screening of inherited genetic disorders such as cystic fibrosis and Huntingdon's disease. This has led to couples affected with the defective gene, an opportunity to conceive a child who will not suffer from the disease. Thus, the development of IVF technologies represents an actualisation of the potentialities that were inherent in the original procedure.

Third, the *inherent form* of the object, (which Simondon refers to as its '*technicity*'), is constituted by modes of being or functioning ('technical and physical protocols') that are already in existence. As such, these modes of functioning will always resist having fixed values imposed upon them. This is primarily because, the inherent modes of being are creative of their own norms and values (Mills, 2016: 44). As such, these individuating norms exhibit *metastability* and are therefore transformative in and of themselves.

IVF technology is constituted by technical protocols ('modes of functioning'), sets of procedural steps ('the inherent form'). These protocols, in and of themselves will create and develop the technology in terms of: what is possible, how this is achieved and the scope for further extension of the technique into fields that are yet to be conceived of. These inherent 'capacities' of the technique, will individuate in different ways to create norms in practice, which may resist external attempts to frame the practice with an 'outside' system of values. Crucially, the inherent norms and values of the technology can transform the existing societal and cultural values. Therefore, a recurring causality can be seen between how we think about technology and the ways in which technology alters the way we think.

b)   Form is immanent to matter

Hylomorphism is the central doctrine of Aristotle's philosophy of nature: *being* is composed through an encounter between *matter* and the transformative actions of *form*. However, Simondon rejects the form-matter separation. Instead, he proposes that processes of individuation are immanent. That is, form and matter are indissoluble.

He exemplifies his ideas using the example of a brick. In Aristotelian terms, the clay represents 'matter' whilst the three dimensional 'parallelepiped' brick, is the form imposed on the clay. But, Simondon identifies how this paradigmatic schema fails to recognise the processes or mediatory steps that lie between how clay ('matter') is *individuated* into a brick ('form').

> The technical operation of the *capture of form* can thus be used as a paradigm provided that one asks this operation to indicate the true relations which it institutes. However, these relations are not established between the raw material and the pure form, but between the prepared matter and materialised forms: the operation of the capture of form does not suppose only raw material and form, but also energy; the materialised form is a form that can act as a limit, as a topological border of a system. The prepared matter is that which can transport the potential energy which charges it in the technical manipulation. (Adkins, 2007, my emphasis)

Simondon draws our attention to what is implicated in the *capture of form*. This includes the extraction of clay from marshy soil (*raw material*), dried, ground, kneaded (Chabot, 2003; p. 76). It also involves processes of energy expenditure, which transform the clay into a brick; the technical manipulation of clay through the wood species of the brick mould, the skill of the workman, the temperature of the brick oven. These processes demonstrate the inherent *form* of clay, prior to the substance being manipulated and moulded into a brick.

Clinical relevance

What Simondon emphasises is the notion, that *form is immanent to matter*. This is

similar to the theories of Deleuze (1994) as well as Piaget (1978). In Radha's narrative, as the interaction between herself and the patient unfolds and evolves, there is already a form inherent to the encounter. The encounter begins to take 'shape'. The potentialities that emerge and develop, reflect the *'taking form' activity* that is intrinsic to the encounter.

However, a hylomorphic framework is consistent with a *'form receiving passivity'*, (Massumi, 2006: 43) which signifies an external application of structure. An example is the didactic instruction on doctor-patient communication provided by *Good Medical Practice* (2013). This document details how Radha should interact and speak with the patient, through predefined notions of honesty, transparency and ethics. While it is advisable in complex situations to provide detailed guidance for a doctor to follow, this approach risks being ineffective if applied blindly to all situations. This is because it neglects to recognise how Radha has already encountered the situation, and how this prehension has informed the ways in which she decides to conduct herself in relation to the patient as well as to herself as a surgeon and fellow human being.

Simondon refers to Whitehead's notion of prehension as the taking-effect of an 'operational solidarity' (ibid., 41). This is the way in which Radha encounters the disparate elements of the encounter (her guilt about her daughter, her duty to the patient, the expectations that the hospital have of her as a surgeon) and the relations that *form and develop with and between these components of matter*. This creates a 'new plane of operational solidarity' (ibid.), a new order of the relations of matter in the encounter start to emerge. This is the mode of existence that Radha assumes.

c)   Individuation

Simondon proposed an *ontogenetic* account of individuation where the emphasis is placed on the processes of becoming, rather than on the state of being (the formed individual). Individuation describes how something emerges and becomes constituted. These theories echo the work of Deleuze, (who acknowledges the

influence of Simondon's thoughts) (Deleuze, 1994; Deleuze and Guattari, 1977, 1994) and Alfred North Whitehead (1929) (Shaviro, 2012).

Simondon describes knowledge (epistemology) as grounded in a theory of *individuation.* This has implications for my hypothesis that the way a surgeon comes to know something (knowledge) is immanent to his experience of a clinical encounter. The focus is not on what is known, but rather on the processes that constitute how knowledge is formed and developed: the individuation of knowledge.

Therefore, individuation emphasises the conditions that determine what knowledge can be (Mills, 2016: 95). As such it draws attention to the relations, operations and interdependencies involved in the processes of becoming (Coombes, 2012; Bardin, 2015; Mills, 2016). Simondon's project of 'allagmatics' (1989) is a reference to how the different modes of individuation relate to each other:

> Individuated being is not substance but rather the putting into question of being, being through a problematic, divided, reunited, carried in this problematic, which sets itself up through it and causes it to become. Becoming is not the becoming of individuated being but the becoming of the *individuation of being* (Scott, 2014: 6).

The individual ('individuated being') is not the objective nor the purpose of individuation. Instead, 'a living being exists as only always a becoming *between* individuations, not as a becoming after individuation' (Scott, 2014: 33). Individuated being is only ever partially complete, in a constant state of (re)forming between different modes of individuation.

Therefore, it is not possible to start with a fully constituted individual and 'work back' to the 'pre individual', a state of potential. To do so would be to deny the principle of individuation and instead, subscribe to the practice of hylomorphism (Shaviro, 2012: 53) (Simondon, 2005a: 45-60). An example is how Radha 'exists between individuations'. In the encounter with the female patient, Radha describes her thoughts, emotions and actions as a mother, an employee of the NHS hospital, as a

colleague, as an oncall surgeon, as a woman and as a fellow human being. These are all the different modes of individuation that form and develop in the encounter and which reflect the various relations that she establishes in that same encounter. Appreciating the processes of individuation in any given moment, draws attention to the variable factors that influence our thoughts and actions in an encounter of practice.

d)   Metastability

Metastability is the condition that makes individuation possible. Simondon borrows the term from thermodynamics. It infers a state that is in-between stability and instability, and charged with potential energy for becoming.

Simondon uses the paradigm of crystallisation to help illustrate his ideas (Chabot, 2003: 79-84; Mills, 2015: 37-39). The crystal emerges from two realities, the already structured crystal and the amorphous crystalline solution or 'milieu'. The milieu is Simondon's description of the broader environment in which individuation occurs. The crystalline milieu is rich in *potential energies* or *virtualities.* These potentialities exist within a given milieu but have yet to emerge and *take form*.

A speck of dust disrupting the crystalline solution will transform the metastable nature of the milieu. Through *transductive processes* the potential energies/virtualities are restructured along a particular path, resulting in the emergence of a crystal. Transduction underlines how individuation comes about. Simondon states that:

> […] an operation—physical, biological, mental, social—by which an activity propagates step-by-step within a given domain, and founds this propagation on a structuration of the domain that is realised from place to place. (Mills, 2015: 38).

Importantly, what is individuated is not just the crystal ('the individual') but the crystal *in relation to its milieu;* an individual in relation to their milieu or 'pool of becoming'.

A complete crystal can continue to expand if placed in another solution. We can draw

parallels for surgeons in training. Each trainee has the capacity to continually individuate and therefore she can have no fixed identity. Importantly, the potential to individuate resides in both the trainee (pre-individual) as well as the relations the trainee forms within the encounter (milieu). For example, Radha herself individuates through the clinical encounter with the female patient, and her milieu, (which comprises the environment she works in and the relations she forms within it), also individuates as the event unfolds.

> The individual, then, is always in relation to its milieu, which co-individuates along with it. As such the individual can never be considered as complete but always partial and in the process of individuation, the milieu always acting as a mediation between individual and world. (Mills, 2015: 40).

The milieu represents the dynamic process of 'becoming'. As a metastable structure, it is constituted by a complex of virtualities that await structuration. These virtualities can never be completely exhausted ('used up') nor can they be entirely dissipated: Radha's capacities in this situation are limitless.

This notion resonates with earlier concepts of immanence in clinical encounters (Deleuze, Massumi). An individual is never completely in a state of being or one of becoming. Instead, a singularity, which refers to something(s) in a clinical encounter that disrupts our way of being (for Radha, it was not being able to find the bleeding point in the operation) acts to structure/individuate the potentials within a metastable system. Through this process the encounter attains significance to the individual. The learning encounter starts to matter.

What Simondon's theories illuminate is the nature of the struggle that confronts surgeons in routine practice. This is the tension between the desires and values imposed upon the profession by the regulatory system (which in turn is set by society, policy etc.), and the individual capacities that form and develop, consequent to the potentialities that arise from actual encounters of practice. However, what is often neglected by regulatory schemes is a recognition of the recurring causality between how surgeons view systems of regulation and how systems of regulation can alter the

way surgeons think and act.

e)   Affect

Simondon (1989) describes affect as an example of a transductive process of individuation, which in simplistic terms, can mediate form ('taking form activity'):

> The affections are an orientation of a portion of the living being in relation to itself; they realise a polarisation of a determined moment of life in relation to other moments; they coincide to being with itself across time, but not with the totality of itself and its states; an affective state is that which possesses a unity of integration to life, it is a temporal unity which is part of a whole, according to what one might call a gradient of becoming. (Mills, 2016: 74).

In the above statement, Simondon defines affect as the manner in which an organism (individual) orients itself when confronted by a disparity or tension. The way in which the individual orients itself, refers to how the individual relates to itself as well as the environment it finds itself in. To explain these nuances, I return to the organ procurement surgery narrative. My affective state manifests through my internal and physical response to being confronted by the 'sights and sounds of a newly dead corpse' (which constitutes the 'disparity'), as well as how I relate to my colleagues, the donor patient, the operating theatre. This resonates with Spinoza's initial statement on affectation being a process of 'affecting' and in turn 'being affected' by something.

For Simondon, the problematic of affect is the requirement to act or 'orient' oneself in ways that provide a resolution to the disparity. An example of this is how Radha admits to 'talking through' her feelings of guilt as a way of alleviating the emotional burden she feels, which may otherwise detract from her focusing on the important operative task. This is her approach to resolving the tensions she feels within herself and how she prepares or orients herself to meet the demands of the emergency surgery.

f)   A clinical application of individuation and affect

> Individuation emerges like the act of solving a problem, or - what amounts to

the same thing - like the actualisation of a potential and the establishing of communication between disparates. The act of individuation consists . . . in integrating the elements of the disparateness into a state of coupling which ensures its internal resonance. The individual thus finds itself attached to a pre-individual half which is not the impersonal within it so much as the reservoir of its singularities. In all these respects, we believe that individuation is essentially intensive, and that the pre-individual field is a virtual-ideal field, made up of differential relations . . . Individuation is the act by which intensity determines differential relations to become actualised, along the lines of differentiation and within the qualities and extensities it creates. (Deleuze, 1994: 246)

To explore these particular notions, individuation as an act of 'problem solving' and affect as a resolution of disparity, I apply the concepts to a clinical example of routine practice. I have finished a morning outpatient clinic, and as I leave to go onto my next clinical engagement the receptionist tells me that an elderly patient, Mrs. Grey, who is late for her clinic appointment has finally arrived, brought in by routine ambulance (she is frail and uses hospital transport, which got delayed due to traffic). In this situation, 'I' (Simondon's 'organism') am confronted by the encounter of a late yet elderly patient (the singularity that triggers the affective process of transduction). My responses (individuation of a metastable state of potentials) are initially mediated by affectations that signify how I think, feel and eventually act in this situation.

Here are a sample of the factors implicated in the individuation of affective relations in this particular situation: I am torn and irritated because clinic has overrun, I'm late for an important radiology meeting, I have not eaten or drunk anything in hours and was expecting to grab a sandwich now, I have no clinic room to see the patient as the rooms are being refreshed for the afternoon clinics, the consultation won't be quick because the elderly patient is physically immobile, partially sighted and deaf.

The process of individuation in this example, is similar to Deleuzian concepts of the actual-virtual. Simondon, similarly to Deleuze, does not propose a universal framework that can be applied to the behaviour of *pre-individual being*. How a

metastable system operates in any encounter cannot be predicted, because it is dependent on 'singularities', each event can trigger a system of potentials in pre-individual being that will actualise in ways that cannot be known in advance.

g)   Ethics

While Simondon never described a clear ethics, his theories of normative transduction and development suggest an ethics of practice that emphasises the act.

> Ethics is transformed once the perspective for choosing "right" or "wrong" actions is made on the basis of an appeal to becoming and the presumption that all being is only ever incomplete and indeterminate (to whatever degree). In doing so, we replace the Kantian presumption on which moral choices are made: the total and complete individual being, with its corollary, conscious and coherent subjectivity. What this means is that the normative is only *an effect of affective practice* and, therefore, expressive of the particular problem of incompatibility - *of existence and necessity*, between the individual and the world and between other individuals - that elicits the decision to act, to be, or not to be. *An ontogenetic ethics is one that raises the question of how an individual lives its problematic being*. (Scott, 2012: 182, my emphasis)

As is true for Deleuze, a Simondonian ethics goes beyond judgements of right or wrong. Simondon describes ethics as an affective response to the disparity that confronts an individual, and which proceeds to create the norms. In other words, the problems encountered at a given time determine whether we choose to resolve the tensions that confront us or not. This is the nature of an ethics of individuation.

As such, a Simondonian ethics, which is founded on notions of ontogenesis (how something becomes) are concerned with how an individual chooses to think or act when confronted by particular challenges to its way of life. This approach is very close to an ethics of immanence which is grounded in the actions that emerge from the here and now of practice.

h)   The technician

Simondon states that:

> Man understands machines; he has a function to play between the machines, so that there can be a genuine technical ensemble. It is man who discovers meanings (les significations): meaning is the sense that an event takes in relation to forms that already exist; meaning is what makes an event have information value. (Mills, 2016: 135)

To be trained as a surgeon, is to be inducted into a specific code of behaviour and norms. However, to emerge as a professional who is 'response—able' to variations in clinical situations, which may not be completely covered in the official texts, requires an ability to exceed the established code of conduct. This relates to Simondon's notion of the technician as 'a man who discovers meanings'. A technician has the capacity to link what is known about a practice with an ability to advance this knowledge when confronted by 'singularities'. This is what distinguishes a technician from a worker.

In training, through our personal experiences of practice as well as what we learn and hear about surgery, a surgeon begins to build systems of potentials. These systems represent ways of thinking, acting and being that are novel and may not have been considered yet by the individual. Over time these systems of potential become structured. However, the structures themselves represent potentialities for further development in response to singularities that arise from the environment.

An example is how a kidney transplant operation, may still have the potential to surprise a transplant surgeon who has over 30-years of experience, performing this procedure. In that time, she may have undertaken hundreds of kidney operations which provided different sets of potentialities. These potentialities have been organised over the years into methods of procedural knowledge that may now become standard practice for the surgeon. However, a singularity, in the form of an outcome or component of a kidney operation has the power to trigger new

potentialities to arise from the existing systems.

For surgeons to become *true technicians* (in the Simondonian sense) rather than labourers within a health service, individuals must cultivate an ability to interpret the established knowledges and practices in ways that can be enhanced when faced with the actuality of real events of practice.

4.12   Conclusion

In this first part of the theoretical chapter, I have proposed that a pedagogy of the surgical event is a necessity, if the aim is to understand and prioritise in the learning agenda *how something matters for a trainee*.

This approach requires a softening of the transcendent frameworks that presently govern teaching practices. It also raises issues of ethics within a pedagogic scenario. The way in which a teacher understands something may be punctured by the trainee's response. An example of this is taken from the organ procurement surgery narrative when Vinny, the mentor surgeon, notices the trainee's response. It appears he had neither anticipated nor previously experienced such a reaction from a trainee. This learning encounter could have afforded him an opportunity to rethink how he prepared and taught trainees at an organ procurement surgery. In this context, an ethics of surgical pedagogy is concerned with conduct that is relative to a particular learning encounter, how it matters to the trainee and how the trainer engages with the trainee.

I have presented theories from a select group of philosophers to describe how I intend to explore actual encounters of clinical experience, to illuminate the pedagogical opportunities embedded within. I end with a quote from Judith Butler (2005), taken from her book *Giving an Account of Oneself*. It seems to sum up the ethical position of a pedagogy of encounter:

> Perhaps most importantly, we must recognize that ethics requires us to risk ourselves precisely at moments of unknowingness, when what forms us diverges from what lies before us, when our willingness to become undone in

relation to others constitutes our chance of becoming human. To become undone by another is a primary necessity, an anguish to be sure, but also a chance – to be addressed, claimed, bound to what is not me, but also to be moved, to be prompted to act, to address myself elsewhere, and so to vacate the self-sufficient "I" as a kind of possession. If we speak and try to give an account from this place, we will not be irresponsible, or, if we are, we will surely be forgiven. (ibid., 136).

A Theoretical Framework: Part Two

4.13   Methodological Approach To Policy Analysis

How surgeons are constructed through policy documents and how this in turn impacts on the direction in which surgical education is developed and expanded is the focus of the first data analysis chapter. I have used specific sociological theories to unpack the content and meaning of the documents. This is a novel approach to policy analysis in *postgraduate surgical education research.*

Previously, the content and impact of policy texts has been understood through an evidence-based research paradigm; the effectiveness of a curriculum (policy) and whether it is 'fit for purpose' is assessed through *measurements* of performance such as examinations, procedural competencies, colleague feedback, patient satisfaction surveys (GMC, 2013, 2014, 2016).

My research is concerned with exploring the ontological aspects of a surgeon's journey through training, and as such I query *how* a trainee emerges through surgical practice rather than what abilities or skills (elements of transcendent knowledge) they acquire at each stage of training (what they can do).

To explore the ontological and ethical dimensions of training I begin by asking questions about how policy texts position trainees, educators and patients within Medicine and Healthcare. This investigation of text is complemented by; (i) interviews with individuals involved in educational policy making and delivery and (ii) ethnographic research utilising examples of actual surgical events from my training journal.

The use of a range of data allows interpretation of each source: each source is both singularly and collectively interpreted (Gerard and Farrell, 2013). These interrelated source materials generate multiple research entry points with which to analyse and

interpret the subjects and outcomes (actual and proposed) of policy grounded in a socio-historic context. As Gerth and Mills (1958) state, 'social scientific theory is what allow us to connect to "the fate of our times": it situates our understanding of specific, local issues within a broader social and historical context' (Brosnan, 2013: 6).

This approach provides a sociological lens for an interpretation of the documents in which teaching and learning and their socio-historical context are conceived.   The way in which material is presented, evaluated, judged and understood is largely shaped by the society of which we are all a part:

> [..] medical education research and policies that are divorced from social science theory are at risk of overlooking the origins of the problems they are meant to address. (Brosnan, 2013: 6).

In studying these documents, I treat them as 'discursive practices', that is to say practices that construct those entities about which they speak, as opposed to revealing essential truths. To facilitate this approach, I have drawn on Foucault's theories of discourse and power-knowledge, Butler's concept of subjectivities and performativity theory and Bourdieuian field analysis.

4.14   Michel Foucault: The Power Of Discourse

> Discourses are. . .about what can be said, and thought, but also about who can speak, when, where and with what authority. Discourses embody meaning and social relationships, they constitute both subjectivity and power relations. . .Thus discourses construct certain possibilities for thought. (Ball 1990, p.17).

Foucault (1972) theorises that individuals *come into being* through discourses; a structure of language and practice around certain social concepts and ideologies. Foucault's theory of discourse explores the structures and rules that underpin how a discourse is constituted; that is the *conditions of possibility* of what can be said or thought or imagined of something in a particular epoch. In being concerned with 'what can be said' and 'who can speak' discourse, in this Foucauldian sense, is therefore indissoluble from power. It is not concerned with revealing the truth of idea or thoughts

of a text, as for example in more traditional hermeneutics.

Ball (2015) argues that much of policy analysis has failed because it focuses on 'text work [rather] than discourse work; that is, a lot more focus on what is written and said, rather than *how* those statements are formed and made possible' (p. 311). Therefore, applying a Foucauldian analysis of policy text is to investigate the discourses embedded in the document to identify the 'practices that systematically form the objects of which they speak', and the embedded power relations (Foucault, 1972: 49). For example, in the context of education, surgery is framed in the following ways;

- 'Surgical training is patient safety for the next 30 years–'.
- Structured surgical training prepares surgeons for independent practice within individual specialties.
- 'Grit is a fundamental requirement to complete [surgical] training·'

The above examples of discourse demonstrate how surgeons and trainees are constructed within specific discursive and practice parameters that define ability and performance.

In the first example, the morphing of surgical work with patient safety is a specific construction of Surgery. On the one hand, the link between surgery and safety may seem obvious and natural. But, I suggest that the statement functions to construct a particular link, that was previously not emphasized in the same way. Patient safety is the core principal around which all clinical practices and training must orient. This has occurred due to a series of reviews of hospital practice, which have demonstrated poor standards in care and unacceptable working practices (GMC, 2013, 2015, 2016; Health Education England, 2016).

In the second example, a link is being established between consultant practice, the end goal of training, and the need for organised programmes of education, to achieve this objective. It implies that experience or learning that does not occur within this recognised framework of teaching, may not make a valuable or useful contribution to

developing professional practice.

In the final example, the identity of a surgeon is connected to specific values, in this case 'grit'. The emphasis of this particular quality over others, suggests that surgical training is being conceived around the possession of certain inherent or acquired characteristics. Thus, the lack thereof is being associated with an inability to complete training.

Deconstructing these statements allows one to disclose the conditions that regulate how a trainee becomes visible through a particular context. Butler (2005) describes how discourses construct a 'regime of truth' that 'offers the terms that make self-recognition possible' (p. 22). Discourse creates the conditions and frameworks that enable one to think about how 'good' we are or how 'effective' we are in what we do.

a)   Power-Knowledge and Subjectivity

Foucault emphasised the institutional and political production of knowledge. Though he did not write specifically about medical education, his writings on hospitals indicate that he would have viewed medical (surgical) training as continuous with the practice of clinical medicine (Foucault 1975). It is possible to apply his theories to the way in which medical (surgical) education has been conceived and developed.

First, he considers that power operates upon bodies (individuals) through the application of knowledge to those bodies. In essence, this describes his observation that, knowledge which is desired or expected within certain practices is imbued with power. For example, the 'official' knowledges of Surgery as authorised by the Royal Colleges of England (RCS) is contained in the ISC (intercollegiate surgical curriculum). Trainees are 'legitimised' by the College when they demonstrate proficiency with the ISC as recognised through passing College exams; trainees become 'visible' as potential surgeons.

Through this discourse of knowledge, the trainee acquires a specific pedagogic

identity: the trainee is constructed as a future surgical being through their relationship with the official and accepted bodies of knowledge. These relations of power activate the individual as a *subject* of certain cultural practices; in this example, it is through curricular assessment. This discourse of knowledge values certain aspects of the trainee's practice over others; the assessment of a trainee's knowledge refers to fluency of their theoretical knowledge, it does not critique the ability of the trainee nor their innate skill.

This means that a trainee is recognised within boundaries that are determined by the official framework of surgery; this is the discourse of knowledge that constructs, regulates and confirms the surgical student as a specific pedagogic subject. It appears that discourse here operates on a couple of levels. In the first instance, a body of surgical knowledge through which the trainee surgeon becomes initiated. Second, the initial formation of this knowledge through which bodies, their anatomies, physiologies, pathologies etc. are conceived create a specific medical discourse in which surgeons participate.

However, for Foucault the subject is not a passive victim of power; power is not exerted on us by an external force or system. Power insinuates and permeates all aspects of an individual's existence; their relationships, expectations, self-judgments and aspirations. We constitute ourselves as subjects by participating in mechanisms of power.

Butler expands the conditions under which subjection occurs; mastery and submission (see below). Usher and Edwards (1994) point to the concealed and intrinsic aspects of power-knowledge discourses:

> Power-knowledge formations operate through the practices which inscribe the person as a particular subject prior to entering an educational institution and those practices they are engaged in once within it; in becoming a 'subject' we learn to be a 'subject' of a particular sort. It is our assumptions about the nature of the 'subject' which then inform our practices as teachers and learners, yet the effect of power which gives rise to the particular positioning of

subjects is effectively veiled. (p. 96.)

In applying this understanding of power-knowledge to the surgical education example above, one can see that the knowledge-assessment discourse constructs specific subject identities. Walkerdine (1990) describes how identity is formed through this discursive power:

> Modern apparatuses of social regulation, along with other social and cultural practices, produce knowledges which claim to 'identify' individuals. These knowledges create the possibility of multiple practices, multiple positions. To be a 'clever child' or a 'good mother' for example, makes sense only in terms given by pedagogic, welfare, medical, legal and other discourses and practices. *These observe, sanction and correct how we act; they attempt to define who and what we are* (p. 199, my emphasis).

Stuart Hall (1996) concludes:

> Precisely because identities are structured within, not outside, discourse, we need to understand them as produced within specific historical and institutional sites within specific discursive formations and practices, by specific enunciative strategies. (p. 4)

At different times in the history of surgery, surgical operations and care have been conceived through various terms which were consistent with the dominant existing bodies of knowledge. In chapter 2, I describe how between the 1980s and the beginning of the 21st century the model of healthcare transitioned from a paternalistic doctor-patient relation to one where the both subjects now work 'equally' and cooperatively in a therapeutic relationship.   Thus, the identities of both doctor and patient have evolved through discourses that have altered the balance of power in the relationship.

b)   Normalisation

How is this pedagogic identity facilitated? This is partly through *normalisation* which functions by classifying certain behaviours, practices, skills and theoretical knowledge as 'normal'. The schema of normalisation refers to criteria that specifically structure knowledge and practice along trajectories that are then viewed as normal.

An example is how the ST3 trainees in orthopaedic surgery (exposed to three years of orthopaedic training) must at this specific stage in their training demonstrate fluent knowledge of the lower limb anatomy. Any deviation from this norm (standard) of ST3 training is viewed as either inadequate or insufficient knowledge. Application of this official knowledge (knowledge-assessment discourse) functions to *normalise* bodies (trainees) so that they are classified according to schemes of normalisation (standards of knowledge).

The ISC curriculum is organised according to such normalising criteria and the system of assessment functions to establish whether these norms are met by each trainee (see chapter 5 for detailed analysis of normalising criteria). Establishing expectations and guidelines for theoretical knowledge and practical skills is helpful in orienting a trainee's learning and providing guidance.

My concern lies with the conceptual framework established by normalising discourses. Behaviours, knowledge, skill and attitudes that are unrecognised by the 'official' normalising schema are not valued or visible within this framework. Whilst, norms are important for stability in functioning (societies could not exist without norms) the difficulty lies in what they might obscure. This may include ways of learning that are useful and effective but lie outside of the norm.

4.15   Judith Butler: Subjection & Performativity Theory

If Foucault's earlier work examines how we become subjects over time, particularly within institutional contexts, then Butler expands this to explore how *subjection* works on and in the psychic life of a subject. To answer this, she concerns herself with the conditions that underlie how subjects come into being.

At the heart of her theoretical framework is the concept of performativity: a theory of subjectivity which proposes that identity is constituted through action, discourses or the words we speak and behave. An example is how working in surgical departments, operating on patients, participating in discussions around surgical care,

trainees through these practices, *become* surgeons in training. Their identity as surgical trainees, does not pre-exist these activities, it emerges through performing them.

Butler proposes that in assuming this identity, subjection is accomplished through mastery as well as submission which though paradoxically placed, occur simultaneously, at the same moment in time:

> The more a practice is mastered, the more fully subjection is achieved. Submission and mastery take place simultaneously, and it is this paradoxical simultaneity that constitutes the ambivalence of subjection. Where one might expect submission to consist in a yielding to an externally imposed dominant order, and to be marked by a loss of control and mastery, it is paradoxically marked by mastery itself... the lived simultaneity of submission as mastery, and mastery as submission, is the condition of possibility for the subject itself. (Butler, 1995: 45–46)

A surgeon's approach to medical revalidation ˗exemplifies how the subject (surgeon) must demonstrate mastery in the different areas of practice as outlined by *Good Medical Practice* (2013), while becoming subjected to the requirements of these practices at the same time. *Good Medical Practice* functions as a governing mechanism in this interpretation, where it constructs the 'double' subject; at one and the same time, a surgeon must be master of certain practices and submit to those same practices (Honan, 2002: 1).

Power is external to the subject but also implicated in the formation of the subject: 'the subject might resist and agonise over those very powers that dominate and subject it, and at the same time, it also depends on them for its existence' (Davies, 2006: 426). Butler, extends these ideas by suggesting that power is the locus of both constraint and alteration: to change the norms (rules) that constitute (constrains) a subject, one must inhabit these norms first:

> We are used to thinking of power as what presses on the subject from outside, as what subordinates, sets underneath, and relegates to a lower order. This is surely a fair description of part of what power does. But if, following

Foucault, we understand power as forming the subject as well, as providing the very condition of its existence and the trajectory of desire, then power is not simply what we oppose but also, in a strong sense, what we depend on for our existence and what we harbour and preserve in the beings that we are. (1997: 1-2).

Butler calls this *performative resignification.* Her theory of agency is located in the concept of performative resignification. Once a subject has complied with the norms, is it possible to then *escape* them (norms) by mobilising the rules differently? Butler, rejects the traditional separation between the doer and the act. She views the performance as primary in which the actor and act are fused, (Butler, 1990: x).

In *Gender Trouble* (1990), Butler uses Nietzsche to explain her thought: 'there is no 'being' behind doing, effecting, becoming; "the doer" is merely a fiction added to the deed—the deed is everything' (p. 45). Instead, she theorises that the actions of a subject are determined by their desire for recognition and the conferral of existence. In other words, we conform to particular ways of acting in order to receive recognition. But, such normalizing processes do not prevent other ways of acting emerging at times.

Though it is difficult to overcome the power of the norm particularly in contexts of training. However, by interrogating the norms that inform action, we may be able to pass beyond them to conceive action in other more expansive terms. This is what Butler alludes to in her term *performative resignification.* However, such resignification does not emerge 'out of the blue' but from events of practice that in some way force us to question normative procedures.

An example of performative resignification is taken from the organ procurement narrative. At the organ procurement surgery, I had expected to perform a 'standard' operation, similar to what I had read about and discussed with senior colleagues. Getting scrubbed (hand washing, wearing sterile gowns), preparing the surgical field, scalpel in hand, my expectation was that I would operate as I had done countless times before. The operating room, surgical attire, theatre staff and equipment were

the same (constant) and typical of a surgical operating list, as was my proposed technique of cutting and dissection associated with the act of performing surgery. All these elements were consistent with the performative norms of surgery that I had become accustomed to and been schooled in. However, confronted by the reality of the surgery, these normative processes failed to capture my experience.

Any attempts made by a trainee to question the protocols employed in the organ procurement surgery, or to advocate an alternative conceptualisation of training, would constitute resignification of the norm. However, in training situations, due to the power differential, it is very difficult to enact performative resignification.

Crucially, such instabilities create avenues for thinking 'otherwise': they create the conditions by which norms can be changed to potentially include new ways of thinking and doing. Normalizing processes not only inform and regulate action and thinking but also our very desire to act and to think in specific ways. This may be true of how surgical trainers are 'condemned' to teach in ways that have already been prescribed and recommended by the authorised bodies of surgical teaching.

> Only by going on strike against such norms, only by unlearning the rules and losing our 'expertise', do we have a chance of exposing the field of norms and their coercive effects. This might as well lead to a form of desubjugation as yet unimagined. But any such 'unlearning' would have to make room for an alternative agency, a creative deployment of power, and so a way of entering the matrix of rules that allows for an exposure of their porousness and malleability, their incompleteness, and their transformability. There are, after all, other things to do with rules than simply conforming to them. They can be displayed. They can be recrafted. Conformity itself may permit for a hyperbolic instantiation of the norm that exposes its fantastic character. In this sense, then, a certain errancy within expertise, a certain *poeisis* that shows what else a set of rules might yield offer us options that exceed the binary framework of coercion, on the one side, and escape, on the other. (Butler, 2006: 5)

With regard to conversations, Butler argues that there are two dimensions to speech; what is being said with what is being communicated and what is shown/signalled

through what is being said. Saying as communicating, with saying as displaying. When words are being uttered in these 'saids', they represent in that relationship how one subject presents themselves to another.

In this way, the act of speech also constitutes how one *appears* to another, "language has to be understood in these instances as ways of taking on a social shape or form subject to an aural and visual interpretation", (Butler, 2006: 529). This may apply to training situations and to the conversations that occur between surgeons and their trainees.

4.16   Pierre Bourdieu's Theory Of Social And Cultural Reproduction

Bourdieu proposes a theory of social and cultural reproduction to understand how agents (individuals and institutions) generate regulated practices. He proposes that in illuminating the structure of the principles that govern these practices, one uncovers the regulated character of social life itself, particularly the social life of institutions. His theories relating to social reproduction provide a way of revealing the regulated nature of social structures. In particular, how power operates to create situations in which some sections of society become more privileged than others, for example in education. This is made evident in the book *Reproduction* (1990), which he co-wrote with Jean-Claude Passeron. The authors demonstrate how students who have access to cultural capital tend to succeed in later life in contrast to students from lower economic bases who do not get access to such capital. Policy viewed from a Bourdieuian lens is more than text. Its effect is to produce a specific structuring of social spaces (Ball, 1997; Levinson, Sutton and Winstead, 2009; Sutton and Levinson, 2001).

a)   Habitus

Bourdieu developed his theories through a series of concepts including habitus, field and capital, when he analysed the class system in education. Habitus derived from the Greek, 'hexis' meaning habit or disposition, refers to a condition or state of the

body:

> Constructing the notion of habits as a system of acquired dispositions
> functioning on the practical level as categories of perception and assessment
> or as classificatory principles as well as being the organising principles of
> action. (Bourdieu, 1990: 12-13).

Social practices, such as ways of being and interpreting, are internalised in the individual from childhood as a set of durable *embodied dispositions* or habits (ways of acting, seeing and making sense of the world), which in turn generate certain practices of an appropriate kind. These dispositions reflect central structural elements of the social and cultural group that the individual has been exposed to over a long period of time, for example surgeons in a department of neurosurgery will expect their trainees to provide a continuous stream of care whatever the demands of the oncall rota - this may mean that trainee A is scheduled to work night shifts for the week (8pm to 8am daily), but her supervising consultant may still expect her to attend his clinics and operating lists in daylight hours (rather than retiring home to rest after what can often be a strenuous 12 hour night shift before waking to return for the next night shift).

A neurosurgical consultant may regard this as a recognised and accepted sign of a trainee's commitment to the discipline. This may then be 'rewarded' with learning opportunities, where a consultant will take a trainee through a procedure or teach them a specific operative technique. These are the 'kinship rules' for neurosurgeons and those training in the specialty. This reinforces the trainee's engagement with the established system of teaching in neurosurgery; leading her to behave in ways that reproduce those structural elements.

Therefore, trainees who progress in this department will do so because they have internalised the 'rules of the game' and adopted practices that ensure reproduction of the system. Thus, habitus is an embodied objectification of structure: generating practice in accordance with the structural principles of the relevant social world. It forms the basis of anticipating practice.

Swartz (1997: 6) notes that Bourdieu's work is concerned with 'the question of how stratified social systems of hierarchy and domination persist and reproduce intergenerationally without powerful resistance and without the conscious recognition of their members'.

b)   Field

Bourdieu views society as composed of many spheres of activity or *fields* (economy, education, politics), politics is the dominant one. Each field in turn comprises individuals and institutions engaged in a hierarchy of power relations, competing with one another for valuable resources which he terms *capital*. Capital is a form of wealth, a valuable resource which each individual has the capacity to invest in different fields.

The aim of investing capital is to either obtain power directly or indirectly through the acquisition of some other form of capital. There are four forms of capital; economic (money, wealth), cultural (educational qualifications recognised as valid), symbolic (social honour and prestige), social. A field is therefore a competitive space characterised by inequities in access to capital in that competition. The opportunities available to an individual in each field are determined by how well they are endowed with capital. The endowment determines how individuals can invest various valuable resources (capital) to secure certain advantages. A simple example of cultural capital in education and training, is the acquisition of examination qualifications or degrees which then allow entry into university and professional work beyond.

If one applies this theory in broad strokes to medical education, the multiple institutions that form healthcare (hospitals, clinics, outpatient centres, medical schools) represent the social field that encultures doctors. The practices of care developed through national and local policy generate ways of behaving and thinking about patient care (embodied by trainees), which in turn impacts on the way policy is understood and deployed at the local level (the hospital or clinic).

This process of socialisation produces ways of thinking and practices which in turn reflect the aforementioned structural elements. An example of this would be the local hospital policies for prevention of hospital acquired infections (HAI). A rigorous hand washing regime has been implemented through hospitals in the UK by widespread advertisements and instituting 'infection' nurse consultants to lead the way by demonstrating correct hand washing technique and ensuring hand sterilisation procedures within wards.

This concern with HAI has been extended in ways that have been both contentious and intrusive. An example is how male doctors are discouraged from wearing ties. The rationale presented is that whilst bending over patients, the loose end of the tie may become infected with micro-organisms from one patient and be transferred to another patient, thus creating a route for cross contamination and possible infection. Similarly, medical staff are prevented from wearing wrist watches, rings in some hospitals and told to roll up their shirt or blouse sleeves in accordance with the "bare below the elbows" policy.

There is no data whatsoever to justify these practices or demonstrate that the wearing of clothing or other items below the elbow is associated with carrying infection between patients (Dancer, 2013; Pemberton, 2014). However, it is now commonplace policy, so that newly arrived medical students to hospital chant this dictat like a mantra. They wear neither white coats, ties or long sleeved shirts because they have been told that such attire is consistent with the conduction of infection. This is an example of how the medical body (doctors, nurses) has become more and more a site of control.

The above example of socialisation is referred to by Bourdieu as 'the collective enterprise of inculcation' (1977: 17). It is not a passive act. Individuals are complicit and play an active role in bringing about their own socialisation. An example is how nursing staff are empowered to carry out this task of ensuring compliance with anti-HAI policies and do so with great zeal on the ward. I have frequently been accosted

by nurse managers and scolded for wearing a wrist-watch (I refuse to remove this item and often cite the fact that there is no evidence to support this belief).

Medical students, the next generation of doctors, not only comply willing with these ideals, they also do so without question or query. In one clinic, I encountered five male medical students, all of whom were without ties. I informed them that if they chose to wear a tie, no-one could stop them as there was no evidence for this activity - they were astounded and disbelieving! They also told me that the medical school staff would be angered if they now chose to wear ties as they had been expressly told not to. This process of enculturation illustrates how willingly we subject to certain practices and ensure they are propagated without question.

4.17   Conclusion

In the second part to this chapter, I have set out my method of analysis to examine clinical discourse, whether it presents in spoken or written forms. The objective once again, is not to identify the veracity of discourse. But, rather, to explore, as Foucault suggests, *the conditions* that make these statements a reality for the individuals or organisations concerned. In the following chapter, I apply the theory discussed in part two of this chapter, to critically analyse a selection of documents that collectively represent the established clinical guidelines and ethical codes of practice.

Chapter 5

Standards of 'Good' Clinical Practice: An Analysis And Comparison Of Professional Texts And Guidance With Ethnographic Accounts Of Surgical Encounters

5.1 The Art Of Care

"Oh hello, this is Arundi one of the transplant doctors, I just wanted to see if Dr. Chou was available to discuss how Mr. Pitt's procedure is progressing?" I settle into my chair, knowing that it could be as long as ten minutes before someone picks up the phone and comes back to me with an answer. However, my effort at getting comfy has been premature; within seconds I hear the receiver click (what a pleasant surprise!), "Mr. Pitt is . . .", the words are drowned out by an approaching trolley being wheeled into the ward. I peer into the trolley. The occupier is Mr. Pitt (who should still be in the procedure room!). I return to my phone-call and say wearily, "Mr. Pitt didn't have the procedure did he? I mean. . . I know Dr. Chou is one of the best, but even he couldn't have got a stent in that quickly." The voice on the other end is Dr. Chou. "Hi Arundi, your gentleman refused to have the procedure, not much I can do I'm afraid. Come back to me when he agrees."

Dr. Chou is probably my favourite radiologist. A calm demeanour and friendly manner belie an impressive skill set. He is notoriously polite to patients and colleagues alike. Therefore, I am puzzled as to why my patient is back on the ward, sans procedure.

Mr. Pitt is now happily ensconced in his bed, patient bay 4. He catches my eye as I approach his bed. "Hello love, I did as you said but when I got there that fella was terrifying! So they sent me back up." "But Mr. Pitt they told me that you refused to have the procedure. Why did you do that? We talked about it last night and I explained to you that the tube connecting your kidney to your bladder has got a narrowing in it which means the urine made by your kidney can't reach your bladder. Do you remember the picture I drew? Where I showed you how your kidney is starting to resemble a balloon because of all that urine backed up and trapped in the kidney, blowing it up? That's why you haven't been able to pee, because there's a blockage in that tube. Dr. Chou was going to relieve that block by placing a stent in

the tube so that the urine could flow into your bladder again. It means you'll able to pee again."

Mr. Pitt turns to the side table and opens the drawer pulling out a sheet of paper with my drawing from the previous night. "I know what you said love, but that chappy (Dr. Chou) told me I had to sign a consent form so he could do the procedure and then he told me that there was a chance the stent could make a hole in my kidney. . . 50% or something . . . then I'd lose my kidney. . . I can't go back on dialysis again. . . I just can't . . ." He looks at me, utterly devastated and terrified. I walk to his bedside and sit with him. "It's ok", I say soothingly but he has seen my disappointment and exasperation, I cannot hide it this morning. He clenches my palm between his bony fingers. This day has left him bewildered, tired and now he feels guilty.

"The chances of something like that happening. . . I think Dr. Chou would have called it a rupture or perforation, well it's rare. . .he possibly quoted a percentage at you, and I know that I wasn't there, but I can assure you that it wouldn't have been as high as 50%", I continue. "We wouldn't recommend the procedure unless the risk was <u>so small</u> (I pinch my finger and thumb together in a physical demonstration of 'smallness') that it was acceptable for you to go through with it . . . you see at this moment the risk of the procedure going wrong is tiny, in fact it's much, much smaller than the risk of your kidney being damaged by the blockage." "But he didn't say that", he says, dejected. "He said I'd sure as lose it (the kidney)!"

5.2   Introduction

Every day, doctors engage with the public in many different clinical environs and scenarios with the aim of ensuring that an individual receive the necessary 'care'. In the context of this thesis, I use the term 'care' as opposed to treatment, because an encounter between patient and doctor in a clinical setting, is not limited to the provision of a remedy or cure, nor is its focus problem solving. Care denotes something beyond the problem-solution paradigm: at its heart is the relationship created by the physician *responding* to the concerns of a patient regarding their mental or physical health. The nature of this 'responding' and its significance for surgical education are expanded on in Chapters 4 and 6.

There is a wealth of literature and research on care and caring. Care has been studied from a variety of perspectives; theoretically (Leninger, 1988; Swanson, 1991; Watson, 1985), philosophically (Gaut, 1983; Mayeroff, 1990; Ray, 1997) and ethically (Cooper, 1991; Parker, 1990). It has been explored as a phenomenon in clinical practice through ethnographic works such as *Forgive and Remember* (Bosk, 2003), *The Boys in White* (Becker et al, 1961), as well as through biographical accounts (Gawande, 2002; Weston, 2009; Marsh, 2014; Kalanithi, 2016). I am concerned with how surgical care is conceived in policy texts and how it is enacted in training practices. Postgraduate medical (surgical) education and training are principally concerned with teaching and learning the various elements of general and specialist care: 'Put simply, our doctors are trained for a purpose, to care for patients.' (Greenaway, 2013: 3).

The objective of this chapter is to explore policy texts pertinent to medical (surgical) education to locate key themes that give the reader an impression of how surgical education and training are conceived in the United Kingdom. Put another way, I analyse policy documents to identify concepts and themes that shape and direct surgical training. I aim to show that such a construction forms a powerful ideology of education and training in which trainee surgeons acquire their medical identities (surgeon identities). The framework for this analysis is based on Foucault's genealogy. I adopt this methodology to tease out how surgical practice is constructed in policy and how the identities of surgeons and patients are subsequently constituted.

The first part of the chapter explores the different *ideologies of Care* embedded in policy and deployed in actual practice ('Official' versus 'Real'). I contrast and compare narratives illustrating actual events of common surgical practice with the guidance provided in key medical texts, *Good Medical Practice* (2013) and *Good Surgical Practice* (2014b). The purpose is to explore (through the central concept of Care) the difference between *how a surgeon appropriates care in actual clinical scenarios*

(where events cannot be predicted in advance) and *how care is conceived theoretically* in terms of clinical guidelines and established ethical codes.

I argue, that an inherent and distinguishing feature of Care is *uncertainty*. What unravels in actual clinical encounters cannot be consistently accounted for by *transcendent* frameworks of practice: approved clinical guidelines and ethical codes of conduct (as exemplified in the above narrative involving Mr. Pitt). There is a need to consider carefully the *immanent* nature of clinical relations and practice in actual events of clinical medicine (surgery). Experience of practice is unique and individual. The *haecceity* of an event, the 'thisness' or the concreteness of a clinical encounter (singularity of practice) cannot be reproduced nor adequately pre-empted through handbooks of practice.

The second part of this chapter critiques the actions of surgeons engaged in unanticipated events of *actual clinical practice* with reference to how Care is conceived in clinical guidelines. I assert that surgeons confronted by the acuteness of clinical practice, must make decisions within contingent clinical situations. How they emerge within this unanticipated event of practice suggests an *ethics of immanence* in terms of the approach and behaviour manifested. This lies in opposition to an *ethics of transcendence*, where surgeons must adhere at all times to an established code of practice. I argue that there must exist a necessary tension between an immanent ethics and a transcendent ethics. Maintaining this fine balance, between two necessary ideologies of clinical ethics is the challenge of a meaningful and effective modern day surgical practice.

5.3   Foucault's Genealogy

Michel Foucault introduced a method of historical analysis which he coined with the term 'genealogy':

> And this is what I would call genealogy, that is, a form of history that can
> account for the constitution of knowledges, discourses, domains of objects

and so on, without having to make reference to a subject that is either transcendental in relation to the field of events or runs in its empty sameness throughout the course of history.

(Faubion, 2002: 118)

His approach de-emphasises the traditional view of history as a chronology of events: a linear trajectory between the past and present. Instead, genealogy is a "history of the present" (Foucault, 1977: 31). By looking at the practices, institutions and discourses that constitute the object of study, one can pose a question that is situated in the present. For example, the question, "what is surgical education policy?" can be answered by exploring how trainees are constituted in policy discourse, what are the conditions under which statements about training practices are formed at a given time and who's voice is privileged in the discourses (whose interest does such a conception serve) and which voices are silent (see also Chapter 4).

Foucault (1977) explains his methodology when researching Prisons: 'the target of analysis wasn't "institutions," "theories," or "ideology" but *practices*—with the aim of grasping the conditions that make these acceptable at a given moment: [these types of practices] possess their own specific regularities, logic, strategy, self-evidence, and "reason"' (Faubion, 2002: 225, original emphasis). He continues to say:

> It is a question of analysing a "regime of practices"—practices being understood here as places where what is said and what is done, rules imposed and reasons given, the planned and the taken-for-granted   meet and interconnect. To analyse "regimes of practices" means to analyse programs of conduct that have both prescriptive effects regarding what is to be done (effects of "jurisdiction") and codifying effects regarding what is to be known (effects of "veridiction"). (ibid., 225)

Foucault states that his objective in *Discipline and Punish* (1977) was not to write a history of prisons as an institution, rather to write about the *practice* of imprisonment (Foucault, 2002: 223-239).

In a similar way, I approach the subject of surgical education by first posing questions about the practice of surgery: what is the purpose of surgeons? As stated by Professor Greenaway, the purpose of doctors is 'to care for patients' (see above, p. 2). It therefore follows, that the aim of medical training is to teach trainees how to provide care for patients. Similarly, the goals of surgical training must be to educate future surgeons in the *craft* of surgical care[6]. Put simply, how to 'look after' patients who require surgical attention. Thus, my investigation begins with exploring how Care is conceived and deployed in education policy texts: to examine 'the production, regulation, distribution, circulation and operation of statements'[7] about Care.

To explore the social contexts that underlie how policy text is produced, mediated or challenged, I have included analysis of two interviews with individuals involved in policy design and curricular development. To document the ways in which surgeons assimilate policy and understand it, I have included excerpts from my training journal (textual analysis, ethnographic data and interview data). I treat these documents as 'discursive practices' (Foucault, Butler et al.). That is, practices that construct those entities about which they speak, as opposed to revealing eternal truths.

5.4   Ideologies Of Care

In this section, I describe, examine and contrast Care as *encountered* in actual events of clinical practice versus Care as *conceptualised* by theoretical policy texts. Put simply, Care as experienced by patients (receivers of care) and doctors ('givers' of care) in daily practice versus Care as defined by policy text and enacted by policy subjects (patients and doctors). I have chosen to define the former as *Real Care* (the

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[6] One of my interview subjects defined surgery as "the art of providing a mechanical solution to an organic problem". Whilst the technical aspect of practice is what distinguishes a surgeon from other physicians, the goals of surgical practice, in my view, are no different to any other area of Medicine—care of the 'whole' patient whether that requires a specific surgical intervention or not.
[7] Taken from Foucault's explication of "Truth": understood as a system of ordered procedures for the production, regulation, distribution, circulation and operation of statements' (Faubion, 2002: 132). Truth is understood by Foucault as a set of rules which govern what is presented as true and what is deemed to be false.

'real' denotes the reality of undergoing actual care and its experience) and the latter as *Official Care*[8] ('official' refers to the formal discourses of Care produced by stakeholders in medical education policy such as the GMC, the Academic Medical Colleges, NHS England, Medical Education England).

These two conceptions of Care do overlap when there is common ground, for example, the overarching goal of care is the welfare of the patient. However, they tend to differ in terms of *how* the goals of care are achieved. The latter is the subject of the argument below, which contrasts *real* and *official* care.

a)   **Real Care**

Section 5.1, is an auto-ethnographic account of a common occurrence of patient care. It was in part chosen to demonstrate the *typologies* of *Real Care*: the sub-categories of care that feature in an everyday experience of clinical care. These include *care as experienced by the patient*; on the ward, in the diagnostic process, in the radiology suite, through encounters with two doctors. It also comprises the *experience of providing care* on the part of the two doctors and other personnel involved in Mr. Pitt's inpatient stay. Each type of Real Care is subject to two agendas: the intended provision of care (the plan of care devised by the professional team responsible for diagnosis and treatment) and the actual experience of care (the patient's physical, emotional and cognitive perceptions of care, as well as the impressions of the physicians doing the 'care-giving').

In this specific instance, the intended provision of care was the treatment designed by myself and Dr. Chou (insertion of a stent). However, the actual experience of care by the patient undergoing this treatment was fear, bewilderment, guilt and a risk of acting foolishly. Dr. Chou assured me afterwards that he had not quoted a complication risk

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[8] The use of the descriptors, 'Real' and 'Official' is terminology I have adapted from Stronach's (2010) analysis of teenage pregnancy in which he labels State (government) discourses on sex education as 'Official Sex' (p. 46).

of 50%, whereas, Mr. Pitt insisted that he had heard exactly that figure when being advised of the risk of losing his kidney. I believe them both.

It is apparent that the patient wanted desperately to salvage his kidney transplant yet was deterred by something. Was he was suddenly frightened at the dawning realisation of the procedure or did the risk appear more exaggerated to him, or did Dr. Chou fail to engage with the patient in a manner appropriate to soothe Mr. Pitt's doubts and fears? It is also possible that factors which neither Dr. Chou nor I had anticipated (because we expected a routine event of practice), were responsible for Mr. Pitt's refusal to go through with the procedure. The experience for myself of providing care for Mr. Pitt, was one of disappointment and frustration with both the system and my colleague. Equally, Dr. Chou may also have been dissatisfied and worried that a patient who required an urgent procedure failed to receive it.

As this narrative clearly demonstrates, an occurrence of patient care in clinical practice (Real Care) is composed of multiple layers, each concealing hidden complexity and nuance, which inevitably contribute to the *contingent* nature of Care in routine medical practice.

The experiences of Care that occur for patient and doctor in daily practice, cannot be fully predicted nor even foreseen. This is an indisputable fact of clinical medicine. Adhering to the various guidance and training manuals on clinical practice may help to remove some of the uncertainty and potentially improve a patient's experience of care. But, it cannot completely control the quality of the experience nor the way it is experienced. I use the term 'experience' in this chapter to denote how a person encounters something: how they perceive, discern or happen upon an event, person or object and what impressions this leaves upon them. Certainly, the format of a procedure (radiological insertion of stent), the theoretical knowledge underlying a diagnosis (an obstructed kidney due to a narrowing in the ureter or outflow tube) and the remedy for a clinical problem may be common knowledge and form habitual

practice. Nonetheless, how a plan of care is fully experienced and what will unfold in the experiencing is always an unknown.

In conclusion, notions of Real Care are grounded in the *contingency of actual practice.* This characteristic feature of uncertainty determines *how* a form of care is in fact experienced, as a temporal reality.

b)   Uncertainty of medical practice

As I have argued above, the uncertainty of even *routine practice*, an oxymoron, has been well researched and written about extensively (Engerbretsen et al, 2016; Guenter et al, 2011; Herman, 1990; Katz, 1984; Lingard et al, 2001; McGee and McLaughlin, 1995; Naylor, 1995; Seaburn et al, 2005). However, the literature focuses on uncertainty as it arises through processes of diagnosis, clinical decision making and medical judgement: all elements of clinical competence (Latifi et al, 2013; Pauley et al, 2011; Jalote-Parmar and Badke-Schaub, 2008; Sutton et al, 2015, Flin et al, 2007a).

Logan and Scott (1996) attribute uncertainty in health care partly to the imprecision inherent in decision making. To illustrate the latter point I use a hypothetical example based on Mr. Pitt's story. Imagine that I arrive at a diagnosis, based on Mr. Pitt's symptoms, signs and test results. I then organise an intervention appropriate to this diagnosis, only to discover a few days later that the initial diagnosis was incorrect. Therefore, the treatment administered was both inappropriate and ineffective.

Guenter et al (2011) describe how trainees experience, in situations like these, effort and anxiety in 'maintaining a cloak of competence' (p. 120). This refers to the spectrum of emotions experienced by trainees when their practice is challenged by the uncertainty that arises due to limitations in skill or an inability to meet patient expectations. The next chapter (analysis of interviews) explores how instances of unpredictability in routine practice unfold to disrupt established ways of thinking and behaving to reveal they can profoundly transform surgeons in training: disclose

modified ontological states and unfurl new worlds of practice for a trainee. However, in this chapter I develop the notion of *contingent routine practice* that goes beyond the existing body of literature on uncertainty in medical practice.

c)   Uncertainty versus Error

I suggest, that the challenge facing surgeons in training and surgical educators, is not overly concerned with controlling factors that generate variability in clinical practice. The aim of this approach is to reduce or eliminate unpredictable outcomes. Put another way, policy texts that focus on the fluency of a surgeon's practice, as defined by those elements of performance that can be *measured* directly (observation of technical skills, behaviours and attitudes, examination of theoretical knowledge) demonstrate a belief, that ensuring proficiency in these aspects of 'skills' training is the primary solution to eliminating the unpredictability of practice.

Certainly, developing fluent skill in the component parts of a procedure is critical to ensure that patients come to no harm and benefit from successful treatments. Measurements of performance assess these component parts, such as; technical proficiency, recognition of anatomy, sterile technique and patient communication.   An example is the DOPS evaluation (direct observation of procedural skill), which forms a core part of trainee assessment in the formative years of training (see Figure 3) (examples of assessment tools are critically analysed in chapter 6).

Figure 3: DOPS (direct observation of procedural skills) evaluation form (taken from iscp.ac.uk)

Direct Observation of Procedural Skills (DOPS)

ISCP — INTERCOLLEGIATE SURGICAL CURRICULUM PROGRAMME

Trainee	Assessor
Name / GMC/GDC/IMC number:	Name / GMC/GDC/IMC number:
Assessment date:	Hospital DOPS took place:

FEEDBACK:
Verbal and written feedback is a mandatory component of this assessment.

General

Strengths

Development needs

Recommended actions

TRAINEE REFLECTIONS ON THIS ACTIVITY (optional)

What did I learn from this experience?

What did I do well?

What do I need to improve or change? How will I achieve it?

RATINGS
Your ratings should be judged against the standard laid out in the syllabus for the trainee's stage of training.
N = Not observed **D** = Development required, **S** = Satisfactory (no prompting or intervention required) **O** = Outstanding

Domain	Rating	Comments
1: Describes indications, anatomy, procedure and complications to assessor		
2: Obtains consent, after explaining procedure and possible complications to patient		
3: Prepares for procedure according to an agreed protocol		
4: Administers effective analgesia or safe sedation (if no anaesthetist)		
5: Demonstrates good asepsis and safe use of instruments and sharps		
6: Performs the technical aspects in line with the guidance notes		
7: Deals with any unexpected event or seeks help when appropriate		
8: Completes required documentation (written or dictated)		
9: Communicates clearly with patient and staff throughout the procedure		
10: Demonstrates professional behaviour throughout the procedure		

GLOBAL SUMMARY
Level at which completed elements of the PBA were performed on this occasion

		Tick
Level 0	Insufficient evidence observed to support a summary judgement	
Level 1a	Able to assist with guidance (was not familiar with all steps of procedure)	
Level 1b	Able to assist without guidance (knew all steps of procedure and anticipated next move)	
Level 2a	Guidance required for most/all of the procedure (or part performed)	
Level 2b	Guidance or intervention required for key steps only	
Level 3a	Procedure performed with minimal guidance or intervention (needed occasional help)	
Level 3b	Procedure performed competently without guidance or intervention but lacked confidence	
Level 4a	Procedure performed confidently to a high standard without any guidance or intervention	
Level 4b	As 4a and was able to anticipate, avoid and/or deal with common problems/complications	

DOPS DETAILS

Name of Procedure:

No. times procedure previously performed:	Emergency / Elective (please circle)

Performed in a simulated setting ☐ Description of the simulation:

DOPS performed while on a course Yes / No If yes, please give details:

Difficulty of procedure: Easier than usual ☐   Average difficulty ☐   More difficult than usual ☐

Trainee's signature:	Assessor's signature:

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However, even a doctor who has performed a thousand such procedures is still subject to an unexpected outcome or event (though he may have the experience and technical proficiency to deal effectively with an unexpected outcome such as torrential bleeding during a procedure). Therefore, I would argue that no amount of practice, repetition or knowledge can obviate the contingency that is inherent to any clinical encounter.

What I am attempting is to draw attention to how traditional training viewed from this perspective, i.e. the cultivation of procedural skills or behavioural attributes (such as reassuring the patient, gaining consent); conceptualises a trainee's aptitude around elements of performance that can be measured or quantified. As a consequence, skills that can be measured directly, and by virtue of this fact become '*visible'* to the world, are prioritised (by the curriculum), recognised (by training practices) and so become representative of what it means to be a competent doctor.

This visibility also confers 'value' and a quality of valuableness to skills that can be demonstrated (see Chapter 6 for further discussion of this theme). In turn, this engenders a belief that orienting training around aspects of measurable and visible performance will reduce uncertainty in practice or eliminate the sources of error associated with practice. For example, my inability to participate in the organ procurement (because I was speechless and physically paralysed by the reality of the event of practice) may be attributed to failed practice owing to a lack of exposure: *"there'll be a next time . . . you just need to do more, that's all"*, (Vinny's comments).

This evaluation reveals a widespread belief espoused by surgeons and consolidated by educational documents (curriculae, operative manuals): repetitive technical practice and recurrent exposure to events, will, *in and of themselves*, minimise the variability of experiences 'in the field'. In doing this, a surgeon's capacity to respond is also strengthened.

There is no doubt, that repetitive practice and accumulation of experience, are critical to developing a surgeon's ability, confidence and safe practice. However, the difficulty arises when despite the best preparations, a clinical encounter can culminate in unanticipated and unpredictable outcomes. In these instances of contingent practice, the uncertainty intrinsic to clinical encounters is perceived as tantamount to an *error in practice*, constituted by a lack of experience or failure in judgement or skill.

I would add that the single-minded pursuit of eliminating error from practice, obscures the objective of medical practice and the purpose of training: providing care for the patient and learning how to care for the patient. In the narrative above, the goal of Mr. Pitt's clinical encounter was not accomplished—he did not receive the necessary care. No stent was placed to relieve the obstruction in his failing kidney transplant. The patient was left confused, distressed and guilt-ridden, the doctors were frustrated in their attempts to provide urgent care and anxious about the wellbeing of their patient.

d)   A twist in the tale

In summary, I suggest that, it is at this interface of Care—the unpredictable nature of a clinical encounter, that the role of the doctor is constructed for the patient in an enduring and forceful manner. Care deployed by doctors and experienced by patients is a *complex* practice: it is intricate, entangled and inherently human. In a world that is increasingly technologized, in part to detach from the human propensity for error, the value and professional longevity of a doctor may lie in how she mediates the contingency of clinical practice to give patients reassurance and comfort. If a doctor is successful in this endeavour, then she may paradoxically give patients a sense of certainty in their care.

> The current attempt to extinguish uncertainty in our society risks removing from the medical profession some important "tools of the trade" and placing obstacles in their way. Too much emphasis in medical training on removing or reducing uncertainty will crowd out what little attention is being paid to

educating doctors into the maturity and wisdom that they require to be able to accompany people in times of need, contain their own and their patients' anxieties and facilitate healing and recovery in an uncertain world.

(West and West, 2001: 320)

5.5   Official Care

The formal discourses on how doctors are trained to provide Care are produced by the stakeholders in medical education policy. These stakeholders include; the GMC, the Academic Medical Colleges (for example the Royal College of Physicians, the Royal College of Surgeons), NHS England, Medical Education England and the Department of Health. The primary text which provides a framework for how doctors should organize and structure their practice as well as guidance on how they should conduct themselves as care givers is *Good Medical Practice* (General Medical Council, 1995, 1998, 2001, 2006, 2013), (see Figures 4 and 5), which I abbreviate to *GMP*.

GMP is written by the General Medical Council (GMC) who are responsible for; licensing medical practitioners, setting the duties and responsibilities of a doctor in the United Kingdom as well as the standards of training programs, the processes for assessment and the professional requirements for maintaining licensure (see Chapter 2 for a history of the GMC and its duties). To provide a historical context and rationale for the structure and content of *GMP* (2013)*,* I examined Department of Health policy texts published around the same timeline. My purpose in doing so is to background the concepts and frameworks within which doctors, patients and Care are conceived in.

In 2014, the Royal Colleges of Surgeons of England published a related text that adapted the principles and guidance set out in *GMP* for a surgical audience. *Good Surgical Practice* (Royal College of Surgeons of England (RCS), 2014b), which I abbreviate to *GSP*, was a specific guidance for surgeons engaged in surgical practice.

a) *Good Medical Practice* (*GMP*) (2013)

First published in 1995 by the GMC (See Figure 4), *GMP* replaced existing guidance on unacceptable behaviour in the medical profession, that would lead to a charge of professional misconduct at a disciplinary hearing of the GMC[9].

> *"It was a kind of handbook for 'doctors in trouble', you know, you had been found negligent or had harmed a patient in some way, and his booklet basically told you what you shouldn't do. It was pretty obvious stuff, like 'don't be rude to your patients'. Things like that. Hardly rocket science!"*
>
> (Stephen, Consultant Surgeon, taken from surgical training journal, 20 January 2008)

With the approaching spectre of Appraisal and Revalidation for doctors, the GMC overhauled the document in 2005. The content was reorganised and additional material was included with the aim of ensuring: 'that the standards and principles against which doctors will be revalidated are clear, by reorganising the guidance using the headings under which doctors are expected to be assessed during revalidation and NHS appraisal' (GMC, 2001: 2). The new restructured *GMP* released in 2005 was now circulated as a handbook for all doctors in practice.

The 2005/6 review considered the approach to giving guidance: that it should focus on good practice rather than list 'offences'; that it should apply to all doctors on the register; that it should establish principles and standards rather than specify particular requirements or prohibitions. We do not propose to re-open these issues in this review, although we will of course respond positively if the issues are raised by other organisations or individuals. (GMC, 2010: 3)

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[9]A detailed discussion on what constitutes professional misconduct is beyond the scope of this thesis. However, the expression 'serious professional misconduct' was substituted by the Medical Act of 1969 for the term 'infamous conduct in a professional respect', used in the Medical Act of 1858. It infers an act of omission, negligence or incompetence which falls below the standards set by the governing body, the GMC. (Hamer, 2010).

Figure 4:   **Cover image of *Good Medical Practice* (1995)**

Figure 5: Contents page of *Good Medical Practice* (2013)

Areas of practice are presented as 'domains'

Good medical practice

Contents

02 | General Medical Council

In gathering information on how *GMP* (2005) should be structured, the GMC commissioned Picker Europe to conduct research amongst doctors, patients and the public (Picker Europe, 2006)). Their aim was to look at: 'what are the key duties of a doctor for inclusion in *Good Medical Practice*; the balance between the roles of patients, doctors and other health professionals; the balance between clinical and organisational duties; and whether or not it is reasonable to expect doctors to adhere to all duties all the time.' (Picker Europe, 2006)

GMP was most recently updated and re-released in 2013. It categorises a doctor's practice into four component areas entitled domains (GMC, 2013). Figure 5, the contents page of *GMP, itemises* each domain with a list of criteria that a doctor must comply with to meet the standards of that specific sub category of practice (See Figure 5). The four domains of practice are:

- Domain 1: knowledge, skills and performance

- Domain 2: safety and quality

- Domain 3: communication, partnership and teamwork

- Domain 4: maintaining trust

a)   **How is the concept of Care presented in *GMP* (1995) in contrast to *GMP* (2013)?**

In this section, I interrogate how the concept of Care is captured in each document and whether the notion of Care has transformed over that time. This has an impact on how Care is conceived by the medical profession and practiced.

Imagery

The front cover of the 1995 text depicts a Michael Van Musscher portrait, 'Doctor taking a young woman's pulse' (See Figure 4). The pale feminine hand is held purposefully by a male doctor. This image portrays the doctor as self-appointed protector, guardian and expert bearer of scientific knowledge, whilst the patient is

passive, submissive and the object of the physician's benevolence and expert knowledge. This alludes to notions of paternalism in the doctor-patient relationship. There is a great body of literature on Paternalism in clinical practice (Dworkin, 1972; McKinstry, 1992; O'Neill, 1984; Siegler, 1985,). However, this is not a key area of research for this thesis. Suffice it to say, that the use of this image in a doctor's guidebook suggests that the accepted 'face' of Care in 1995, may have been informed by a paternalistic model of Medicine.

This theme of paternalistic care is continued in the epithet featured beneath the GMC logo, 'Protecting patients guiding doctors'. It announces the dual roles of the organisation as self-appointed 'protector' and 'guide'. I would suggest that on first glance, this first edition of GMP appears to convey a 'doctor knows best' approach to Care, promoting paternalism. The image only presents a picture of the doctor's hand, a hand of caring but also possessing the power to heal, the physician himself is invisible, so what comes through is the hand of care and power which is unquestioned and the submissiveness and trust of the patient.

However, the covering image on the most recent publication of *GMP* in 2013 (See Figure 6) is in stark contrast to the first edition. Here, the reader is confronted by the sole image (photograph) of a young female. But this time, the woman is the doctor rather than the submissive patient, perhaps an acknowledgement of the increasingly female population of the medical workforce (reference). In addition, the female doctor is from an ethnic minority background and is photographed smiling broadly, appearing engaged and happy at work.

Presumably the use of a cheery, youthful image presents the 'face' of a doctor that most patients would like to encounter—approachable, amiable, receptive and compassionate. The epithet beneath the logo now reads, 'working with doctors working for patients'. This change in the 'motto' of the organisation reflects a change in philosophy; from paternalism to partnership. The organisation now promotes a more egalitarian approach to the way in which it conceives care-givers (doctors) and

Figure 6: Cover image of *Good Medical Practice* (2013)
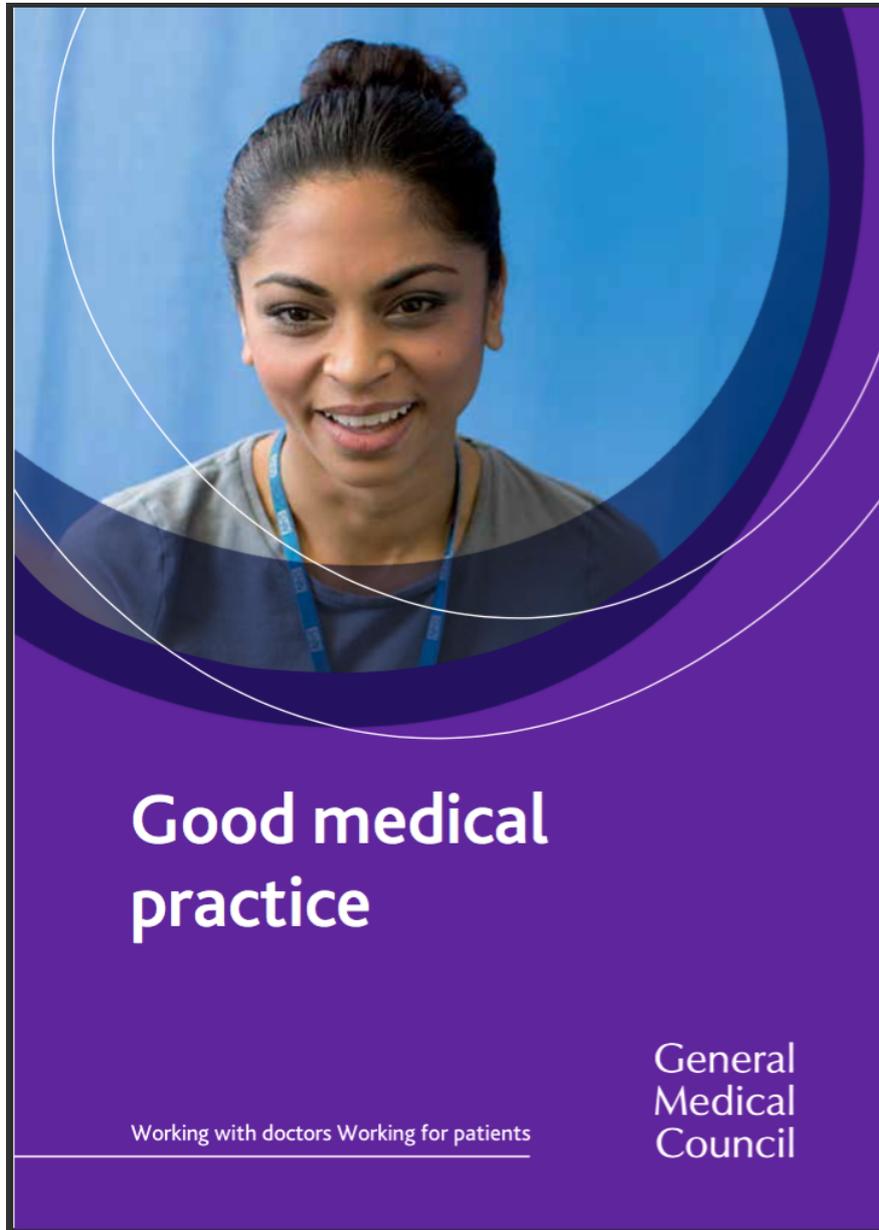
recipients of care (patients). It works alongside doctors in a supportive and advisory capacity, guiding their practices of care; whilst engaging with patients through advocacy to ensure their needs are voiced and met satisfactorily. Here the doctor does not occupy the omnipotence of the first image and is now subject to the power of inspection and audit.

In the seventeen years between the two documents, the contrasting imagery hints particularly at the change in the *locus of power* within the doctor-patient care relationship. There is a shift from a situation where the doctor controls the processes of care-giving because he is perceived to 'have the patient's interest at heart' and have sole possession of expert knowledge. Instead, the giving and receiving of care, in the modern age, is framed in terms of a negotiation between the doctor's expertise and the patient's expressed needs as determined by the GMC. What may have prompted this change is discussed at the end of this section.

Thus, an important difference between the two images concerns the issue and place of power. In the first image, the invisible doctor occupies an authoritative position with the power to heal and care, whilst the patient is submissive to this power. In the second image the patient is now absent, replaced by a smiling (perhaps obedient) doctor, subject to the power of the GMC and its edicts on practice and care.

The 'good doctor'

In the opening pages of *GMP* (2013: a2) the following statement is made:

> Patients must be able to trust doctors with their lives and health. To justify
> that trust you must show respect for human life and make sure your practice
> meets the standards expected of you in four domains.

The first sentence medicalises the life of an individual by placing it in the domain of the doctor's expertise. In my personal experience when patients consult me within the routine of a surgical clinic or emergency setting, it is usually because they are experiencing a set of symptoms which is troubling or anxiety provoking. A person may

present a health problem that impinges on the quality or longevity of their lives, but, the assumption that seeking medical help is tantamount to placing their lives in the hands of doctors is aggrandising and dramatic. Life and health is perceived through a lens of disease and treatment, constituting the patient as a medical object. Following this dramatic statement, the document introduces the notion of the 'good doctor':

> Patients need good doctors. Good doctors make the care of their patients their first concern: they are competent, keep their knowledge and skills up to date, establish and maintain good relationships with patients and colleagues, are honest and trustworthy, and act with integrity and within the law.

> Good doctors work in partnership with patients and respect their rights to privacy and dignity. They treat each patient as an individual. They do their best to make sure all patients receive good care and treatment that will support them to live as well as possible, whatever their illness or disability. (ibid., 4)

The notion of a 'good doctor' is complex. There is an expansive body of research devoted to what constitutes a 'good doctor' and how a 'good doctor' is perceived (Corrado 2001; Judge & Solomon 1993; Jung et al 1998). The symbolic evocation of the term, 'good doctor' is interesting, as the doctor is conceptualised as virtuous, demonstrating 'goodness'.

In above statements, however, the GMC conceptualise the 'goodness' of the doctor as a set of practical criteria by which it, the GMC, as professional regulator and licensing authority, recognises doctors. The statement begins by identifying the prioritisation of patient care as the outward symbol of a good doctor. It then goes on to outline the framework that constitutes how a doctor should 'make the care of their patients their first concern'. This is through accomplishing proficiency in their work, demonstrating their knowledge and skills as current, exhibiting good interpersonal skills, honesty and integrity. All these criteria reference the elements of performance that make up the four domains of practice upon which assessments, appraisal and revalidation are based on.

In summary, I would argue that deconstructing the 'goodness' of the 'good doctor' into these component parts may facilitate assessment of performance and thus serve the surveillance and regulatory functions of the GMC, but they do not adequately capture the contingency of a doctor's practice nor the full complexities of good clinical care. As such this reductive attempt to define and encapsulate how a doctor *cares* for her patients supports a current criticism of medical practice as a 'tick box exercise'. In this description, practice is viewed through a series of measurable performances that may very easily obscure the more contingent and unforeseen events of doctor-patient relations.

In the narrative of Mr. Pitt, I would contend that both Dr. Chou and I demonstrated competence (the correct diagnosis and treatment plan was made), up to date knowledge and skill (decision made to insert a stent, and the best radiologist in the department was identified for the potentially difficult procedure). Good relationships were maintained between patient and colleague (the two doctors communicated well to expedite the procedure, the patient trusted me sufficiently to explain his concerns and he found Dr. Chou polite, clear and courteous).

Did the procedure fail to occur because of a problem in communication skills? In one sense, definitely not. Dr. Chou and I articulated all the relevant features, consistent with GMC defined 'best practices'. Information was provided in simple language. All the necessary steps were taken to ensure urgent and appropriate care was given. However, no-one could anticipate the eventual 'failure' of care that distinguished this event of practice. This may be a consequence of the approach adopted by a regulatory perspective. In this conception, Care is viewed as a complicated procedural event: the 'adding up' of a series of complicated steps which amount to good clinical care. As opposed to the complexities of actual clinical practice: how the reality of Care unfolds in everyday clinical encounters. This failure may also be due to the *force of affect*, which is 'unpredictable'. It exceeds a 'sense' of rationality: the affect that develops from interpreting the doctor's words through a growing anxiety,

which colours the interpretation. This illuminates what I perceive to be at the heart of the 'good doctor'; the tension between care as a sequence of *complicated steps* versus care as contingent *complex practice*.

Complicated steps versus complex practice

The content of material between the two editions of *GMP,* 1995 and 2013 has not altered greatly. This may seem surprising given that *GMP* (1995) was a guidance for failing doctors and as such, the content was originally written to provide clear instructions for doctors who were struggling to meet the basic requirements of patient care. For example, an explanation is given as to what constitutes 'good clinical care': '*adequate assessment of the patient's conditions, based on the history and clinical signs including, where necessary, an appropriate examination [...] arranging investigations or treatment*' (*GMP,* 1995: 2). This explanation is basic and typical of how clinical practice would be described to medical students. However, it was clearly felt that for 'problem doctors' the return to simple, basic advice was key to help them remedy their poor performance.

The recent publication (*GMP,* 2013) has kept the original material but altered the layout of the content: it is presented as bullet points and a series of paragraphs. I would argue that the way in which the material is arranged is consistent with a conception and presentation of Care as a sequence of (complicated) steps that must be enacted. An example is the excerpt below, taken from the domain entitled 'Knowledge, Skills & Performance' (*GMP* 2013, p. 8). It itemises the actions that must occur, according to the GMC guidelines, in order to provide good clinical care (See Figure 7).

In the above, clinical care is broken down into its component parts or as I have argued above, its many steps. I remember when I first read *GMP* as a new consultant, being struck by how such a presentation of care, as a sequence of steps, created an

Figure 7: Good clinical care (taken from *GMP* 2013: 4)

16 In providing clinical care you must:

a   prescribe drugs or treatment, including repeat prescriptions, only when you have adequate knowledge of the patient's health and are satisfied that the drugs or treatment serve the patient's needs[6]

b   provide effective treatments based on the best available evidence

c   take all possible steps to alleviate pain and distress whether or not a cure may be possible[7]

d   consult colleagues where appropriate

e   respect the patient's right to seek a second opinion

f   check that the care or treatment you provide for each patient is compatible with any other treatments the patient is receiving, including (where possible) self-prescribed over-the-counter medications

g   wherever possible, avoid providing medical care to yourself or anyone with whom you have a close personal relationship.[6]

impression of clinical practice as a 'tick box' exercise: a series of activities to be completed.

There are items under the subheadings of care that comprise attitudes or behaviours which a person has to 'check off' as they complete the criteria. The danger with this approach is that the focus of the clinical encounter becomes box ticking to meet the authorised criteria. This approach places an emphasis on the *process* of care rather than *what actually happens* and *what is experienced* at each stage of care. The list above constitutes care in simple mechanistic terms. These terms in no way reflect the complexities of doctor-patient relations, and all the intensities that affect such relations including how a doctor might cope, which is illustrated in Mr. Pitt's story.

If one returns to the narrative of Mr. Pitt, I accomplished all the criteria cited in Figure 7: I prescribed the correct treatment for Mr. Pitt based on best practice, I checked that it was compatible with all his other treatments, I consulted a colleague (Dr. Chou), I did what I could to anticipate and alleviate Mr. Pitt's distress by spending time with him, repeating explanations, drawing diagrams etc. However, whilst the steps in the process of care were accomplished, the objective of the care plan was not. I would propose that this may owe a great deal to the fact that care which is contemplated principally as an abstract process, neglects to understand the real life processes of human interactions and entanglements that constitute the *complexity of* the practice and experience of care.

I also considered whether there were other factors that had contributed to the decision to present care in this style. I questioned whether developing the notion of care as a step wise process was influenced by the assessment criteria that shape a doctor's performance. Put simply, fragmenting care into technical components that are measurable may make the performance of clinical practice more amenable to assessment, which is a fundamental tenet of appraisal, revalidation and licensing doctors for practice.

At present, the morbidity and mortality figures of surgeons in disciplines such as vascular surgery, breast surgery and orthopaedics are subject to performance tables[10]. This is taken to provide an indication of the technical expertise and clinical experience of a surgeon. Similarly, there are other assessments that attempt to quantify and capture the performance of a surgeon. In the below example (Figures 8 and 9), I have compared the instructions in *GMP* on knowledge, skills and maintaining trust with the GMC issued patient feedback questionnaire. My objective is to explore similarities in the content between the two and see if the content of GMP has been

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[10] http://www.nationalhealthexecutive.com/Health-Care-News/surgeons-performance-data-published-in-nhs-league-tables-

organised in such a way that the questionnaire can be used to check a doctor's compliance with it.

Figure 8 comprises excerpts from Domain 3 and Domain 4, where instructions on how to construct therapeutic relationships with patients are issued. The requirements made of the doctor are specific and detailed. It demands the doctor show politeness, an ability to listen, honesty and integrity, and so forth. Handbooks providing guidance are useful precisely because they act as a point of reference, a source that can be delved into at times of uncertainty or when there is a query. Requiring doctors to be polite or honest is obviously an important aspect of the culture of practice and therefore its inclusion in the handbook is to be expected. The challenge however, is to provide guidance and advice as opposed to rigidly enforcing a written code of conduct.

As seen in the excerpts taken from *GMP* (Figure 8) the design of the handbook is as a series of instructive paragraphs and points, suggestive of a regulatory code of conduct, thereby adopting the style of a legal statute, though it is described as 'guidance'. The 'legalification' of non-legal fields is a pervading feature in this and *Good Surgical Practice* (2014b). *Legalification* is a term I introduce in this thesis to connote non-legal documents being structured by organisations to resemble legal statutes and other contractual documents used in legislation and systems of Law. Legalification is used as an approach to behaviour and attitudes in all aspects of life. Its use in *GMP* implies a contract for doctors. A physician must demonstrate compliance with all the criteria to be allowed to continue to practice - this is the foundation for appraisal and revalidation.

I believe that the intentions behind *GMP* (2013) are worthy, notably to remove doubt regarding the expectations of minimum standards in practice. However, the highly didactic content and prescriptive format is insufficient to capture the complexity of actual events of clinical practice and as such inadequate for the reality of medical practice.

Figure 8: Excerpts taken from Domain 3: Communication, partnership and teamwork (GMC, 2013; p. 13) and Domain 4: Maintaining Trust (ibid., p. 21)

Establish and maintain partnerships with patients

46 You must be polite and considerate.

47 You must treat patients as individuals and respect their dignity and privacy.[12]

48 You must treat patients fairly and with respect whatever their life choices and beliefs.

49 You must work in partnership with patients, sharing with them the information they will need to make decisions about their care,[15] including:

    a their condition, its likely progression and the options for treatment, including associated risks and uncertainties

    b the progress of their care, and your role and responsibilities in the team

    c who is responsible for each aspect of patient care, and how information is shared within teams and among those who will be providing their care

    d any other information patients need if they are asked to agree to be involved in teaching or research.[9]

50 You must treat information about patients as confidential. This includes after a patient has died.[10]

Act with honesty and integrity

Honesty

65 You must make sure that your conduct justifies your patients' trust in you and the public's trust in the profession.

66 You must always be honest about your experience, qualifications and current role.

67 You must act with honesty and integrity when designing, organising or carrying out research, and follow national research governance guidelines and our guidance.[2]

Communicating information

68 You must be honest and trustworthy in all your communication with patients and colleagues. This means you must make clear the limits of your knowledge and make reasonable checks to make sure any information you give is accurate.

Figure 9, illustrates Section 4 and 5 of the GMC patient questionnaire (GMC, 2014). Section 4 breaks down the care received by the patient into its component parts; the personal conduct of the doctor, their clinical skills of diagnosis and treatment and how this information was presented, conveyed and organised by the doctor. Section 5 also asks the patient to comment on the doctor's integrity and candour: '*(is) this doctor honest and trustworthy*'. A comparison of parts 4a to 4g in Figure 6 with points 45 to 49 in Figure 5 show that they are matched and that the questionnaire tests the doctor's familiarity with the 'rules and regulations' as opined by the patient. In addition, the questionnaire also assesses care as a procedural phenomenon; it asks the patient to comment on the predefined steps of care (listening, being polite, providing information etc.).

Care constituted as a cultural process

There is a wide body of literature on communication skills and facilitating good patient interaction. Doctors can have excellent communication skills and demonstrate optimal body language, which though desirable is not an end in itself. Possession of these skills does not necessarily translate into success when giving care. I was proud of the rapport I had established with Mr. Pitt and the clarity and compassion of my communications with him, however it did not ensure a successful outcome.

I therefore looked to see how the GMC questionnaire (Figure 9) understood the important qualities of a doctor providing care. The ordering of the components of section 4 in Figure 6, is interesting because it begins with questions regarding the personal conduct of the doctor and ends with how the doctor performed as a whole. This document defines conduct through three criteria; are they courteous ('polite'), attentive ('did they listen') and comforting ('make you feel at ease'). I have worked as a surgeon in three other continents; South Asia (Sri Lanka), Western Australia (Perth), North America (New York), where the aforementioned 'niceties' would not be considered important or integral to framing good clinical interaction.

Figure. 9: GMC Patient Feedback Questionnaire (GMC, 2014)

4	How good was your doctor today at each of the following? (Please tick one box in each line)	Poor	Less than satisfactory	Satisfactory	Good	Very good	Does not apply
a	Being polite	☐	☐	☐	☐	☐	☐
b	Making you feel at ease	☐	☐	☐	☐	☐	☐
c	Listening to you	☐	☐	☐	☐	☐	☐
d	Assessing your medical condition	☐	☐	☐	☐	☐	☐
e	Explaining your condition and treatment	☐	☐	☐	☐	☐	☐
f	Involving you in decisions about your treatment	☐	☐	☐	☐	☐	☐
g	Providing or arranging treatment for you	☐	☐	☐	☐	☐	☐

5	Please decide how strongly you agree or disagree with the following statements by ticking one box in each line.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Does not apply
a	This doctor will keep information about me confidential	☐	☐	☐	☐	☐	☐
b	This doctor is honest and trustworthy	☐	☐	☐	☐	☐	☐

6	I am confident about this doctor's ability to provide care	☐ Yes	☐ No
7	I would be completely happy to see this doctor again	☐ Yes	☐ No
8	Was this visit with your usual doctor?	☐ Yes	☐ No
9	Please add any other comments you want to make about this doctor. Please note: No patients will be identified when this information is given to the doctor.		

These qualities are rooted in a historical tradition of pleasantry unique to the British 'way of life' and as such have cultural significance and value. As such they provide an understanding of how care is socially constructed in British society.

The authors of the questionnaire may argue that the manifestation of these qualities by a physician indicate respect for the patient and pre-empt good communication. However, I would assert that their inclusion in the document suggests how the regulators and therefore the official body of Medicine structures the *visible face* of

'Care': socially constituted by cultural virtues. These traits may hint at an approach that mollycoddles the patient: what my colleagues euphemistically call 'touchy-feely nonsense'. I know from my own experience of being a patient that polite and attentive clinicians can still leave me feeling empty and disconnected from the substance of the encounter. I therefore suggest that, to understand how a patient experiences care may require distancing oneself from cultural prerequisites and artificial codes of behaviour constructed by regulators, to find out what is important to the individual patient. *GMP* should function in an advisory capacity as a guidance, not as a dictum of care.

5.6 Two Stories of Surgical Care

The Errant Testicle

We were both scrutinizing the operating field. In this case, it comprised a 35-year old man's lower abdomen or groin, as commonly termed, and the contents of his spermatic cord (a rope like structure that runs in the tissues of the lower abdomen to the testicles in the scrotum and carries the vas deferens, a white tube carrying sperm). The scheduled operation was 'surgical repair of an inguinal or groin hernia'. A hernia occurs due to a weakness in the abdominal wall, which allows the contents of the abdomen (such as bowel or fat) to push through into the tissues of the groin. This a protruding lump, more prominent when standing, straining or coughing. However, 15 minutes into the operation, we were both stumped. We had identified the weakness in the wall and were trying to identify what exactly was protruding through the abdomen into the groin. What we found was a rather small, shriveled, egg-like structure ensconced in the spermatic cord.

"That's a testicle!" we both chimed. "My goodness, how long has that been there for?!" Answer: since he left the womb.

During pregnancy, a male foetus' testicles travel from a site within the abdomen to the scrotum. There is sometimes a delay of this process, so that at birth the testicles have not yet descended (travelled to the scrotum). However, after six months of age, if a single or pair of testicles have not yet descended, the standard practice is to identify where they are sitting (usually still in the lower abdomen) and suture both into their proper place within the scrotum. Why? The established research demonstrates that after six months of age, undescended testes rarely descend spontaneously into the scrotum. They remain in the abdomen, where they can be a cause for reduced fertility and more importantly put the individual at high risk of testicular cancer. For these reasons, male infants with a missing testicle(s) are investigated and if necessary a surgery will follow.

"I didn't examine his scrotum, I should have, but it seemed quite full", MD (consultant) admitted, sadly. Scrotal examination is a part of the examination for a patient with a hernia, but it is often missed if there appears to be no need, especially as examination of intimate areas can create anxiety and embarrassment for the patient. At this point, I pulled down the drapes and examined his scrotum, there was indeed just one unusually large testicle present.

"Well the scrotum appears deceptively normal because the one testicle he does have is so big!", I conceded. "It changes nothing however. We still have to remove this testicle, because it's a risk for cancer and besides its been non-functional for the past 35 years. It is unexpected, but we've done this young man some good today," I concluded.

The rest of the operation proceeded uneventfully. It wasn't till later, when we were both completing the paperwork for the surgery, that I found myself for the second time that day, completely astonished. While filling in the theatre record on the computer, I casually asked MB, "so what will you tell him (the patient)?" He looked up at me while composing the operative note on paper, rubbed his eyes and said very matter of factly, "oh nothing, it's not relevant, we did him no harm today. . . in fact we protected him by doing this operation. . . he was at risk of a cancer, but not anymore . . . he doesn't need to know, it will only upset him and make him uncomfortable. We've treated his problem." With that final word, he returned to his writing.

I was gobsmacked. "But, doesn't he have a right to know? I'm sure we won't alarm him if we tell him that the lump was caused by a missing testicle. . . in fact he may tell us that he always wondered why he had just one ball?! We can tell him that we did some good today." Even as I spoke these words, I knew from his body language that such a conversation was not to happen. Ever. I continued to watch him. Under 'Procedure name', he wrote slowly and purposefully, 'Orchiectomy (removal of testis) and repair of inguinal hernia'. He murmured without looking up from his writing, "I don't think that's necessary". That was that.

Crème Brûlée

'So. . . what d'ya wanna do? I mean if you wanna talk to him, that's fine but I'm tellin' ya, he's not listening and he's not gonna change his mind.' She looks at me, expectant, twiddling the end of a twist of her hair. It was her way of throwing down the gauntlet, her way of saying the unsaid; 'if you think you can do better, go right ahead. . . 'OK, Mary Ellen,' I say. I am exhausted after spending the last 13 hours upright in what was supposed to have been a 'routine' liver transplant.

I knock gingerly on the door of patient room 10. There is no answer. I knock again. Maybe he's asleep or in the bathroom, I reason. Or maybe he's sitting in his bed, awake and he doesn't want to hear.   I walk in slowly. "Mr. Martino, good morning. I just finished a surgery and thought I'd pop in and see how you are." Not quite the truth, but it will do. He does not meet my gaze, instead he stares out through the window, motionless. It is then that I notice sitting in the shadows at the back of the room, his wife and son. "Oh I'm sorry, I didn't realise you had family here", (I nod my head at the family in recognition). "Well, good. Perhaps we can all have a chat together and see what we can do to get you stronger again."   I try not to sound too chirpy: too much is always a step too far. The wife and son get up and move their chairs closer to Mr. Martino's bed, so that we are all now facing him. A jury sitting in judgement.

"I hear you won't eat anything. The nurses tell me that you haven't eaten in two days." I present the facts. "In fact, they say that you refuse all food, even the delicious food that Mrs. Martino brings in for you". I have upped the stakes and briefly glance at her, smiling weakly in recognition of her efforts. Mrs. Martino however, is quietly sobbing. "He says this was a mistake", Luke, their son, suddenly interjects. He sounds worn and exasperated, motioning with his arms. "He says, that he knows this transplant has failed because he feels worse now than he did before the operation! He says he knows he's dying . . . that no-one can save him." The opening statements have been made.

Mr. Martino remains still, his gaze fixed on the view from the window. From the corner of my eye, I catch sight of the clock. 9.15 a.m. The next patient for surgery would have been escorted to the operating suite by now (Grace Matthews, kidney transplant, right side). She's probably waiting for me in the anaesthetic room. In fact, the whole theatre team is most likely waiting for me and agitating as it becomes evident that my 'no-show' means the surgery is being delayed. Yet again. 'OK', I sigh, put my hand in my pocket and switch my phone off. I walk over to the mobile table which is piled high with an incredible assortment of food, all cooked lovingly and patiently by Mrs. Martino.

I pick out a small glass dish containing a wonderfully aromatic crème brûlée, the vanilla and cinnamon are heavenly. I think back to three months ago when Julian Martino walked onto this same ward; disbelief, trepidation, wonder at the prospect of an impending liver transplant. Since then, one complication after another has weakened him and made his 'new' liver a hostile implant. He is presently in a state of acute organ rejection. For the second time in twelve weeks. The effects are florid and pernicious. A strong cocktail of anti-rejection drugs has eaten away at his tissues and destroyed his innate defences against disease. I perch on the edge of his bed, teetering on a precipice holding only dessert.

"I'm not going to lie to you and promise that everything will be better, that what you're going through now is temporary. . . not, because it isn't. . . but because I just don't know. When I told you that this liver transplant would mean a new life, a new beginning for you and your family, I truly believed it. Yes, I've seen things. . . bad things that happen when transplants go wrong, but that day when I came to talk to you here on the ward, I truly . . . in my heart . . . never thought that those bad things would happen to you, because you and the new liver seemed perfect for each other! It seemed like the chances of things not working out were so, so small." I continue to talk slowly, the fatigue like a sponge in my brain, sucking up thoughts and words.

Normally I would have rehearsed this conversation mentally as I walked to his room, however, at this moment I am tired, hungry (damn this brûlée!) and irritated at the thought of the theatre staff waiting for me downstairs who are most likely cursing as they reach my voicemail repeatedly ('why the hell is her phone switched off?!'). But mostly I am tired. Tired of the one in a hundred times when things go wrong, tired of offering explanations that are always inadequate because the promise of something better never quite materialises, tired of the heroic efforts that fall short of finding a permanent solution to the destruction, devastation and disappointment of these transplant lives. Tired, tired.

I twist and turn the spoon in my hand, a blunt scalpel waiting to slice and dice the brûlée. Mr. Martino has not flinched once in the ten minutes I've been in the room. He continues to stare blankly out of the window, oblivious to my words, indifferent to my presence. He gives me nothing. I dig into the brûlée and scoop up a sliver of creamy flesh.

"I . . .if you don't eat, then what you're telling me, what you're telling the world is, 'I want to die'. . . because if you don't eat then that's what happens . . .you die, whether you've got a transplant inside you or not. And that's just not fair. . . it's not fair to them (I point to his wife and son) because all they want is to take you home, healthy and possibly even happy. . . and you know what sir? It's not fair to me. . . because that means I did a bad thing when I gave you that liver. . . I did something to harm you. . . I hurt you in ways that I could never have imagined. . . and I am so sorry because I can't undo it, I can't take out that liver, that thing that has poisoned you, because I have nothing to replace it with, absolutely nothing."

Tears are welling up in my eyes, but I continue to speak slowly and purposefully. "So you can refuse all this glorious food cooked with so much love and hope because you've clearly given up on hope and you sure as hell have given up on me (my voice starts to falter, I am exhausted. I want to curl up at the foot of his bed and sleep and sleep. And forget). "And I am so sorry. You will never know how sorry I am. . . you

see I have nothing left to give you right now, not a thing . . .except. . . except this bloody amazing creme brûlée that I didn't even make for you. . . that's how lost I am with you." Julian Martino turns his impenetrable gaze to the creme brûlée, never once meeting my eyes. Without a word, he takes the spoon from my fingers and puts it to his lips. He chews slowly on the sweet flesh. Languid and methodical, he continues to scoop out the contents of the dish all the while fixing his gaze out of the window. There is no sign of whether he is enjoying it or not. Infact I don't believe he eats to taste.

I think he eats not because my words have resonated.
I think he eats not because hope has miraculously suffused his tissues.
At this moment in time, I think he eats to lighten my load.
He eats because he pities me.
He eats so that I may have hope again.
Whatever it is, I gobble up every morsel that he offers.

5.7　　　　The Ethics of Surgical Practice

The above two narratives from my surgical journal, are examples of the different ways surgeons can act, when confronted by an unexpected event in a clinical encounter. The surgeon is caught unaware by the 'thisness' or acuteness of the unanticipated event (contingent practice) which had neither been foreseen nor predicted. In coping with an unfamiliar situation, how the surgeon experiences the event and engages with the encounter (*affective* relations) may trigger ways of responding (thinking, acting) that she had not conceived prior to the event. Earlier in the chapter I discussed how authorised manuals of practice (Official Care) do not fully capture the complexity of actual events of practice (Real Care). I now investigate how surgeons respond within encounters of Real Care (providing care in contingent events) in relation to the recommendations of Official Care: what is set out in clinical guidelines and ethical codes. I draw on the theories of affect and ethics from Spinoza, Deleuze and Massumi to analyse and interrogate the material.

What is ethical practice?

In the first narrative, the unexpected event was the discovery of a testicle in an otherwise routine hernia surgery. MD, the senior surgeon, is an inspiring and compelling figure. No patient leaves his clinic without a diagnosis, or a clear plan to establish a diagnosis. He was careful to elicit important details when a patient describes his health problems. He was compassionate to distressed patients, sensitive to the impact of their condition and zealous in the pursuit of treatment and cure.

Therefore, why did he not inform the patient of the discovery, a non-functioning testicle in a hernia sac? Is it because, as he stated, it was 'not relevant'? Certainly, removing a non-functional testicle which the patient was unaware of and which contributed nothing to his health had no adverse outcome on his health. In fact, by removing the testicle, MD had eliminated the risk of it becoming cancerous in the future. Perhaps these issues motivated his belief that the operative finding was

'irrelevant'. But the crucial question in this and every clinical encounter between doctor and patient is whether the surgeon's course of action was ethically sound. Did MD fulfil his ethical duty to the patient? And what constitutes the ethical act of the surgeon?

'You must be honest and trustworthy in <u>all</u> your communication with patients and colleagues.'

In chapter 2 I discussed the events leading to the issue of Candour being prioritised in healthcare systems (DoH, 2014a; 2014b; RCS, 2014b; 2015). In late 2014, this culminated in new legislation through the introduction of a *statutory Duty of Candour* for all healthcare professionals and organisations involved in patient care (House of Commons, 2014: 24):

> (1) [Registered persons] must act in an open and transparent way with relevant persons in relation to care and treatment provided to service users in carrying on a regulated activity.

The Duty of Candour (2015) document published by the RCS is primarily concerned with honest communications when serious errors or adversity have occurred: 'a *notifiable safety incident*, i.e. an incident that resulted or has the potential to result in moderate harm, severe harm or death' (ibid., 9, my emphasis). However, the document does state that, 'after the surgical procedure, the surgeon has a duty towards his or her patient to give an account of what happened during the operation' (RCS, 2015: 8).

MD did meet the patient afterwards while he was recovering from the anaesthetic, and gave him a brief and reassuring account of the surgery. Critically, he did not divulge the surprising findings of an errant testicle. It could be assumed that a description of what occurred in a clinical procedure or treatment or the sequence of events that led to a particular outcome (good or bad), should be a simple matter of speaking the *truth*: that which happened. Isn't this the *ethical* course of action—a transparent conversation with the patient's best interests at heart?

The fact that this did not happen raises the question as to *who's interests are served* by an omission of the full facts in this case? To answer this I offer an alternative theory, based on the fact that MD appeared to think that full disclosure of the procedure would cause the patient unnecessary distress and confusion.

Difficult conversations

Perhaps the surgeon, MD, imagined the following conversation:

Surgeon: *A funny thing. . . we found a testicle in your hernia.*

Patient: *My testicle? What do you mean? You took my testicle out?!!*

Surgeon: *Yes, but also, no. We found that you had one testicle in your scrotum and the second one was hiding inside your belly.*

Patient: *But I don't understand, I've always had two testicles. Why did you take the second one out? Now I've only got one testicle. I thought you were operating on my hernia?*

Surgeon: *No, you've only got one testicle. The second one had not fully descended into your scrotum when you were a child. But don't worry, you'll be just fine. You know it's a good thing we took it out, because it could have become a cancer.*

Patient: *Cancer? You mean I might have cancer? But I came in today because you told me I had a hernia!*

There are many conversations in routine practice that resemble the above: complicated, complex and ripe for miscommunication and misunderstanding. It is well established and extensively covered in the literature (Maguire et al, 1986; Dosanjh et al, 2001; Fallowfield and Jenkins, 2004; Barnett et al, 2007; Turini et al, 2008; Herbert et al, 2009) that communicating complicated information or bad news is an area of difficulty, distress and reluctance for most clinicians. Physicians are faced with the dual challenge of managing the turmoil of a patient's emotions (shock, anger, grief) as well as coping with personal feelings of disappointment, guilt and sadness.

Rigorous training in communication skills and the development of practical algorithms

help prepare physicians as well as simplify and structure potentially difficult conversations or clinical events. However, these measures cannot accurately account for the intricacies of human expectation and understanding, nor how an event actually transpires. The nature of complex interactions is that they cannot be reduced to discrete categories or their outcome be pre-judged.

Candour

It is my opinion that the established guidance is clear as to what the standard of practice should be in this situation: MD was expected to communicate the operative finding to the patient demonstrating the transparency of his practice. It could be argued that the work on Candour in healthcare is so strongly oriented around adverse events that the surgeon believed that this specific event of practice did not qualify for such a conversation. After all it was not a 'notifiable safety incident'.

But my argument is separate to these. I assert that efforts to further explicate or elucidate terms such as 'adversity', 'harm' or even 'candour', as is advocated in some consultation documents (Williams and Dalton, 2014) will not necessarily create more clarity for the physician, nor provide inducements to engage honestly and openly with patients. This is not to discount existing measures to identify and remove those attitudes and behaviours that foster and legitimise intolerable standards of care, endangering patients. Instead, I argue that an approach that single-mindedly pursues the development and enforcement of more and more clinical guidance and highly specified criteria, is indifferent to the reality of medical encounters. This approach neglects to understand how the complexities of actual practice *affect* the ways in which professionals respond and react in difficult and challenging situations of Real Care. To illustrate the latter, I outline some of the factors that may have been implicated in how MD acted using Deleuze's theory of ethics.

An ethics of immanence

The above discussion identifies two ideologies of ethical practice. In the first, ethics is

defined as an uncompromising code of conduct that is grounded in Kantian principles of morality. A physician's actions are assessed according to moral criteria, which evaluate and judge the intentions, thoughts and behaviours along categories of 'right' and 'wrong'. Deleuze opines that ethics premised on a foundation of morality reflects the transcendent framework of values that are viewed as important by society at that moment in time. This structure of values is expected to direct and influence how individuals and organisations think and 'do'.

The second ideology of ethics emerges from real events of clinical practice, in which a doctor is forced to make decision in the 'here and now' (haecceity of practice) of an encounter according to the contingencies of the actual doctor-patient relationship. To explore Deleuze's notion of ethics, I draw on the writings of Daniel Smith, who provides excellent insights into some of Deleuze's denser theory.

> What he calls "ethics", is on the contrary, a set of "facilitative" [*facultative*] rules that evaluates what we do, say, and think according to the immanent mode of existence that it implies. One says or does this, thinks or feels that: what mode of existence does it imply? "We always have the beliefs, feelings, and thoughts we deserve," writes Deleuze, "given our way of being or our style of life." (Smith, 2007: 67)

An "immanent mode of existence" is at the heart of Deleuze's conception of ethics, but what does it mean? Notions of ethics, for Deleuze, are intimately linked to an individual's *capacity to act* and the *affective relations* that enable or diminish the *power* to act.

To return to the narrative example, to understand the actions of MD is to explore how he *prehends* (Whitehead, 1929) an event. Prehension is a term introduced by Alfred Whitehead, to denote how one entity *takes account of* another entity. For example, performing operations involves a sequence of prehensive relations involving the organic and non-organic components that constitute the act of operating. Put simply, there are intricate networks of relations involving the rotational action of the wrist, the scalpel, sutures, blood, tissue, memories of previous procedures, frustrations,

surprises etc. These entities mingle, pull apart and act on each other in complex tiers of intra-action (Barad, 2007) which characterise the act and experience of operating. It is difficult to know precisely how these relations influence an individual to think or act in a specific way. However, I suggest that these relations are involved in how an individual engages with an event because they constitute how something comes to matter to her.

In the narrative of the hernia operation, how does MD prehend the surgical encounter? What affects him in the encounter? Is he affected by the discovery of the testicle? What affects diminish or augment his capacity to act in this example of practice? These questions emphasise the *affective conditions* that constitute his capacity to act and how he engages with the encounter: 'we arrive at a real definition of a mode of existence only when we define it in terms of its power or capacity to be affected […] what is it affected by in the world? What leaves it unaffected' (Smith, 2012: 154). The power to act in a given moment is not determined by 'logical possibility' (what we are told, know or conceive to be possible); it is what is actualised at every moment (what the person is actually *enabled* to think, do, react or respond).

Thus, an ethics of immanence refers to the capacity to be affected in ways that encourage an individual to ask in a given moment or situation, 'what can I do, what am I capable of doing?' (Smith, 2007: 67). Critics have accused Deleuze and Foucault of peddling 'immorality' by introducing a philosophy that rejects normative criteria to judge thoughts or actions.

Deleuze provided a very staunch defence of his ideas, which are beyond the objectives of this thesis. However, I want to develop one particular explanation as it has significance to the narrative. A particular mode of existence can be assessed along established moral criteria. The latter signifies a transcendent framework that judges intentions and actions as 'good' or 'bad' depending on how closely they comply with an external system of approved values.

But an ethics of immanence, is distinguished by the *singularity of an event*—the specific situation in which an individual finds himself in at a given moment: 'the object of philosophy is not to contemplate the eternal, nor to reflect on history, but to diagnose our actual becomings', (Deleuze and Guattari, 1994). An ethics of immanence requires a physician at every moment to ask, 'what is in my power to do such that I reach the limits of my capabilities?' What I am advocating is an approach that promotes physicians to ask, 'in this event of practice have I pushed myself to do, to achieve all that I can?'

'Doing the right thing', is a moral stance premised on known and approved outcomes that pre-exist an event. It is founded on a framework of pre-defined values to establish acceptable and safe practices. However, broad application of a universal system of pre-approved, transcendent values can potentially limit the intrinsic and actual capacities of an individual, in two ways. First, a rigid classification of 'good' and 'bad' practice may dissuade a physician from being *responsive* or effectively engaging with an encounter. This is because the physician's 'natural' inclination or response in a situation is not recognised or accommodated by the authorised forms of conduct. Second, responding in a manner that transcends established protocols is critical if new ways of being, thinking and doing are to suffuse medical practice, enhancing patient care and professional conduct. It is this second point that I next develop through an analysis of Mr. Martino's story.

An ethics of practice: how 'should' physicians conduct themselves?

The narrative of Mr. Martino is told from my perspective (the surgeon's story). It is the story of an *unexpected patient response* to a complicated liver transplant. The complication itself, organ rejection, though infrequent, is well researched and familiar to transplant surgeons and explained to patients (in preparation for transplant surgery) as a possible risk. But, as familiar as I was with the complication, I was unprepared for exactly how Mr. Martino would respond. I was fully cognisant of how the condition would manifest physiologically; jaundice, abdominal pain, cachexia, fever, dark urine,

loss of appetite. However, I was unaware of how precisely it would *affect* Mr. Martino and unprepared to deal with his response: a refusal to eat, an avoidance of eye contact or engagement with another person.

Some may assert, that these are the typical features of a depressed transplant recipient who is worn out by the daily and ongoing challenge of a complicated liver surgery. But, I would argue that this viewpoint is problematic if it conceptualises the encounter through a *singular* biomedical lens. If his reactions and responses are narrowly emphasised as the psychological features of organ rejection, then this can eclipse other factors that emerge from the surgeon-patient relation and that really matter to the patient.

My engagement with the patient, Mr. Martino, may be construed by official codes of conduct as overly emotive, inappropriate and unnecessarily entangled. The language I used to communicate my disappointment and despair may be judged as emotional, personal and crucially, unprofessional. I may be accused of lacking the appropriate detachment from my patient to ensure that I was objective and dispassionate—key qualities historically lauded by conventional medicine as critical to the provision of best medical practice[11]. Contrasting objectivity in Medicine with the subjectivities of practice is beyond the scope of this thesis partly because it is an extensive area of study in itself.

However, I included this narrative not to stimulate judgements or opinions as to whether I behaved correctly or appropriately, in what had become an emotionally charged situation. My purpose is to illustrate that there may be no 'right answer' as to how I should have conducted myself in that situation. This is because frequently difficult patient interactions have no obvious or easy solutions. Second, an ethics of care is imagined as more than a code of behaviour or conduct; it is an ethics relative

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[11] Best medical practice is a term used in Medicine to describe treatments or ways of working that have been proved to demonstrate the best clinical outcomes.

to how one responds and emerges in the 'thisness' of the clinical encounter and all its inherent uncertainty. Judith Butler (2005) succinctly summarises the issues:

> Perhaps most importantly, we must recognise that ethics requires us to risk ourselves at moments of unknowingness, when what forms us diverges from what lies before us, when our willingness to become undone in relation to others constitutes our chance of becoming human. To become undone by another is a primary necessity, an anguish to be sure, but also a chance - to be addressed, claimed, bound to what is not me, but also to be moved, to be prompted to act, to address myself elsewhere, and so to vacate the self-sufficient 'I' as a kind of possession. If we speak and try to give an account from this place, we will not be irresponsible, or, if we are, we will surely be forgiven. (p. 136)

'*Moments of unknowingness*' are the occasions where one struggles to work out how to proceed given the absence of appropriate guidance or reference to prior knowledge or experience. It is the task of engaging with the unfamiliar. Ethical codes are necessary in formulating guidelines, but often due to unexpected events of practice, they become inadequate. In these situations, it may be necessary to 'risk ourselves', that is, to embrace the uncertainty of the encounter with a view to responding in ways that exceed what is known. Such a response I argue is intimately connected to the affective conditions of the experience.

Affective experience: 'drives', 'inclinations' and 'microshocks'

Affect, as discussed in Chapter 3, has been written about widely by many philosophers; Baruch Spinoza, William James, Gottfried Liebniz, Alfred North Whitehead, Gilles Deleuze, Felix Guattari, Friedrich Nietzsche, Gilbert Simondon, Brian Massumi. The concept has also been described as, 'inclinations' (Liebniz), 'drives' (Nietzsche, 1982), 'intensities' and 'desires' (Deleuze and Guattari, 1977), 'thinking feeling' (Massumi, 2002). I hypothesise that in moments of unforeseen and unpredictable events of clinical practice, as illustrated by the narrative, a surgeon has the power to *affect* the events of the encounter and is in turn *affected* by it. This creates a state of *affectation* which is mostly imperceptible (we are not consciously

aware of it), however, affect is perceived or 'felt' through the effects it exerts. These effects are seen in how an individual is capacitated or how they are activated to think, emote, behave: 'a body passes from one state of capacitation to a diminished or augmented state of capacitation' (Massumi, 2008: 2).

How we choose to behave in every moment, as discussed earlier, is related to Deleuze's notion of an immanent ethics. A capacity to transition to an 'augmented state' refers to what I can do which is at the limit of my abilities in a given moment. I use an example relating to my young child to illustrate this idea. I hear my baby crying because his nappy needs to be changed. I can put down my cup of tea get up and change his soiled nappy (augmented state) or wait for my husband to tend to our child ('diminished' state). Therefore, to reiterate, I have the capacity to change the baby myself but choose not to do so in the moment that I am confronted by this event. It is easy to objectify the two options I choose between ('changing the nappy' and 'not changing the nappy') by making the assumption that I rationalise and make a judgement between them. However, these options are my 'drives' (Deleuze and Guattari 1983, adopt Nietzsche's original term, cited in Daybreak 1881) or what Leibniz calls 'motives' and 'inclinations'. They represent what my tendencies or orientations are in this situation.

> If the soul were like an empty page, then truths would be in us in the way that the shape of Hercules is in an uncarved piece of marble that is entirely neutral as to whether it takes Hercules' shape or some other. Contrast that piece of marble with one that is veined in a way that marks out the shape of Hercules rather than other shapes. This latter block would be more inclined to take that shape than the former would, and Hercules would be in a way innate in it, even though it would take a lot of work to expose the veins and to polish them into clarity. This is how ideas and truths are innate in us—as inclinations, dispositions, tendencies, or natural potentialities, and not as actual thinkings, though these potentialities are always accompanied by certain actual thinkings, often insensible ones, which correspond to them. (Leibniz, 2008: 4)

Like the veins in the marble, my inclinations are motifs that run through my being and which can be modulated. Minute perceptions are; the comfort of the sofa I sit on, the warmth of the tea cup, the temporary moment of time to myself, getting up to change would be the distressed crying of the baby, the desire to hold and comfort, the potent odour of the nappy, onerous task of cleaning the mess. How I eventually behave, is a result of the tussle that myself is experiencing between the feelings that are agitating it and how I choose to resolve those tensions.

Massumi derives his notion of 'microshock' from Deleuze and Guattari's (1994) concept of 'microperception'. He states that as individuals we have no fixed identity ('pre-constituted'), instead we are 'pre-populated' by feelings, memories, inclinations, drives. We emerge as subjects through the act of experiencing where affect is a dimension of this event.

> Affect for me is inseparable from the concept of shock. It doesn't have to be a drama. It's really more about microshocks, the kind that populate every moment of our lives. For example a change in focus, or a rustle at the periphery of vision that draws the gaze toward it. In every shift of attention, there is an interruption, a momentary cut in the mode of onward deployment of life. The cut can pass unnoticed, striking imperceptibly, with only its effects entering conscious awareness as they unroll [. . .] I'd go so far as to say that this onset of experience is by nature imperceptible. (Massumi, 2008:4).

Massumi argues that at any given moment we are bombarded by an infinite series of minor interruptions ('momentary cut') that can be perceptible but largely pass unnoticed. Sitting in the room with Mr. Martino, the encounter involves affective relations between the visual image of his lean and yellow frame, the light and shade in the room, the phone in my pocket, the sound of Mrs. Martino's sobs, the ticking clock, knowing irate staff are waiting in theatre, hunger, the aroma of food, Mr. Martino refusing to look at me, fatigue, irritation (and other things that are not perceptible to me). While I register these events, I am not conscious of the intensities they precipitate. However, the affective relations that form and develop in the encounter

become visible through the consequent ways in which I think, emote and behave. This is how the micro perceptions of affect can manifest.

After an affective event, the body readjusts around the interruption and infolds the *context* of the experience, preparing for what is to follow: 'it in-braces, in the sense that it returns to its potential for more life to come, and that potential is immanent to its own arising' (ibid., 4).

> [...] in the instant of the affective hit, there is no content yet. All there is is the affective quality, coinciding with the feeling of the interruption […] That affective quality is all there is to the world in that instant. It takes over life, fills the world, for an immeasurable instant of shock. (ibid.)

For Massumi, the initial engagement in the encounter is purely mediated through the affective dimension ('the affective hit'), the relations of intensity that form and develop creating an experience of the encounter. Although these affective relations emanate from my experience of the encounter, they are not personal to me. However, each body is different in terms of their capacity to be affected and their tendencies which result in affective states triggering a multitude of ways to think, act and emote.

Other physicians confronted with the same encounter may have responded differently. As suggested earlier, the surgeon may attribute Mr. Martino's attitude and behaviour to depression and proceed to find an appropriate therapy (psychiatric referral, prescription of anti-psychotics etc.). Others may have walked out of the room wishing to avoid a difficult conversation or decided to 'cheer him up' with humour or promises of improved health, or confronted him angrily about his 'non-compliance' or gone away to read up on new cures for organ rejection and so on. Most importantly, it could be hypothesised that my actions in the encounter were *attuned* to Mr. Martino's affective state. While I cannot know what his experience of the medical complication is, the events in the encounter affected us in similar ways. Massumi uses 'affective

attunement', first described by Daniel Stern (1987)[15], to conceptualise how affective states can create unison as well as difference in a singular event.

The immanence of practice: 'Discognition'

I have argued in this chapter for an awareness of how a doctor's thoughts and actions may initially be impacted by the affective nature of an encounter. Steven Shaviro (2015) supports this argument in his writings. He too argues that as *sentient beings,* our initial experiencing of the world is not necessarily conscious, rational or immersed in cognitive thought. He contends that how we first come to know the world, understand and make sense of it is grounded in aspects of sentience. These include sensory awareness or arousal, which inform mental functioning and subjective experience. Sentience therefore is a mode of 'thinking' that has yet to be captured by cognition or emotion.

Shaviro introduces the notion of 'discognition' as what *'disrupts cognition, exceeds the limits of cognition, but also subtends cognition'* (ibid., 10-11). He appears to suggest that sentient modes of thinking are not only prior to cognition but also have the potential to interrupt rational processes thus reconfiguring how we 'think' on matters. Put another way, a state of discognition is a parallel mode of thinking. Thus far, I have described how affect can mediate knowing and understanding. However, Shaviro seems to propose that affect in and of itself is a mode of knowing and being. I suggest that the notion of discognition provides another way of contemplating the affective dimension.

In summary, each clinical encounter is charged with affective relations that can spark numerous ways of coping, acting and thinking at every moment. However, a transcendent framework of ethics sets out specific ways of thinking and practicing that may appear unconnected to the acuity of real practice. I am advocating for an ethics

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[15] Stern suggested that mother and infant share affective states and experiences through affective attunement. This was the observation that mothers undertake a range of actions (e.g. touching, smiling, cuddling) that reflect and enhance the presumed affective state of the baby. The mother's actions create a preverbal understanding of affective states.

of immanence which relaxes transcendent frameworks to consider the affective states that form and develop in a clinical event. In events of practice that are unanticipated or unexpected, there is a need to consider carefully the immanent nature of clinical relations and practice. The narrative depicts how an unanticipated event of practice generated affective states that led to a renegotiation of the doctor-patient relations.

5.8 *Good Surgical Practice* (2014)

In September 2014, several surgical organisations[17] collaborated to write and produce *Good Surgical Practice* (2014), which I abbreviate to *GSP*. The document sought to make the guidance and standards outlined in *GMP* relevant to surgeon's engaged in surgical practice. *GSP* opens with the following statement:

> We share the privilege of working as surgeons, with the responsibilities, joys and disappointments that this brings. As surgeons we understand the fulfilment of delivering a successful outcome, and the humility and strength required when surgery goes wrong or is unlikely to be a patient's best option. We are all human, we all make mistakes and so we all benefit from guidance. We are fortunate; our profession is still respected and held in high esteem. Our behaviours and attitudes are observed by those we work alongside and impact directly on the care we deliver to our patients. The challenge of providing compassionate, high quality, safe care is at the top of our professional agenda. (ibid., 4)

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[17] The Association of Surgeons of Great Britain and Ireland
The British Association of Oral and Maxillofacial Surgeons
The British Association of Otorhinolaryngologists – Head and Neck Surgeons
The British Association of Paediatric Surgeons
The British Association of Plastic, Reconstructive and Aesthetic Surgeons
The British Association of Urological Surgeons
The British Orthopaedic Association
The Royal College of Physicians and Surgeons of Glasgow
The Royal College of Surgeons in Ireland
The Royal College of Surgeons of Edinburgh
The Society for Cardiothoracic Surgery in Great Britain and Ireland
The Society of British Neurological Surgeons
The Vascular Society of Great Britain and Ireland

It conveys a romanticised notion of the Surgeon as noble, embattled, good but fallible. It clothes the profession in virtuous robes: 'strength', 'humility', 'respect', 'compassion'. The symbolic evocation of the virtuous yet fallible surgeon may appeal to the emotional core of the profession's members. Through this statement, the RCS communicates to all surgeons through a personal voice that acknowledges the challenges and complexities of their everyday practice. It reinforces a sense that surgeons are united (constant repetition of 'we') by their common *affective* experiences of surgical practice; that is, how the demands and the joys of a career in surgery make them *feel*.

I use the term 'feel' or 'feelings' apropos Whitehead in his theory of experience (see Chapter 3). This is the way in which one encounters something (object or event) and how it comes to matter to that individual. For example, the pleasure felt when one encounters a beautiful flower. The 'pleasure' is sensed and perceived by the body even before one is cognisant of 'beauty' as a concept. Put another way, an individual experiences the beauty of the flower before cognitive factors intervene to describe and organise that experience. By creating an affective connection with its readership, *GSP* signals how it can be relevant to surgeons from all disciplines: it claims to understand what is at the heart of surgical practice.

This is an encouraging beginning to the document and suggests it may be a useful guide in actual clinical practice. It goes on to state its objectives:

> *Good Surgical Practice* aims to be a base line of clear and assessable standards for individual surgeons and their practice. It is not a statutory code or a regulatory document but rather seeks to exemplify the standards required of all doctors by the GMC in the context of surgery. It represents the profession's core values, the skills and attitudes that underpin surgical professionalism to which all surgeons should aspire in order to deliver high quality care. (p. 4)

The authors appear to suggest that, while the document is not a regulatory text, it outlines the minimum standard of practice expected of surgeons by the RCS and the

GMC. By claiming to represent the 'profession's core values', the RCS appoints itself as the official voice of the profession: an authority on what is deemed by surgeons to be important, what skills and attitudes they must demonstrate in practice and what ethical principles shape their everyday practice[18]. I explore how the notion of an ethics of practice had been captured by the RCS, through this written guidance and what a surgeon might infer from it. The below is a critique on how the text interprets and conceptualises an ethics of practice and why its approach is problematic.

a)   The 'profession's core values'

The launch of this document was accompanied by a three and a half minute promotional video[19]. A senior medical director at the University Hospital of South Manchester makes the following comment;

> "The NHS for a long time has accepted poor values and standards and individual surgeons have produced huge amount of variation in practise, a variation in standards which has led to a variation in outcomes and the Royal College's Standards (team) have produced a framework of values really. Its values as much as rules I think, which will enable surgeons to practise so much more safely in the future."

Clare Marx, the president of the RCS is filmed, stating;

> "We can no longer allow people to vacillate about whether this is important or not important. The general view is, a bit like washing your hands, this is something you just have to do… it's not actually just about checking, it's about the whole ethos of the safety culture, it's about the whole business of team working, it's about the whole open to challenge and it's about learning from other people and making sure that the patient lies at the heart of it and that that patient is safe".

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[18] As explained in Chapter two, the RCS is the professional body responsible for surgical exams, awarding higher surgical qualifications and setting the content of the surgical curriculum. The primary responsibility of the RCS is to patients and the improvement of patient care, for which it was given a royal charter. Its engagement with surgeons is through ways that will ultimately affect the care of patients, such as running courses and training to develop and consolidate surgical skills, thus improving clinical outcomes and patient experience.

[19] http://www.rcseng.ac.uk/surgeons/surgical-standards/professionalism-surgery/gsp/gsp

The above comments portray the surgical environment in a negative light, including tolerance of poor practices, acceptance of low expectations and reliance on the approaches of individual surgeons (as opposed to a unified professional stance on what is acceptable practice and what is not). As discussed in Chapter 2, the above statements reflect the findings of the Mid Staffordshire inquiry (Francis, 2013) and the subsequent responses from the college and government.

This unflattering commentary on the profession is curious. The romanticised service of surgeons iterated in the opening pages is replaced with the more prosaic categories of the GMC regulations: 'standards', 'framework of values', 'rules', 'business', 'team working', 'safety'. The text has created two worlds of surgery. The first, romantic and idealised and the second, flawed and in need of urgent repair. The repair may come in the form of guidance produced in *GSP.*

Through an external framework of standards, rules, regulations and a n0n-negotiable code of conduct ("we can no longer allow people to vacillate"), the RCS through *GSP* attempts to remedy what is wrong with modern surgical practice: general dithering in the face of poor standards and unacceptable practices. The text presents a code of conduct similar to *GMP* which is exhaustive, listing every detail of the practical aspects of a surgeon's day to day routine. For example, in Domain 1 (knowledge, skills, competence), it instructs surgeons to write clearly and legibly, with the appropriate date and patient details:

> 1.3 Record your work clearly, accurately and legibly
>
> Ensure that all medical records are accurate, clear, legible, comprehensive and contemporaneous and have the patient's identification details on them.
>
> Ensure that a record is made by a member of the surgical team of important events and communications with the patient or supporter (for example, prognosis or potential complication). Any change in the treatment plan should be recorded.
>
> (GSP, 2014: 21)

A document that professes to extol the principles of practice and the inviolate ethics of conduct dilutes its message if it includes operational details of day to day working, and present these as core values by which surgeons must work by. The document becomes didactic and dictatorial in providing rigid rules and specifics on how surgeons must conduct themselves.

I believe that the gross error this document makes is in failing to distinguish between what is a principle and what is a technique. Autonomous individuals, like surgeons, who deal with complex practice every day and must use independent judgment, require overarching principles that can guide, inform and assist their practice. They should be free to use whatever technique that is appropriate given the circumstances to achieve those principles.

For example, in the above, rather than outlining the specific techniques a surgeon should use to achieve the goal of clear communication, I would instead identify the overarching principle of, 'ensure communications are clear and understood'. This would be a value whereas the example above is an operational technique. My conclusion is that *GSP* confuses an ethics of practice with a framework for organising the minutiae of practice.

Summary

In this chapter, I have attempted to explore through the central concept of care, the difference between how to give appropriate care in unanticipated or unpredictable clinical situations and how care is treated as a major concept within medical and clinical guidelines. In the former, the surgeon must make decisions in unfamiliar situations, trying to find a way forward. The affects that lead to the thoughts and actions of the surgeon relate to an ethics of immanence. In the latter, a transcendent ethics is promoted, an established code according to which surgeons must adhere. I do not argue that a formal code of ethics is unimportant. Such guidelines are important, but in unfamiliar situations they may not help to cope with what happens in

relations between surgeon and patient where there is a real need to find an effective resolution.

Attempts in medical practice to establish a clear set of criteria according to which the work of practitioners can be evaluated (measurement) is a response to the past problems and failures of health care. Given this background, the drive to assess and measure is understandable: strong arguments can be made for it being a desirable component of modern healthcare processes. However, the desire for clarity through performative assessments and measurements can obscure the complexities of actual clinical practice, as demonstrated in the personal narratives in this chapter.

A focus on the 'complicated processes' of care and the specific issues concerning delivery of care, constitute a particular preoccupation with the general business of healthcare. To cultivate professionals who can respond appropriately in a clinical encounter with the necessary dynamism, creativity and compassion, surgical education and training must embrace a paradigm that goes beyond a narrow understanding of competence and skills acquisition. What is necessary is a relaxation and softening of approaches that mandate conduct and behaviour.

> *If there is one lesson to be learnt, I suggest it is that people must always come before numbers. It is the individual experiences that lie behind statistics and benchmarks and action plans that really matter, and that is what must never be forgotten when policies are being made and implemented.*

(Robert Francis, 2010: 4)

Postscript

In large capital letters I document in PF's patient notes, 'DO NOT MENTION BLOOD. THIS IS A TRANSFUSION OF PACKED RED CELLS.'

I had met PF the previous weekend and admitted her for what essentially was a rotting big toe on the right foot. Her poorly controlled diabetes coupled with an accident in which she stepped on some broken glass had resulted in a wound infection that had insidiously eaten away at most of the flesh on the back of her toe. There was now a great big hole where once there was skin and muscle. The white of the tendon sheaths attached to the base of the big toe were now clearly visible and the top edge of the toe looked suspiciously like necrotic (dying) tissue. The first thing I noticed when we met was the disinterest and fatigue in her eyes. She met my gaze but it was a lethargic effort and matched her flat affect. Though her skin was dark I noted a heaviness to her complexion and her habitus was hunched masking an emaciated body. In short, she was obviously neglecting her physical and mental self. PF was accompanied by her daughter, AF, a sturdy young woman who was irritated but at the same time resigned to the fact that she was spending Saturday night in A&E with her mother. I explained that the toe was infected but there was still a good chance she could heal given the right medications and medical support, however, if this failed then yes, as she had correctly surmised already, the toe would need to be amputated to prevent the infection from spreading.

The next time we met, a week later, it was clear that regular medical review plus some gentle invasive supportive measures (intravenous antibiotics) had not improved her toe or overall health. I sat down with her that morning and explained that due to her severe anaemia it was most unlikely that the toe would survive as her basic tissue oxygenation was woefully inadequate to foster healing or equip her natural defences against infection. She needed a blood transfusion to increase her red blood cell count and thus treat her anaemia. This was the first crucial step. Whilst other options were available, such as oral pills and supplements that would raise the blood count, these would take several weeks to months to produce a noticeable effect. A blood transfusion was the quickest and speediest way of doing this.

"It's against my religion. I'm a Jehovah's witness. It's a sin to accept blood", she whispered, her voice weakened by her overall physical decline. "Do you want to get better? Do you want me to help you through this?" I asked her. "Yes", she answered without hesitation. "What if I gave you a blood product called packed red cells? It's

taken from blood, it contains the cells that carry oxygen to your body, but it's not whole blood. The colour is the same. It's what we give people when they need a boost to their blood count. Would you accept it?" She simply said, "yes".

I called AF and explained the situation to her. I told her that while I was essentially giving her mother important constituents of blood, PF seemed to understand this. But I wanted to make sure that the patient was fully aware of what she had agreed to. With both mother and daughter there I repeated the treatment plan. I explained to her that her overall lethargy and sense of disinterest was linked to her anaemia and that the lack of blood cells meant she was fatigued and felt low. Behind those tired eyes I could see that she was listening intently to my words, she did want to get better but was struggling with her faith and what she felt she ought to do. "You know", I told her, "the treatment you have in this hospital, is confidential. Whatever happens here is just between you and me. No one from your congregation will ever know unless you choose to tell them. My first priority is to your health and confidentiality. If you think that packed red cells would be acceptable to you and would make you feel better, then I can do that right now for you." She paused, looked at her daughter and then at me and said, "Yes, I don't want the whole blood, but I'll take the other option you talked about, the packed red cells."

Reflection

I am conscious that this story leaves me open to criticisms from some corners, that as a surgeon, 'I thought I knew what was best for the patient above her religious beliefs'. That I manipulated the patient through a form of discourse. However, I am clear in my mind that I did not manipulate or deceive a weakened patient. I made this decision based on a sense of clinical care for the patient, as well as care for her beliefs and sensibilities. I felt she was asking for help to make these treatments more acceptable to her. I am certain that she knew she was accepting blood and was in no doubt when the bags were put up and her permission was asked prior to commencing the transfusions. I hope that what I did was help her make a meaningful choice: a choice that she felt she could live with. I hope that I picked up on her actual desires by engaging in a way that was respectful to her beliefs yet perceptive and sensitive to the internal conflict. I knew that I could not resolve that conflict for her, but I hope I made her feel better about it.

Chapter 6

A Tale of Training: a critical examination of events of clinical practice through an analysis of interviews and approved training materials

6.1   The Craft Of Training

What people would say is that they compare the system now (based on assessments and criteria for competencies) and they would say, well at least it's fair, at least it's not nepotistic like the old system. . . But my feeling is, and as someone who was a junior trainee before we had any of these systems of assessment, as a house officer (1st year doctor), somebody wrote a little paragraph about me at the end of my job and that was that. As a woman in Medicine, who didn't go to private school or didn't know anybody in Medicine, I actually had a huge amount of support from all the consultants I worked for. And that wasn't for any other reason other than they recognised that I was hard working, loyal and dedicated as well as being good at the job. They really were vying for me and encouraged me which made a huge difference. But when MMC[20] came in that was the real final death knell of that sort thing where your boss would phone up their colleague to say, "make sure you shortlist this one because she's good".

. . . I had a whole bunch of consultants who were massively supportive and they'd phone me and say, "have you been shortlisted?" And I would burst into tears and say no, and they would be absolutely outraged on my behalf, and say "I don't understand, why is the new system not working?!" But the trouble is. . . [this new system] completely removes from the process of picking doctors, the genuine support of other doctors. And I really think that you and I or anybody else whom you would consider a good doctor, would be consistently picked out by others as a good doctor. We all know who's good and who's not up to par, we all know it! But there's no way under the current system of just doing that . . . of saying, "I'll take these eight trainees but not those two". . . It's the same with nurses isn't it?. . . You know which ones are the good ones. . . when someone says, "oh so-and-so is the nurse on the ward", then it's

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[20] MMC - Modernising Medical Careers was a controversial postgraduate medical training programme introduced in 2005 in the UK. It replaced the original system of training grades and introduced routine assessments of skills and activities. The independent review of MMC by Prof. John Tooke strongly criticised the way in which the programme was instituted highlighting the inadequacies and inefficiencies of the system, (See Chapter 2 and Appendix A)

understood that, (those tasks) will never get done! There's an understanding of people. Human beings understand each other, that some are lazy, others are competent. We understand that about each other, that's thousands and millennia of evolution. Then we're coming to a system where we take all that out in order to make it fair. And I understand that it's a really difficult balance to strike.

(Lydia, ST7 surgical trainee)

There is so much focus by the government on outcomes, so we have to show the effect. We know there is a positive impact by using these workshops but you have to prove that patients are safer for it, so it's hard to demonstrate the value of it. That's the context and the framework that we're all thinking with now because that's how people are being judged. We do struggle with this on our courses, we struggle with measuring impact. You're talking about 2 days out of someone's annual schedule (spent on a course), how do you measure whether this is what's made the difference or not?

We're reluctant to just be seen as a course provider, we'd like education to mean something a bit broader for people coming to the college. Not just training. A bit more of everything really. . . all sorts of different types of education . . . more networking forums and less formal things, some e-learning that would be free, just a bit more investment is needed. We have a huge number of faculty who teach on our courses and to be able to do a bit more with them as a community would be quite good.

I understand the importance of patient safety. But, if you're going to value outcomes more than people, then you're stuck aren't you? I'm not going to convince anybody by saying, "well, you'll have less trainees who are struggling." But, how do I prove that or who cares if I prove that? If we had this (other forms of education) and surgeons reflected more then they might feel better coming to work every day, in which case I presume it will impact on how patients experience treatment. But how do you show that?

(Amy, senior educator, Royal College of Surgeons of England (RCS))

6.2   Introduction

Since the 1990s, the medical profession has been under increased scrutiny and pressure to reform its practices, foster greater transparency and honesty in doctor-

patient relations, take decisive and immediate action against physicians who are failing in their duty of care (Stacey, 1992; Irvine, 2003, 2006; Bogner, 2004) (see also Chapter 2). It is not surprising therefore, to find that these trends have been reflected in the development of medical education and training, bringing about an alignment with the wider aims of the medical profession, (DoH, 2002; Carracio et al, 2002; De Cossart and Fish, 2005; Brown et al, 2007; Eraut, 2009) (see also Chapter 2). One important example is the incorporation of mechanisms to ensure accountability and quality assurance in systems of training (DoH, 2008, 2011; GMC, 2016).

The aims of medical education and training: priorities and tensions

As a consequence, there have been strenuous efforts to update and modernise training. In the past decade, no less than eight reviews have been organised into the state of postgraduate training and education (Tooke, 2008; DoH, 2008, 2011; Collins, 2010; GMC, 2010a; Greenaway, 2013). These studies have tended to focus on the structure and delivery of training rather than on how trainees assimilate learning content.

The introduction of formal structured training programmes was to ensure transparency and order in postgraduate training with clear measurable outcomes. The overarching aim of postgraduate training is to produce skilled, competent and safe practitioners: 'the delivery of high quality education and training is an essential part of delivering high quality patient care', (DoH, 2008: 4).

> Doctors have to care for many more patients with chronic illness and with multiple co-morbidities. This is partly driven by our ageing population, is partly driven by the success of earlier intervention . . . partly driven by lifestyle. (Greenaway, 2013: 3)

In the above statement taken from *The Shape of Training Review* (2013), the current and future health needs of the population are identified. These include: an increasing number of people living with more than one chronic condition (asthma, diabetes, high blood pressure), and an expanding population of elderly people. The needs and

demands of the ageing population, is particularly cited as an area of healthcare that places a specific burden on limited resources.

The review makes a series of recommendations in response to the changing health needs of the population. One is that physicians be trained with more general skills in diagnosis and treatment rather than an overwhelming focus on the acquisition of more specialist skills. The review concludes that cultivating a broad skills base amongst trainees would improve the safety and care that patients receive. The reason is that more generic training programmes would train physicians to be better informed and skilled at managing a variety of more common medical problems, rather than emphasising specialist skills in a few areas.

These issues give an insight into how the development and design of training programmes are subject to other competing considerations. These include, a responsivity to the health demands of the population, a sensitivity to the social and political concerns of the time, a recognition of the trainees' needs as well as physician receptivity to the dictates of policy. These elements can work in harmony but more often than not, they exist in tension with each other.

The objectives of the chapter

In this chapter, what I attempt to explore, through the central concept of training practices, is the difference between how trainer/trainee subjectivities emerge from an engagement with the thisness or concrete reality of actual clinical practice, and how surgical learning and teaching is treated within official training materials (curriculum and assessments). This is achieved through a critical examination of interviews with surgeons and educators alongside an analysis of specific surgical training materials (the ISC[21], work based assessments (WBAs) and surgical trainer standards).

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[21] ISC - intercollegiate surgical curriculum. Briefly defined in Chapter 2 and further explicated later in this chapter.

The aims of the analysis are four-fold. First, to investigate the affective nature of clinical encounters of practice. Second, to question how the affective conditions of practice are expressed in surgeon attitudes and behaviours. Third, to inquire how training materials pedagogise learners and teachers (through idealised versions of clinical practice) and how these documents impact upon the ideas and intensities that emerge from the immanence of clinical experience. Fourth, to examine how the formal structurisation of medical practice (how health policy is enacted, how hospital departments are organized and deployed, the impact of the 'outcomes agenda' on patient care and training) controls actualisations of practice. It is my contention that framing the analysis through these questions will lead to a better understanding of how surgeons learn and cope within the ontological and ethical complexities embedded in actual encounters of clinical practice.

I have analysed six (out of a total of 9) interviews, 3 of which were conducted with trainee surgeons and 3 with consultant surgeons. I believe that these narrative accounts are representative of the widely held experiences of trainees (who undergo training) and trainers (who provide the training). However, my purpose is not to prove that the interviews contain routine occurrences, nor is it to confirm the veracity of the statements. Rather, I intend, to understand how the ideas and experiences expressed in these (learning) encounters *matter* to a trainee. Thus, I ask how the examples of clinical practice reported in the interviews, are significant for a learner.

This is not to diminish the importance or effectiveness of known and established forms of surgical teaching and learning. Instead, I propose an alternate yet complementary approach to processes of surgical learning and teaching. An approach that exceeds an application of existing medical pedagogies and established ways of knowing. I suggest that learning can occur as a function of *mattering*. That is, how something

that attains significance for a learner (and therefore 'matters') can create forms of knowing, specifically other modes of learning which may yet be unknown.

To investigate this notion of learning, I locate my enquiry within *actual encounters* of clinical practice as experienced and narrated to me by surgeons. The accounts of clinical experience are problematised using a theoretical framework previously outlined in chapter 4, constructed from philosophical theory. The analytic model draws on, Badiou's notion of truth and event, Whitehead's writings on experience and affect, Deleuze's concept of the actual-virtual dimension, Simondon's theories of individuation and metastability, and Massumi's work on affective thinking. These illuminate the intricacies within accounts of experiencing in surgical practice. I further use the philosophical discourses of Foucault and Butler to construct a methodology that unpacks the discursive practices of the training materials, as well as the content of some of the narrative accounts.

6.3   Official Training[22]: Narrative Discourses

So far, I have introduced the two opening narratives of Lydia and Amy respectively. I treat these as discursive practices. That is, they are practices that construct the entities about which they speak, rather than being an embodiment of 'truth' or motive. To unpack these statements and tease out the emerging ideas, I draw on the theories of discourse of both Foucault (1972) and Butler (2005).

> To describe a formulation *qua* statement does not consist in analysing the relations between the author and what he (sic) says (or wanted to say, or said without wanting to); but in determining what position can and must be occupied by any individual if he is to be the subject of it. (Foucault, 1972: 95-96, original emphasis).

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[22] This characterization of training is derived from Ian Stronach's (2010) analysis of teenage pregnancy in which he labels State (government) discourses on sex education as 'Official Sex' (p. 46). In Chapter 5, I similarly used this terminology to describe 'Official Care', a form of care produced in discourses involving stakeholders in medical education policy.

Foucault further states that understanding the subjectivity of an individual requires exploring of the conditions of possibility that underpin 'what can be said' and 'who can speak it'. As such, these statements are indissoluble from power. Butler (2005) asserts that discourses operate within 'regimes of truth' (p. 22), thereby creating the conditions and frameworks for self-recognition, and producing a reality for the speaker. Therefore, I approached the analysis of the narratives with the following question: *what controls and regulates how a trainee/trainer becomes visible within the current system of surgical training?* At this juncture re-reading the opening narratives once more will likely facilitate grasping the ensuing analysis.

a)   **Amy's story**

Amy, an educator at the RCS, is involved in developing new training courses and modifying existing programmes. She vocalises how government strategies to prioritise and assure patient safety have challenged the activities of the College. As discussed in chapter 2, investigations such as the Francis inquiry, that highlight the appalling standards of care at the Mid Staffordshire NHS Trust, have reconfigured healthcare services and training around an agenda of patient safety (Francis, 2013; DoH response; GMC 2013; RCS, 2014b). All organisations and personnel involved in medical education and training are required to demonstrate clear outcomes that link a particular clinical activity with the prioritisation and promotion of patient safety (GMC, 2016) (see also chapter 2).

Amy and the College education staff, believe in the value of providing a broader portfolio of surgical education. This wider pathway would support the growth of the surgical professional along additional complementary pathways, such as networking events, e-learning or faculty development.

However, Amy reports that these types of education are considered less important than the more established forms of training, such as anatomy courses or suturing classes. These latter courses have demonstrated a clear link with patient safety by

being associated with an improvement in a surgeon's technical proficiency. By contrast, non-traditional educational programmes, which target aspects of practice that may potentially make surgeons 'feel better about coming to work every day', are not recognized or supported in similar ways. Why might this be?

The emotional wellbeing of a surgeon is a complex nebulous concept, making it near impossible to measure accurately and consistently. This becomes a challenge within the current system of professional regulation which relies on demonstrable outcomes. In this case, the College would be required to provide clear evidence of how attention to the emotional wellbeing of a surgeon would improve or strengthen the patient safety agenda, mandated by national policy. Identification of concrete, replicable outcomes to establish a connection between the affective state of a surgeon and the safety of patients is an enormously difficult task given the abstract or obscure nature of the relation.

Learning as a 'form taking activity'

As is shown in Amy's narrative, meeting the pre-defined and prescriptive outcomes of NHS policy, can thwart attempts to widen the concept of surgical education, beyond a singular focus on mandatory training. That is, limiting surgical education to compulsory activities considered integral to patient safety, risks narrowing professional practice to an isolated acquisition of specific pre-defined skills. However, what I question critically, is not the component skills of established mandatory training, nor its promotion over and above other aspects of learning and training. Instead, I want to draw attention to the *other forms of learning* that are either neglected or 'lost' when mandatory knowledge and skills are developed in ways that totalize the nature and content of training. This is the dominant theme that emerges from Amy's analysis of the state of surgical training and education. I have drawn on an application of Simondon's hylomorphism and technical mentality (Simondon, 1964) to illustrate this concern.

The predefined outcomes mandated by NHS policy, contribute to a form of governance according to the creation of a hylomorphic scheme of training. This is unavoidable when organizing a system in which the transmission of fundamental skills and knowledge associated with safe and proficient practice must be ensured. However, a hylomorphic framework of training risks overlooking other *forms of learning and their respective forms of governance immanent to an encounter* with actual clinical practice. Crucially learning that emerges in these unforeseen and unpredictable ways may be associated with how the clinical problem comes to matter to the surgeon. This in turn may be associated with how clinical learning 'in the field' becomes enduring and transforms existing practice.

Brian Massumi commenting on Simondon's theory of form-matter, distinguishes those aspects of learning that arise from a direct engagement with actual clinical practice as a 'form taking activity' (Massumi et al, 2006: 43). This means that there are forms of learning that are inherent to the encounter of practice itself. This stands in contrast to the knowledge that is assimilated from official manuals of training, that reflect learning as a 'form taking passivity'. I suggest that the learning which emanates from a *form-taking activity* can enhance a physician's practice in two important ways. First, by extending what is already known, in terms of creating new knowledge and skills that were previously absent. Second, the novel ways of thinking and doing that emerge from being immersed in actual clinical encounters, can also modify existing foundational practices of knowledge and skill so as to ensure that they remain current and practically applicable.

Laparoscopic surgery

An example of the benefits of learning as a form taking activity, is the development of laparoscopic surgery (keyhole surgery). This minimalist technique, which avoids large incisions and gross dissections, was initially used in the field of gynaecology. However, surgeons discovered that the technique could be applicable in other disciplines of surgery such as colorectal surgery and hepatobiliary surgery. This

represented an *extension of the technique* by developing novel methods of manipulating the procedure.

But, the exposure to laparoscopic surgery also led to a modification in non-laparoscopic surgical practice, i.e. the principles of generic surgical practice. Laparoscopic incisions are smaller, involve less dissection and are not as invasive as standard surgery. The technique is associated with quicker recovery times and less post-operative pain (Veldkamp et al, 2005; NICE, 2006; Papadima et al, 2009; Varela et al, 2010). As a consequence, patients required less analgesia, mobilized quicker and are discharged home sooner, frequently with a quicker return to work (Burns et al, 2010; Varela et al, 2010; Hayden, 2011). For instance, patients undergoing a laparoscopic removal of their gallbladder (one of the most common routine surgeries in the UK), are advised nowadays that they can be discharged home the same day of the surgery and expect to return to work within two weeks.

This is a great improvement from the days when a gallbladder was extracted through a large incision in the abdomen that necessitated at least four weeks of recovery time, and brought considerable postoperative pain. This experience demonstrated to surgeons the benefits of making surgery minimally invasive, leading to a modification of generic surgical practice. It is also an example of the reinforcing causality that occurs between how humans think about technology and how technology can in turn alter the way society thinks.

Fostering professional development that is consistent with the principles of *Good Medical Practice* (2013)

I have suggested above that the current mandated trainings emphasise the mechanical aspects of healthcare. But, if one of the goals of healthcare policy is to encourage the development of professionals who are thoughtful, transparent,

empathetic and innovative, can mandatory systems *alone* achieve this? Not according to the following statement:

> The obligations and challenges of candour serve to remind us that for all its technological advances, *healthcare is a deeply human business*. Systems and processes are necessary supports to good, compassionate care, but they can never serve as its substitute. It follows from this that *making a reality of candour is a matter of hearts and minds* more than it is a matter of systems and processes, important as they can be. *A compliance-focused approach will fail*. . . systems and processes can only serve to structure a regulatory conversation about compliance. The commitment to candour has to be about values and it has to be rooted in *genuine engagement of staff*, building on their own professional duties and their personal commitment to their patients. (RCS, 2015: 17, my emphasis)

The above quotation is taken from a report commissioned by the health secretary (Jeremy Hunt), *Building a Culture of Candour* (RCS, 2015). The report is a culmination of a review into how adverse events should be labelled and reported. It was triggered following the investigation into unacceptable standards of patient care at Mid Staffordshire NHS Trust led by Professor Robert Francis (Francis, 2013).

This document along with many other similar publications in recent years, have reiterated a key objective in healthcare: the creation of a professional culture of honesty, empathy, compassion and collaboration (Francis, 2013; DoH, 2014a, 2014b; RCS, 2015; CQC, 2015). Cultivation of these values in practice requires physicians to engage and be responsive within actual encounters of clinical practice. In a specific event of practice, a surgeon is expected to put into action all the recommended attitudes and behaviours. However, I suggest that expressing these attributes appropriately in actual events of clinical practice, is a far more complex activity than is reflected by the official documents. The authors of the candour document do indeed identify the complexities of this challenge. They rightly state that a culture of transparency is only possible if there is actual staff *engagement*, a relation that is

critical to making candour an everyday reality of practice, over and above the effects of regulatory mechanisms.

Expanding the 'capacities' of a surgeon

In her interview, Amy talks about professional development beyond mandatory training, as a way of enhancing a surgeon's abilities, which she concludes should in turn improve the patient's experience. I believe that surgical professionals also need a *space* to contemplate novel ways of expanding their capacities in practice, which is unencumbered by the outcomes agenda. Such an opportunity would I think, permit a surgeon to think critically without constraints, about how their practice *matters* to them.

Critics may argue that this objective is not different from reflective practice, which provides an opportunity to 'look back' on practice in contemplative ways. I would assert however, that while there may be similarities between reflection and the case I advance for a form of *learning that arises from the immanence of clinical relations*, notable differences remain. First, in reflective practices the tendency is to assume an objective stance when reviewing an experience. Put another way to examine an experience from a dispassionate and logical approach.

Second, the perception and the enactment of reflection are a rational exercise. That is, the thoughts and actions that emerge through experiencing are framed as evidence of cognitive processes. As discussed in earlier chapters, I have hypothesized that the initial impact of an encounter is first, affective. To this end, I have proposed a notion of 'affective thinking' in clinical practice, a central theme of this thesis. I expand on these initial ideas later in this chapter in the section on Reflective Practice.

In summary, Amy's narrative calls for a coherence between how something in practice matters to a surgeon and the regulatory demands of healthcare. A collaborative

venture between these avenues, has the potential to generate conditions that create enduring values in clinical practice: candour, compassion and competence.

b)   Technologies of performativity

Strong parallels can be drawn between the overwhelming nature of performative outcomes in medical education and the outcomes agenda in school education. I briefly examine the writings of Stephen Ball, (1997, 2000, 2003, 2013, 2015), who has vocally criticised attempts to quantify and measure aspects of performance for both learners and teachers. I use his notion of 'performativity' to extend the initial arguments I made in the above analysis of Amy's narrative.

> Performativity is a technology, a culture and a mode of regulation that employs judgements, comparisons and displays as means of incentive, control, attrition and change — based on rewards and sanctions (both material and symbolic). The performances (of individual subjects or organisations) serve as measures of productivity or output, or displays of 'quality', or 'moments' of promotion or inspection. As such they stand for, encapsulate or represent the worth, quality of value of an individual or organisation within a field of judgment. The issues of who controls the field of judgments is crucial. . . Who is it that determines what is to count as a valuable, effective or satisfactory performance and what measures or indicators are considered valid? (Ball, 2003: 216).

'Performativity', a term initially introduced by Lyotard (1984) is one of three policy technologies (the others being 'the market' and 'managerialism') in educational reform, asserted by Ball. The performance itself is judged and compared so that it comes to represent the 'worth' of the individual or organisation. In other words, the performance totalises the contribution by the individual/organisation.

Ball problematises the way in which categories of judgements are established, by asking *who* determines which criteria are deemed valuable and which are not? Amy's narrative emphasises this struggle. What she personally believes to be beneficial and valuable to the professional development of surgeons (gathered from her experiences

of training surgeons) is obscured by what is formally identified in policy text as worthy and effective. Performativity is construed through what appears to be a rational and objective lens—creating fixed outcomes of performance that demonstrate the prioritisation of patient safety, an admirable goal. However, as she opines, it is very difficult to reduce the complexity of a surgeon's affective state to simple categories that are amenable to such judgment.

Through an enforcement of these policy technologies, reform is instituted beyond structural organisations, to encompass human subjects--teachers themselves are subject to change:

> New roles and subjectivities are produced as teachers are re-worked as producers/providers, educational entrepreneurs and managers and are subject to regular appraisal and review and performance comparisons. We learn to talk about ourselves and the relationships, purposes and motivations in these new ways. (ibid., 218)

Ball describes how government discourses of performativity subjectivise teachers in specific ways. To be considered a good and effective teacher within these discourses, individuals must be able to describe themselves using the associated concepts and language, such as 'producers/providers', 'managers'. This framework of values focuses on prescribed identities of performance. *The Standards for Surgical Trainers* (2014) (see Figure 10, below), produced by the Royal College of Surgeons of Edinburgh (RCSE) illustrates these important points well.

The document was produced as part of a wider initiative to formally recognise surgical trainers through a process of training and accreditation. Today, all surgeons engaged as surgical teachers must register their role with the GMC and produce the relevant documentation to support their claim.

I want to draw attention to the introduction in the document of two particular categories that are used to distinguish groups of teachers (see Figure 11, below). The 'effective trainer' versus the 'excellent trainer'. The document identifies the former as

Figure 10:   Standards for Surgical Trainers (RCSE, 2014)
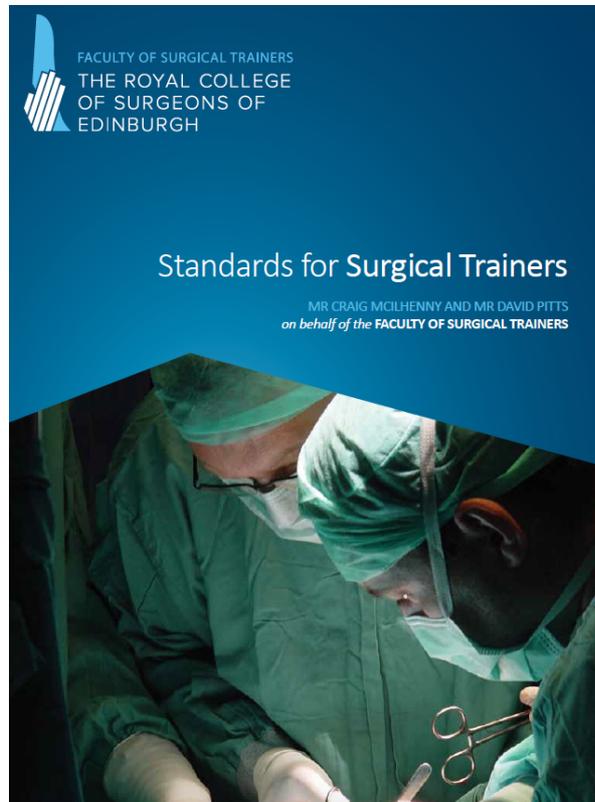
displaying behaviours that are easily demonstrable (RCSE, 2014: 7) in clinical practice. Whereas the 'excellent trainer' is defined as engaging in teaching activities that go beyond the clinical workplace. Examples of these are provided: engaging with training activities that improve overall patient safety, developing research projects, promoting the widespread use of mandated assessment procedures.

These examples of 'excellent' trainer behaviour reflect the wider agenda of professional regulation enforced by the government and GMC. Namely the principles of *Good Medical Practice* (2013). Teaching activities have been 'forced' into a framework that reflects policy objectives. The difficulty arises when other conceptions of surgical teaching, which do not necessarily subscribe to the discourse on performativity, emerge from actual learning encounters in clinical practice. These forms of teaching and learning represent *adventures of pedagogic work*. That is, they

Figure 11: Excerpt illustrating the core and desirable skills and attributes of an 'effective trainer' versus an 'excellent trainer' (RCSE, 2014: 10)

Framework Area 5:
Supporting and monitoring educational progress

As a trainer you are able to set appropriate goals and review your trainee's progress in regard to these and the agreed curriculum.

The Effective Trainer

A. Sets an appropriate learning agreement with the trainee that complies with current curriculum stage.
B. Reviews and monitors the trainee's progress though regular meetings.
C. Uses e-portfolios (e.g. ISCP) to monitor the trainee's progress.
D. Provides written structured reports on the trainee's progress.
E. Identifies and engages with the trainee in difficulty.

The Excellent Trainer

F. Engages in research, development and governance activities in the wider surgical training context.
G. Provides coaching and mentoring for trainees beyond basic requirements.

Framework Area 6:
Guiding personal and professional development

As a trainer you are able to act as a role model and source of guidance in the wider sphere of professionalism in the surgical workforce.

The Effective Trainer

A. Demonstrates exemplary professional behaviour.
B. Builds effective supervisory relationships balancing confirmation with challenge.
C. Sets and maintains personal and professional boundaries when supervising trainees as laid out in Good Medical Practice.
D. Identifies the need for careers or personal advice or support (e.g. occupational health, counseling, deanery careers unit) and refers on to other agencies in a timely manner.

The Excellent Trainer

E. Is involved in the wider context of professional development of trainees
F. Develops skills related to coaching and mentoring above the standard supervisory role.

Framework Area 7:
Continuing professional development as a trainer

As a surgical trainer you continuously review and enhance your own performance as a trainer.

The Effective Trainer

A. Gathers feedback on their own performance as a trainer to benchmark against training curriculum.
B. Acts to improve their performance as a trainer.
C. Maintains up to date professional practice in all contexts in keeping with the principles of Good Medical Practice.

The Excellent Trainer

D. Actively challenges poor practice and champions positive change in themselves and others.
E. Engages in further self-development as a trainer and promotes development in others.

exceed the attempts to predefine the identities and performance of trainees and trainers. Instead, they explore ways of trying to capture and understand what matters for learners in their different modes of learning. In this conception of surgical pedagogy, subjectivation relates to how in local practices of learning a learner becomes subjectivated to his or her mode of learning and experiencing. I revisit these themes in the analysis of Joseph's narrative.

c)   Lydia's story

> I am well aware that I have never written anything but fictions. I do not mean
> to say, however, that truth is therefore absent. It seems to me that the
> possibility exists for fiction to function in truth. One 'fictions' history on the
> basis of a political reality that makes it true, one 'fictions' a politics not yet in
> existence on the basis of a historical truth. (Foucault, 1980: 193)

Foucault rejects contemporary notions of 'truth' and 'reality' as formed by the dominant opinions of a given era. Instead, he focuses on how our stories ('fictions') create a reality that we live and believe in and thus constitute what we conceive to be 'true'. Thus, Lydia, is an ST7 trainee based in southern England. Her criticisms of the unfairness of the new training system, arise from a personal experience of not being selected for further training. This contrasts with her personal certainty that she is a good doctor. A fact also confirmed by senior colleagues, as she told us. These contrasting experiences have constituted the 'reality' of the new training system for both Lydia and the community of surgeons she works with.

Lydia, and others, believe that she is conscientious and diligent, "a good doctor". She regards these characteristics of a "good doctor" as fundamental to any candidate applying for a place on a surgical training scheme. Therefore, Lydia judges the new system of training on how well it identifies and distinguishes 'good' trainees. This

notion of 'goodness' appears to be what controls and regulates the visibility of a trainee, for Lydia.

The good trainee

Lydia states that inequities may have existed in the old system ("at least it's not as nepotistic as it used to be"), which the MMC era aspired to eradicate. However, she thinks that it was her hard work and conscientiousness that propelled her, as a trainee in the older system. These attributes were recognised by her supervising consultants as evidence that she had the intrinsic qualities necessary to be a 'good' doctor. Therefore, within this system of training practices, 'good trainees' were identified through cooperative relations established within work communities. A community of peers and seniors provided unofficial 'assessments' on performance at work. Trainees who were "not up to par", would not progress because they would lack the recognition and support of senior surgeons. This judgement of trainees was based on what Lydia coins "human understanding". That is, a senior surgeon's personal experience and knowledge of what a specific trainee was capable of in terms of his or her inherent abilities and work ethic. According to Lydia's 'reality', this is what regulated the visibility of trainees in the older system.

These themes echo the work of Lave and Wenger (1991) who wrote extensively on how learning (and advancement of learning) is intimately connected to processes of participation in a community of practice.

But, Lydia is critical of how the complex notion of 'goodness' in trainees is captured by the current system:

> *Let's say you've got five junior doctors they are with our department for four months each . . . they are oncall with different people, they are on different wards all the time . . . If at the end of that four-month block, you asked all the surgeons to put in order, the best to worst junior doctor. I suspect that they would pick the same order of doctors. And that's because you know when you work with somebody. I suppose it's because you know your expectation*

of yourself. It takes a very short time to say, "you know what? That person is extremely dedicated, they know their stuff, they've seen their patients, they're aware of everything that's going on, that's the junior doctor I would pick for my team" . . . The question is how can you get that fact, into some kind of numerical scoring system. And the answer is, that it's very, very, very difficult to do, because once you start trying to put it in parameters, and make it all formal . . . you just can't do it.

Lydia describes how the attitudes and aptitudes associated with a 'good trainee' make him or her an appealing and sought after member of the wider team. Consequently, this desirability can also regulate the visibility of a trainee. Lydia concludes by stating that capturing these characteristics which are immanent to daily encounters of practice, is near impossible within the current assessment format which relies on a numeric system of categories. I suggest, that one may extend Lydia's thoughts to view the unofficial human evaluations of performance (as opposed to the formal numeric assessments) as representative of the 'intra-actions' (Barad, 2007) involved in practice. Put simply, 'human assessments' can better perceive and accommodate the layers of complexity involved in a surgeon's performance.

Examples of intra-actions include the complex relations that form between: a trainee's attitude to work and aptitude, the societal expectations of them, the ethos of the hospital, the culture of the work place, the facilities and equipment available. The newer system of training may struggle to try to embrace these tiers of complexity through application of a limited numerical system (Hodges et al, 1999; Lurie et al, 2011; Van der Vleuten, 2012; Pangaro and Ten Cate, 2013).

The context of Lydia's opinions: recognising competence

In the pre MMC (Modernising Medical Careers) era, competence was a function of how the abilities of a trainee were recognised by those who worked alongside and closest to the trainee: their peers and senior colleagues (Sinclair, 1997; Tooke, 2008; Watt et al 2008; Carracio et al, 2002; Carracio and Englander, 2013; Sambrook, 2014). Whereas, in the post MMC training system with its emphasis on *competency*

based training, the opinions and judgements of surgeons, cannot contribute in the previous way.

The locus of the power relations has shifted. Systems of learning objectives and assessment devised and influenced by various stakeholders (the GMC, department of health, the Academic Royal Colleges) replace the 'human' evaluations provided by senior surgeons working in a community of practice (Norris, 1991; GMC, 2013; CanMEDS, 2000; De Cossart and Fish, 2005; ACGME, 2007). It may appear that what is being measured and judged is the actual capacity of an individual (or organisation) to perform. However, in reality, what is actually being evaluated is not the inherent ability of an individual. But, how closely the individual's performance meets the predefined criteria of the performative technology. In short, it is adherence to pre-approved criteria that is being monitored and assessed.

Lydia's narrative draws attention to how trainees are identified along prescribed categories rather than inherent abilities. But, what is the trainer's role in this system of competency based assessments? Certainly, the assessments require observation and interpretation by a surgical trainer to ascertain whether the trainee has met the criteria being tested. But, how are trainers empowered by the assessment format to generate evaluations of performance? Is there consistency between what a trainer identifies as important in a learning encounter and what is deemed relevant by predefined structured assessments? I attempt to answer these questions in the following sections.

6.4   Official Training: Competences And Reflective Practice

In chapter 2, I presented a discussion on the origins and development of competency based medical education (CBME). This is the standard model of postgraduate training in the UK and overseas. It comprises a core curriculum with a series of competencies identified in areas such as practical skills, behavioural attitudes and theoretical knowledge (physiology, pathology etc.) (ISC, 2016; RCPSC, 2015).

Trainees are evaluated at each stage of their programme to ascertain whether acquisition of the necessary standard competencies (associated with their individual level of training) has occurred. Assessments are conducted in areas that include operative ability, clinical judgement and decision making skills.

The nature of surgical trainer input has changed markedly from the days of the apprenticeship system. Surgical trainees are now required to be taken through procedures in a stepwise fashion to demonstrate gradual acquisition of skill (ISC, 2016) and are therefore not expected to operate alone. Independent operating occurs only once competency is fully demonstrated. Some of the criticisms levelled against CBME include: proposed shorter training times which make achieving competence and safety of practice within a limited period more difficult; reductionist approaches to practice and assessment; a checklist attitude to complex clinical skills; and a perception of competencies as discrete tasks even though actual clinical practice is entangled. Competency based frameworks fail to fully capture all the knowledge, skills and abilities needed for safe practice. Accordingly, the current scheme of assessments does not adequately address all the competencies of a practicing physician (Grant, 1999; Talbot, 2004; De Cossart and Fish, 2005; Davis et al, 2007; Brooks, 2009; Brightwell and Grant, 2013; Touchie and ten Cate, 2016).

It is not my intention in this thesis to provide a critical analysis of competency based medical education. This task has been well accomplished already, with a wide range of studies and opinions reporting from both sides of the debate (Van der Vleuten, 1996; Simpson et al, 2002; Leung, 2002; Carracio et al, 2002; Carracio and Englander, 2013; Lurie et al, 2011; Hodges and Lingard, 2012; Whitehead et al, 2013).

However, what interests me, is how the official framework of surgical training is *actualised* by trainees who are engaged in real and acute events of contingent medical practice. Is their actual experience well informed by the pedagogic practices promoted by the official training materials such as the surgical curriculum? What is

the nature of the *pedagogic relations,* involving both the trainee and trainer, that form

and develop within *unanticipated encounters* of actual clinical practice? Does it

coincide with the ways in which trainees and trainers are *pedagogised in training*

materials (curriculum, learning objectives, assessments). What I problematize here, is

the *nature of training practices*, both 'official' and 'real'[23], to deepen an understanding

of the ideologies that constitute how trainees and trainers are engaged in teaching

and learning activities (surgical pedagogy).

a)   The Intercollegiate Surgical Curriculum Programme (ISCP)

The ISCP (see Figure 1) was introduced by the RCS in 2003 as an online resource

available to surgeons in training with the objective of setting out a defined, written

syllabus for each of the ten surgical disciplines: Cardiothoracic Surgery; General

Surgery; Neurosurgery; Oral and Maxillofacial Surgery (OMFS); Otolaryngology

(ENT); Paediatric Surgery; Plastic Surgery; Trauma and Orthopaedic Surgery (T&O);

Urology and Vascular Surgery. As already discussed in Chapter 2, prior to the

introduction of the ISC, there was inadequate documentation and no consensus on

what theoretical knowledge and practical skills were required for a surgeon in training.

'What you needed to know for the job', was largely passed on through the practical

and oral tradition of the apprenticeship training (see Chapter 2). The ISC was part of

a seismic change in training culture. One of the guiding principles of the curriculum

was to make explicit the required knowledge and skills for surgical trainees.

Today, the ISC is a definitive, web based pedagogical tool for surgical training. It

defines the pathway from Foundation Doctor to Consultant Surgeon in the NHS. It

also includes the different assessment strategies. At each stage of this pathway, the

curriculum sets out the general and specialty syllabus[24]: 'a syllabus that lays down the

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[23] In Chapter 5 I used the term 'Real', to connote actual events or experiences. In the current
context here 'real training' refers to the actual experiences of training reported by trainees.
[24] Specialty syllabus refers to a specific discipline of surgery, such as Urology or Orthopaedics.
Each discipline has its own specialty-based knowledge, in addition to the general principles of

standards of specialty-based knowledge, clinical judgement, technical and operative skills and professional skills and behaviour, which must be acquired at each stage in order to progress' (RCS, 2016: 3).

What is a competence?

The curriculum also defines what it expects the trainee to demonstrate at each stage of training to confirm that the appropriate learning content has been assimilated and digested: these are 'competences'. Competences are defined as:

> An observable ability of a health professional, integrating multiple components such as knowledge, skills, values, and attitudes. Since competencies are observable, they can be measured and assessed to ensure their acquisition. (Frank et al, 2010).

Examples of competences in surgery include: knows the basic concepts of haemostasis (arresting bleeding), can diagnose and assess acute abdominal pain, is competent to undertake a hernia repair of the groin and manage any complications. There are different levels of knowledge and skill within each competence. The objective is therefore to gradually increase one's competence level. To use the example of haemostasis, a candidate will advance from knowing the basic concepts of haemostasis to a fluent application of this knowledge by demonstrating the ability to arrest bleeding in an actual clinical event.

Attainment of a competence affirms that the student has met the necessary standard of practice, demonstrated the expected 'outcome'. In addition, acquisition of

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surgery that all trainees must be taught irrespective of which surgical specialty they finally choose to train in.

competences at each stage of training determines whether a trainee may progress to the next stage of training in that specialty.

> Regulation of progression through training. . . [is] by the achievement of outcomes that are specified within the specialty curricula. These outcomes are competence-based rather than time-based." (RCS, 2016: 4).

Progression in training

The content of the syllabus is organised according to 'stages' and 'standards' (ibid., 8). A *stage* in the curriculum refers to a specific point in the training pathway of the surgeon, for example CT1 or CT2 (core stages of training year 1 or 2 where trainees are in the initial stages of their training having graduated from medical school at least three to five years earlier). What trainees are expected to know and do expands in terms of depth and complexity as they advance through stages of training. For example, a core trainee (early years of surgery) is expected to know the symptoms and management of acute appendicitis. Whereas senior trainees (ST4 onwards) will be expected to build on this initial knowledge by demonstrating an ability to perform an appendicectomy (removal of the appendix) and manage any complications of the surgery that may arise etc.

Specialist training[25] begins at ST3 and completes at ST8 (see Chapter 2). The GMC sets the level or 'standard' it requires all trainees to achieve in their professional practice. The ISC then applies these standards to the content of the syllabus, dividing it into three components; theoretical knowledge, clinical and procedural skills and

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[25] Specialist training refers to entry into a surgical discipline such as Vascular surgery or Orthopaedics with the ultimate goal of gaining qualification as a specialist in that area of surgery.

professional skills (ibid., 11-12). The theoretical knowledge required for a surgical topic is categorised using the following numerical scale:

1. knows of

2. knows basic concepts

3. knows generally

4. knows specifically and broadly

A similar numerical scheme is used for assessing the competence level of procedural and technical skill:

1. has observed

2. can do with assistance

3. can do whole but may need assistance

4. competent to do without assistance, including complications

A syllabus entitled 'professional behaviour and leadership skills' follows on from the above to itemise the appropriate behaviours and attitudes expected of trainees.

Figure 12: Excerpt taken from ISC (2016: 11-12) demonstrating the competence levels in skills and theoretical knowledge

Standards for clinical and technical skills

The practical application of knowledge is evidenced through clinical and technical skills. Each topic within a stage has a competence level ascribed to it in the areas of clinical and technical skills ranging from 1 to 4:

1. Has observed

Exit descriptor; at this level the trainee:

- Has adequate knowledge of the steps through direct observation.
- Demonstrates that he/she can handle instruments relevant to the procedure appropriately and safely.
- Can perform some parts of the procedure with reasonable fluency.

2. Can do with assistance

Exit descriptor; at this level the trainee:

- Knows all the steps - and the reasons that lie behind the methodology.
- Can carry out a straightforward procedure fluently from start to finish.
- Knows and demonstrates when to call for assistance/advice from the supervisor (knows personal limitations).

3. Can do whole but may need assistance

Exit descriptor; at this level the trainee:

- Can adapt to well- known variations in the procedure encountered, without direct input from the trainer.
- Recognises and makes a correct assessment of common problems that are encountered.
- Is able to deal with most of the common problems.
- Knows and demonstrates when he/she needs help.
- Requires advice rather than help that requires the trainer to scrub.

4. Competent to do without assistance, including complications

Exit descriptor, at this level the trainee:

- With regard to the common clinical situations in the specialty, can deal with straightforward and difficult cases to a satisfactory level and without the requirement for external input.

- Is at the level at which one would expect a UK consultant surgeon to function.
- Is capable of supervising trainees.

b)　　　　How is the trainee pedagogised by the curriculum?

Power-Knowledge

How does the novice surgeon become a subject within the training practices prescribed by the curriculum? I explore this question by applying Foucault's theory of power knowledge. Put simply, I examine how the syllabus *identifies, positions and regulates* the learner. These positionings of the trainee (as a doctor, a learner, a carer and so on) involve relations of power which mould particular kinds of individuals.

> Power is manifested as relationships in a social network . . . Power, through knowledge, brings forth active "subjects" who better "understand" their own subjectivity yet who in this very process subject themselves to forms of power (Usher and Edwards, 1994: 89)

The above statement refers to how certain forms of knowledge are imbued with power, so that they can create specific pedagogic identities. For illustration, I describe how the curricular discourse of operative surgery generates a particular identification of the learner surgeon. I have also drawn on Atkinson's writings on assessments of students' art practice to develop my analysis of trainee operative practice (2002, chapter 5).

Operative training practices

Figure 13 is an excerpt from the syllabus (ISC, 2013: 83). It indicates what levels of competence in knowledge, clinical skill (diagnosis, judgement) and technical skill (operative technique) are required at each stage of training (ST4, ST6 and ST8) in the diagnosis and management of a groin (inguinal)hernia. I have highlighted in blue the areas relevant to my analysis.

Figure 13: Sample taken from ISC (2016) regarding knowledge and skills required in higher level surgical training on the topic of 'elective hernia' (p. 83).

ELECTIVE HERNIA	ST4	ST6	ST8	Areas in which simulation should be used to develop relevant skills
OBJECTIVE				
Diagnosis + management, including operative management of primary and recurrent abdominal wall hernia				
KNOWLEDGE				
Anatomy of inguinal region including inguinal canal, femoral canal, abdominal wall and related structures e.g. adjacent retroperitoneum and soft tissues.	4	4	4	
Relationship of structure to function of anatomical structures.	4	4	4	
Natural history of abdominal wall hernia including presentation, course and possible complications	3	4	4	
Treatment options				
Current methods of operative repair including open mesh, laparoscopic mesh and posterior wall plication, to include the underlying principles, operative steps, risks, benefits, complications and process of each	3	4	4	
CLINICAL SKILLS				
Diagnose and assess a patient presenting with abdominal wall hernia, including inguinal, femoral, epigastric, umbilical, paraumbilical, rare hernias (such as obturator and Spigelian hernias) and incisional hernias	3	4	4	
Supervise the postoperative course in hospital and on follow-up	3	3	4	
TECHNICAL SKILLS				
Hernia repair-femoral	3	4	4	
Hernia repair-incisional	2	3	4	
Hernia repair-incisional recurrent	2	3	3	
Hernia repair-inguinal	3	4	4	Strongly recommended:
Hernia repair-inguinal recurrent	2	3	4	
Hernia repair-umbilical/paraumbilical	3	4	4	Strongly recommended:
Hernia repair-epigastric	3	4	4	Strongly recommended:

'Knowledge' is conceived within a biological sciences paradigm: the anatomy of the groin area, the pathophysiology of hernia disease, the technical theory underpinning the different methods of repairing a hernia.

In terms of operative technical skill, an ST4 trainee must demonstrate level 3 proficiency; perform the entire hernia surgery with help from a trainer, in the form of verbal advice or assistance. Figure 13 defines what 'requiring assistance' means: a fluency with the procedural theory and rationale but still requiring advice or technical help from a trainer to complete the operation.

An ST8 trainee should be able to perform the procedure at a level 4 proficiency; perform the procedure without trainer guidance or input (similar to a consultant surgeon) and be capable of recognising and managing difficulties encountered during the surgery.

Thus, the terms used to assess the groin hernia operation create a particular paradigm of operative training practice. It anticipates a distinct trainee-skill relation based on two prior notions of competence. First, an assimilation of procedural theory, which is demonstrable through a familiarity of the steps of the operation as well as knowledge of the potential complications. Second, the gradual withdrawal of assistance or intervention from a trainer.

This specific representation of operative competence positions the surgical trainee as a particular kind of surgeon. That is, a competent and safe technical surgeon is configured along an approved chronology, in which there is a graduated acquisition of procedural skill which culminates in complete independence from the trainer. This

recognized training process is the discursive practice within which a trainee's operative practice is made visible to both the trainer and trainee.

Within this representation of surgical practice, Foucauldian theories of power-knowledge function so that learners and teachers of surgery are subjectivised as pedagogised individuals. In other words, within the training relationship established by this representation of operative surgery, trainers and trainees subject themselves, albeit unknowingly, to power relations that appear 'normal' or inevitable. An example is the perception of trainees as 'without skill' until an engagement with a trainer 'cultivates' actual surgical abilities.

However, this paradigm of operative practice is problematic. Particularly, because it assesses, positions and regulates a training operation (such as a hernia repair) within a specific discursive representation of surgery. This singular approach, obfuscates the potential to view the trainee also through other signifying practices. An example is a trainee's acquisition of technical proficiency prior to demonstrating a fluent understanding of the theory behind the procedure. Another example is a trainee who might conceive a procedure in ways that are not stated or approved by the transcendent frameworks of the curriculum. That is, devising a procedural method that is not prescribed by the curriculum, even though it is effective and successful in practice.

Second, the criteria for identifying competent operative practice does not evaluate the inherent technical ability in the learner or in the operation itself, though it may appear that this is actually what is being assessed according to the curriculum. The signifier of ability, which is assimilation of knowledge and independence from assistance, constructs the trainee and trainer as pedagogised subjects. A learner's ability to operate is not viewed as an intrinsic capacity that can be discovered or developed, even though it appears that this is the objective of surgical training. Instead, a trainee's inherent operative abilities are constituted exclusively in specific training practices and their corresponding discourses. These bring into existence particular

regimes of power-knowledge and forms of governance. It is through these forms of power-knowledge and governance that the subjectivities of a surgical trainee and trainer, such as trainer assistance and trainee ability are constituted.

Members of the surgical community, may be disposed to criticise these conclusions. Is the ultimate goal of training not the creation of safe and independent operative practice? We all agree that this necessitates a sound knowledge of procedural theory coupled with appropriate supervision from a trainer. Surely, curricular practices must reflect this imperative? There can be no dispute that complicated procedures require adequate trainer guidance to ensure the safety of the patient whilst teaching the learner appropriate technical methods and so on.

However, what I advocate is an increased awareness of how curricular strategies can mould training practices to reflect exclusively, established components of skill which are considered critical to forming competence. These core skills, specified by the curriculum, include evidently incising and closing superficial tissues accurately, tying secure surgical knots and safe use of diathermy (electrocautery) (ISC, 2016: 51). While proficiency in these techniques is crucial, the difficulty arises when a learner's identity as a competent surgeon is absolutely constituted and confined in terms of their ability to develop skills in these core elements. These 'core' criteria establish a normalizing discourse that separates, categorises and regulates individual aptitude. The unintended result may be that trainees become their abilities and that trainers become their surgical practice.

Not surprisingly, therefore, we find it reasonable and logical to expect the prescribed practice—that a trainee emerges through a graded acquisition, with independent skills to carry out a hernia operation. Indeed, the subjectivities of both trainee and trainer emerge from submitting (unknowingly) to the forms of power and governance inherent in this conception of operative practice and which also appear as obvious and natural processes.

The difficulty arises when this specific discursive practice identifies surgical skill in ways that inhibit or neglect to acknowledge other representations or signifiers of technical skill. These alternative representations may constitute how operative practice *matters* to trainees and therefore, how such forms of mattering may constitute personal forms of governance that affect how they learn. I expand on this topic in the below sections.

6.5   Operative Training: Conceptualising Technical Training

The point I wish to make is that you can't learn surgery by yourself. So, different people have different abilities to learn by watching, some people can repeat something after watching it once. I needed to first do things myself and figure it out in my head . . . because in my head I'm thinking there are many different ways that this could be done. . . So, why would other ways not work and why must I do it this way only? Others don't think about the alternative ways of doing things.

Most of our trainers are used to trainees who will carry out things in one approved way. But, it can be a big advantage when doing difficult types of problems, because then your mind is attuned to looking at things from different angles and not necessarily using the one shot solution.

(Joseph, Consultant Surgeon, London)

When I meet for the interview with Joseph, he has been in his first consultant job, for a few months. He works in a London teaching hospital at a tertiary specialist centre. "What I am really in this job for is that I really like teaching. . . For me that is the THE priority!" Joseph specifically sought opportunities to be involved in the education of trainees and other surgeons.

a)   Transcendent frameworks of surgery

Joseph describes how trainers tend to be confronted by trainees who can only operate in a singular way that replicates one particular format. The apprenticeship model of teaching operative skills (as discussed in Chapter 2) was based on the premise that a student would learn from an expert surgeon by: watching their

operations, being instructed in that surgeon's particular way of 'doing surgery' and demonstrating successful attainment of skill by emulating the surgeon's procedural technique and approach to surgical practice. This model of surgical learning was premised on the 'time spent in training'.

The move to competency based surgical training, shifted the emphasis away from time spent 'apprenticed' to a master surgeon towards demonstration of predefined competences in a procedure (which need not be time dependent). But is it the case that 'one master' has been replaced by another? In other words, where previously a trainee would be expected to operate in the style of one trainer (therefore operating in one particular way), now the requirement is to operate in a manner that is consistent with a single pre-defined method identified by modern day assessments.

Operative training relies on a transcendent framework of teaching, whereby trainees are introduced, some would say indoctrinated, into an established and historical tradition of technical skills. This involves following an approved format: steps of the procedure, shape of the incision, technique to dissect and handle tissues. The operative method is an ancient discipline and some techniques, for example trephining (making a hole in the skull, also known as a 'burr hole' in surgical parlance) have their origins in the neolithic period (Porter, 1997). Another example is the technique of vascular anastomosis (joining two blood vessels together) developed by Dr. Alexis Carrel (1873-1944) for which he was awarded the Nobel Prize in 1912.

It should not surprise therefore, that techniques which are constantly in use, have proved to be efficient and effective and thus 'stood the test of time', are unquestioningly taught and propagated in surgical practice. When faced with a novice surgeon, teaching specific techniques such as knot tying, instrument handling, suturing, help the trainee develop a set of actual physical skills that enable the practical act of performing surgery. I clarified with Joseph whether he felt these techniques should be passed on. He vehemently concurred that these techniques form the building blocks of a surgical trainees' operative skill set. However, teaching

traditional techniques should not limit an individual trainee's *process of discovery* in the operative field. If didactic pedagogic instruction dominates the teaching of operative skills, it can lead to the trainer fetishising the trainee. This incurs a belief that technical skills can only be acquired through unquestioned specific guidance.

Nowadays, a trainee may rotate through a number of surgical jobs in which different expert surgeons are responsible for their operative training. While the basic principles of surgical technique are the same (how to stop bleeding, how to sew vessels) individual trainers have their own interpretation of technique and will apply it in their own unique way to a procedure. A personal example is how in a single transplant centre, I was taught to perform a vascular anastomosis (joining up of two blood vessels) differently by each of the four surgeons in the department. The basic principles of the technique were reiterated by the individual surgeon. Yet, each had their own interpretation of the nuances of the procedure, their own belief systems about why they did something in a particular style and their emphasis on chosen components of the procedure to corroborate their thinking on the matter.

The benefit of a multi-surgeon teaching approach, is that a trainee has the opportunity to learn different elements or 'tricks of the trade' from each trainer. In turn this will permit trainees to develop 'a toolbox' of operative techniques, based on what they have chosen to retain or discard from their training. This way, novice surgeons build a set of techniques and skills that form the foundation of their own practice. However, while the scope to pick and choose different techniques is a definite advantage for a developing trainee, the reality in practice is different.

Without concrete opportunities to attempt variations of a procedure, which may differ from transcendent ways of operating, in a safe and supervised environment that ensures patient safety, how do trainees discover what techniques 'work' best for them? These opportunities are also associated with initial attempts to develop independent beliefs about how an operation should be approached or handled. I suggest that it is through these opportunities to explore, that surgical trainees *discover*

practice. This process of supervised discovery has significance for cultivating thoughtful and creative surgeons who can innovate in unfamiliar situations (not prescribed in the official manuals of surgery). Joseph cites the example of problem solving 'in the field', when confronted by unfamiliar operative cases which cannot be resolved through an application of known or approved methods. In addition, it could be argued that opportunities to discover practice may lead to the development of enhanced abilities to manage the complexity and pressures of consultant practice.

Joseph's narrative raises three primary pedagogical objectives: first, how can trainees be encouraged to expand their understanding of operative practice? Put another way, how can trainees be given some degree of freedom to explore Surgery in terms of what can still be created rather than what already exists? This would lead to a contemplation of *what Surgery can become*, rather than a narrow focus on individual operations. Second, what modes of thinking and being are important in cultivating an ability to cope with the immanence of surgical practice? That is, what attitudes and behaviours emerge from the thisness of practice, which are critical to managing the uncertainty of practice. Third, how can imagination and invention be fostered while maintaining the demands for patient safety and meeting the criteria for competence?

I have drawn on Simondon's writings on transduction, invention and the notion of a technician to explore the concepts around transcendent frameworks in training and norms in surgical education.

b)   Individuation of norms: expanding what operative training can be

A broadening of surgical operative training from a sole transcendent governance of practice to one that also reflects the immanence of learning encounters, can be considered in light of Deleuze's (1994) actual-virtual dyad. This approach emphasises 'becoming' in terms of what can still be created rather than what is

already in existence and known. In section 6.12, I use this theory to unpack narrative accounts of actual training practice.

In operative training I advocate an approach that is open to the modes of thinking and doing that emerge from the immanence of surgical practice. In uncertain and unanticipated events of surgery, it is necessary to consider carefully the immanent nature of clinical relations of practice. However, this approach must still prioritise the safety and welfare of the patient.

In exploring Joseph's thoughts and comments, I draw on Simondon's (2005a) theory of *individuation.* My objective in doing so, is twofold. First, to examine how a reconfiguration of operative practice along notions of 'becoming' may lead to an enhanced understanding of what is *possible* in technical training. Second, to trigger actualisations of virtual potentials that result in 'invention', as described by Simondon. This notion of invention does not conform to a hylomorphic scheme where an idea occurs and results in an effort to construct something in order to replicate this idea. Instead, he suggests that invention is, 'the discovery of a system of compatibility that constitutes a higher level on which previously incompatible and disparate elements can be integrated' (Chabot, 2012: 19).

What Simondon emphasises is a concept of invention that goes beyond the need to simply create an alternative solution or a 'cure' to the problem. At the heart of his notion of invention, is the act of *establishing coherence*, (Chabot, 2012: 20). That is, integrating incompatible elements to give rise to ideas or a 'regime of functioning' (Massumi et al, 2010: 39) that formulates an answer to the initial problem.

Invention is the actualisation of a potential (Mills, 2016: 134) and is rooted in the notion of metastability: a condition charged with potential such that it can 'produce a sudden alteration leading to a new equally metastable structure' (Mills, 2016: 36).

> The individual, then is always in relation to its milieu, which co-individuates along with it. As such the individual can never be considered as complete but

always partial and in the process of individuation, the milieu always acting as a mediation between individual and world. (Mills, 2015: 40).

The individual, according to Simondon, is conceived of in terms of the relations that continually form and develop between what they are at a given moment and what can still be actualised in the present. This state of potentials, a metastable system can be disrupted by a singularity, an unanticipated element.

Joseph in his description of watching an operation as a trainee, discusses how he believes that there are numerous ways to proceed in a surgery at a given moment:

> *. . . some people can repeat something after watching it once. I needed to first do things myself and figure it out in my head . . . because in my head I'm thinking there are many different ways that this could be done. . . So, why would other ways not work and why must I do it this way only?*

Although Joseph is aware of the potentialities that emerge from the encounter, by simply observing someone else doing the procedure, he personally requires a broader application of 'doing by seeing'. What he asserts, is the importance of opportunities to discover why what he has been shown is the best way forward in a procedure. I suggest that what he is describing, is his personal process of discovery: how a particular technique or procedure comes to matter to him. How a way of operating attains significance for him. It is not simply that he cannot learn from observing or being instructed by a more experienced surgeon. I understand his description and thoughts as the *necessary tension* that must exist on the one hand between transcendent forms of learning, and on the other hand, the immanence of learning that arises from an application of transcendent practices.

Another way to examine this concern is to draw on Simondon's theory of a preindividual metastable state, which represents a pool of 'becoming'. At any point in a procedure there is the potential for the surgery to unfold or 'become' in different ways ('the pool of becoming'). The singularity that triggers an actualization of this metastable state (referred to by Simondon as 'dephasing') is the trainee being

confronted by a technical problem in the procedure. This may be an episode of unanticipated bleeding or an anatomical anomaly.

In being immersed in the actual operative encounter of the surgery, he has the opportunity to actualize the potentials that emerge from the virtual dimension of practice. Through this adventure, he is able to derive meaning from the encounter. His practice comes to matter to him through a personal engagement and he learns from the event. It may be that what he learns, is an appreciation of why a procedure is conducted in a particular way. Equally, it is possible that he may discover a new way to resolve the technical difficulty, thus actualising a new potentiality.

What I am advocating through an analysis and application of Simondon's theory is that individuation provides the conditions of possibility for what operative knowledge can be, in addition to what already exists. Indeed, training programmes over many years were built on systems of potentials that contributed to the emergence of authorised practices and transcendent norms, establishing what is known, how it is recognised and when it was approved. However, these systems of potentials in forming authorised norms, structured themselves and these structures in turn also represent potentialities for further development in response to singularities that come from the environment.

As such transcendent norms are 'in essence' metastable structures, which can be disrupted and disturbed by unanticipated or unfamiliar events in the operating theatre, to produce potentialities that act to create and expand how we think and practice in both surgery and surgical education.

6.6   Procedure-Based Assessment (PBA)

PBAs are an example of a workplace-based assessment (WBA), used to evaluate the development of operative skill. The WBAs were designed to investigate the knowledge, clinical skills, behaviour and attitudes associated with one specific procedure. WBAs are formative assessments, which are designed to provide

feedback on performance, aimed at helping trainees improve their familiarity with the procedure, proficiency and technique so that they become expert and safe practitioners (Van der Vleuten, 1996; Norcini, 2003, 2007; Norcini et al, 2003, 2007; PMETB, 2005; GMC, 2010).

Figure 14a: Procedure Based Assessment Form (page 1) (ISC, 2016)

Procedure-Based Assessment (PBA)

Trainee	Assessor	
Name / GMC/GDC/IMC number:	**Name / GMC/GDC/IMC number:**	
Date of event:	**Specialty:**	**Position:***

FEEDBACK:
Verbal and written feedback is a mandatory component of this assessment.

General

Strengths

Development needs

Recommended actions

TRAINEE REFLECTIONS ON THIS ACTIVITY (optional)

What did I learn from this experience?

What did I do well?

What do I need to improve or change? How will I achieve it?

RATINGS

Your ratings should be judged against the standard for the Certificate of Completion of Training (CCT/CCST).

N = Not observed / not appropriate, **D** = Development required, **S** = Satisfactory (no prompting or intervention required), **O** = Outstanding

* Assessors are normally consultants (senior trainees may be assessors depending upon their training level and the complexity of the procedure)

IMPORTANT: The trainee should explain what he/she intends to do throughout the procedure. The Assessor should provide verbal prompts if required, and intervene if patient safety is at risk.

	Competencies and Definitions	Rating N/D/S	Comments
I.	**Pre-operative planning** (WHO Checklist: Sign In)		
PL1	Demonstrates recognition of anatomical and pathological abnormalities (and relevant co-morbidities) and selects appropriate operative strategies / techniques to deal with these		
PL2	Demonstrates ability to make reasoned choice of appropriate equipment, materials or devices (if any) taking into account appropriate investigations e.g. x-rays		
PL3	Checks materials, equipment and device requirements with operating room staff		
PL4	Ensures the operation site is marked where applicable		
PL5	Checks patient records, personally reviews investigations		
II.	**Pre-operative preparation** (WHO Checklist: Time Out)		
PR1	Checks in theatre that consent has been obtained		
PR2	Gives effective briefing to theatre team		
PR3	Ensures proper and safe positioning of the patient on the operating table		
PR4	Demonstrates careful skin preparation		
PR5	Demonstrates careful draping of the patient's operative field		
PR6	Ensures general equipment and materials are deployed safely (e.g. catheter, diathermy)		
PR7	Ensures appropriate drugs administered		
PR8	Arranges for and deploys specialist equipment (e.g. image intensifiers) effectively		

Figure 14b: Procedure Based Assessment form (2) (ISC, 2016)

	Competencies and Definitions	Rating N/D/S	Comments
III.	**Exposure and closure**		
E1	Demonstrates knowledge of optimum skin incision / portal / access		
E2	Achieves an adequate exposure through purposeful dissection in correct tissue planes and identifies all structures correctly		
E3	Completes a sound wound repair where appropriate		
E4	Protects the wound with dressings, splints and drains where appropriate		
IV.	**Intra-operative technique: global (G) and task- specific items (T)**		
IT1(G)	Follows an agreed, logical sequence or protocol for the procedure		
IT2(G)	Consistently handles tissue well with minimal damage		
IT3(G)	Controls bleeding promptly by an appropriate method		
IT4(G)	Demonstrates a sound technique of knots and sutures/staples		
IT5(G)	Uses instruments appropriately and safely		
IT6(G)	Proceeds at appropriate pace with economy of movement		
IT7(G)	Anticipates and responds appropriately to variation e.g. anatomy		
IT8(G)	Deals calmly and effectively with unexpected events/complications		
IT9(G)	Uses assistant(s) to the best advantage at all times		
IT10(G)	Communicates clearly and consistently with the scrub team		
IT11(G)	Communicates clearly and consistently with the anaesthetist		
V.	**Post-operative management (WHO Checklist: Sign Out)**		
PM1	Ensures the patient is transferred safely from the operating table to bed		
PM2	Constructs a clear operation note		
PM3	Records clear and appropriate post-operative instructions		
PM4	Deals with specimens. Labels and orientates specimens appropriately		

GLOBAL SUMMARY Level at which completed elements of the PBA were performed on this occasion		Please tick
Level 0	Insufficient evidence observed to support a summary judgement	
Level 1a	Able to assist with guidance (was not familiar with all steps of procedure)	
Level 1b	Able to assist without guidance (knew all steps of procedure and anticipated next move)	
Level 2a	Guidance required for most/all of the procedure (or part performed)	
Level 2b	Guidance or intervention required for key steps only	
Level 3a	Procedure performed with minimal guidance or intervention (needed occasional help)	
Level 3b	Procedure performed competently without guidance or intervention but lacked confidence	
Level 4a	Procedure performed confidently to a high standard without any guidance or intervention	
Level 4b	As 4a and was able to anticipate, avoid and/or deal with common problems/complications	

PBA DETAILS
Name of Procedure:
No. times procedure previously performed: / **Emergency / Elective** (please circle)
Performed in a simulated setting ☐ **Description of the simulation:**
PBA performed while on a course Yes / No   If yes, please give details:
Difficulty of procedure: Easier than usual ☐ **Average difficulty** ☐ **More difficult than usual** (please state reason) ☐
Trainee's signature: / **Assessor's signature:**

Figure 15: PBA Trainer Guidance Sheet (ISC, 2016)

Procedure-Based Assessment Validation (To be used for training assessors)

Specialty:	All surgical specialties	Procedure:	All surgical index procedures

Trainees should carry out the procedure, explaining what they intend to do throughout. If the trainee is in danger of harming the patient at any point s/he must be warned or stopped by the trainer immediately.

	Competencies and Definitions	Positive Behaviours (doing what should be done)
I.	**Consent**	
C1	Demonstrates sound knowledge of indications and contraindications including alternatives to surgery	Explains using examples relevant to the patient: • Principle benefit of operation • Subsequent improvement of function • Limitations of surgery • Consequences of not having surgery
C2	Demonstrates awareness of sequelae of operative or non operative management	Describes consequences, agrees expectations and checks patient understanding
C3	Demonstrates sound knowledge of complications of surgery	Explains in priority order the complications likely to occur in terms of commonality and in terms of seriousness
C4	Explains the perioperative process to the patient and/or relatives or carers and checks understanding	Describes what will happen throughout the management of the condition, indicating clear post operative milestones, giving a rough idea of time involved and specifying who will do what. Questions the patient to check that their expectations are realistic and they have understood fully
C5	Explains likely outcome and time to recovery and checks understanding	Expresses sensible prognosis and clearly has knowledge of the current outcome data
II.	**Pre operative planning**	
PL1	Demonstrates recognition of anatomical and pathological abnormalities (and relevant co-morbidities) and selects appropriate operative strategies/techniques to deal with these e.g. nutritional status	Articulates the realistic clinical findings against any investigative findings and achieves a balance between the two
PL2	Demonstrates ability to make reasoned choice of appropriate equipment, materials or devices (if any) taking into account appropriate investigations e.g. x-rays	Draws, writes or iterates a pre operative plan
PL3	Checks materials, equipment and device requirements with operating room staff	Either personally visits or rings up the operating theatre to check on equipment availability

Trainees should carry out the procedure, explaining what they intend to do throughout. If the trainee is in danger of harming the patient at any point s/he must be warned or stopped by the trainer immediately.

	Competencies and Definitions	Positive Behaviours (doing what should be done)
PL4	Ensures the operation site is marked where applicable	Personally marks the site
PL5	Checks patient records, personally reviews investigations	Ensures that the relevant information such as investigative findings are present, checks wristband
III.	**Pre operative preparation**	
PR1	Checks in theatre that consent has been obtained	Checks the consent form in the notes
PR2	Gives effective briefing to theatre team	Checks with nurse that they have all equipment needed ready to hand and discusses planned actions
PR3	Ensures proper and safe positioning of the patient on the operating table	Prior to scrubbing supervises the positioning of the patient
PR4	Demonstrates careful skin preparation	Supervises painting of the operative field, ensures the material covers the whole surface
PR5	Demonstrates careful draping of the patient's operative field	Drapes (or supervises draping of) the operative field to adequately expose site ensuring only prepared site is exposed
PR6	Ensures general equipment and materials are deployed safely (e.g. catheter, diathermy)	Checks with the anaesthetic nurse that the diathermy has been placed well away from any existing metal implants
PR7	Ensures appropriate drugs administered	Checks notes, liaises with anesthetic team to ensure prescribed drugs administered
PR8	Arranges for and deploys specialist supporting equipment (e.g. image intensifiers) effectively	Briefs and discusses with the team where equipment is to be placed relative to the operative field
IV.	**Exposure and closure**	
E1	Demonstrates knowledge of optimum skin incision / portal / access	Verbally states or marks with a pen the anatomical landmarks prior to making the incision
E2	Achieves an adequate exposure through purposeful dissection in correct tissue planes and identifies all structures correctly	Gives a running commentary to the trainer of the structures encountered
E3	Completes a sound wound repair where appropriate	Closes each layer without tension
E4	Protects the wound with dressings, splints and drains where appropriate	Personally supervises the application of the wound dressing
V.	**Intra operative Technique**	
IT1(G)	Follows an agreed, logical sequence or protocol for the procedure	Justifies actions at any point in procedure
IT2(G)	Consistently handles tissue well with minimal damage	Personally places self retaining retractors and checks whether the skin is under tension
IT3(G)	Controls bleeding promptly by an appropriate method	Responds calmly by applying pressure initially. Briefs the team about what will need to be done – e.g. asks assistant to be ready for diathermy

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However, in recent years, WBAs (PBAs) have come to represent 'examinations' of performance and as such the formative feedback element has been misplaced (Norcini, 2007; Phillips and Jones, 2015). PBAs involve the trainer (assessor) conducting an observed assessment of the trainee. The trainee is assessed carrying out a common ('index') procedure in that speciality. For example, a hernia repair by an ST4 candidate in general surgery. Figures. 14a and 14b illustrates the written format of the assessment and Fig. 15 is the trainer guidance sheet (ISC, 2016). There are two principal components to the assessment. Each procedure is divided into five 'domains' (consent, pre-operative planning, exposure and closure) that list criteria or 'competencies' to be met in order to demonstrate successful completion of the stage: achievement of 'competent practice'. At the end of the procedure, the trainer must give an overall assessment of performance using a global assessment that features 8 specific ratings. The highest rating coincides with consultant level practice[26].

The assessment format is didactic (see Figs. 14 and 15) itemising what must be observed at each step of the procedure ('positive behaviours'). In addition, the trainer guidance specifies the *parameters* in which the 'positive behaviours' must be observed, such as through speaking or drawing:

TRAINEE COMPETENCIES	POSITIVE BEHAVIOURS
Communicates clearly with scrub team appropriate greeting	Sets **positive tone** with
Demonstrates careful skin preparation operative field	**Supervises** painting of the
Controls bleeding promptly by an appropriate method of pressure	**Responds** calmly by applying
Follows an agreed, logical sequence for procedure procedure	**Justifies** actions at any point in

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[26] https://www.iscp.ac.uk/curriculum/surgical/assessment_pba.aspx

Achieves an adequate exposure through purposeful dissection/identifies all structures correctly	Gives a **running commentary** of the structures encountered
Demonstrates knowledge of optimum skin incision **pen**	**Verbally states** or **marks with a** anatomical landmarks

The terms that form the assessment of the surgical procedure, assert a *particular paradigm of operative practice*.   In this paradigm, competence is conceived and framed through *physical expressions of practice* that are *visual*: the ability to demonstrate, supervise, vocalise, verbalise, mark out one's thoughts and actions at any given moment. It is through this discursive practice, which constitutes a 'physical' representation of operative surgery, that the surgeon becomes visible to both trainer and trainee. The assessment of the procedure is *not about inherent ability*: it is not an assessment of operative ability or clinical judgement *in* the trainee or *in* the surgical procedure (though it appears this way). The assessment discourse constructs, regulates and confirms a particular kind of surgical trainee within a specific pedagogic gaze.

The danger is that the dominant signifier of ability in the PBA is *linguistic skill*, this is how a trainee demonstrates that the required knowledge and skills have been assimilated and understood. The trainee's inherent capacity to operate and perform a specific procedure is not considered a capacity that can be liberated or discovered. Instead, trainee ability is constituted in particular sites of practice. Critics may argue that how else are we to gather information on whether a trainee has the required knowledge to perform the procedure if not by asking for an explanation? I would agree that this is a reasonable approach to take and the easiest with which to find out if trainees understand their practice. But, my concern is two-fold: first, that this assessment method is the only way advocated for finding out whether a trainee understands something (i.e. through a verbal explanation).

Second, in reality, surgeons perform surgeries for a variety of reasons: like all human beings, they too respond to multiple motivations. Eleanor comments:

I'm quite good at saying 'well, I don't understand that, what's your rationale, what's your surgical strategy?' Because at the beginning you think they just know everything and I don't understand. But because I've done the exam I know that they don't always (have a rational explanation based on theoretical knowledge). They do things a certain way because it's what they're familiar with or because he lives at home with his mum or some other social thing. . .

The corresponding discourses constitute and regulate aspects of subjectivity through regimes of power-knowledge. The power implicit in this specific discursive practice in surgical training exerts inclusionary and exclusionary forces. The global rating at the end of the assessment, subjects the trainee to the gaze of certain knowledge and practice discourses, according to which their practices are measured and categorised.

In this evaluation, the signifier of ability is 'guidance'. Guidance is viewed in a few different ways in the assessment, from the giving of advice, to guiding the trainee from a position as an assistant to the main surgeon in the procedure and guidance as intervention when necessary or not. The provision and withholding of assistance by the senior person reflects the relations of power-knowledge that exist in the trainer-trainee relationship. Guidance appears to be required when a trainee is 'lacking' in knowledge or skill, for example, Level 1a global score is 'able to assist with guidance' explicated as 'not familiar with all steps of the procedure'. Guidance is equated with 'help' or 'not familiar'.

Interestingly guidance also appears to be implicated in the following assessment of a trainee, labelled as 3b (see Fig 14): 'procedure performed competently without guidance or intervention but lacked confidence'. It may appear that demonstrating competence is automatically equated to being confident in performing the procedure. However, the assessment adds a further tier to how competence is now understood. It emphasises that demonstrating competence does not mean that the trainee has 'confidence'. By making this link what is the motivation behind the statement? It's not

clear whether this requires a trainer to make an assumption about the trainee's state of mind or not. Lydia makes the following comment:

People say trainees develop at different times. I think that's only true partially because some people are just cocky and think they can do operations that they're really not fully trained to do. I remember this guy called Raj Pataki and they said to me, "how many hernias could you do?" And I said, "well, I could do one on my own, but I'm training and I therefore want somebody there who'll be able to tell me what I'm doing right and wrong." So they said, "ok, well, Raj could do it with you." I said, "well Raj has done 20 (hernia operations) and I've done 50! Raj is a cocky t*** and I'm a conscientious surgeon. That's the difference between us." So I found it really frustrating that they were like, "well, if you're a bit nervous take Raj with you." No! I'm not nervous, what I want is to improve every time I do this operation. It is a balance because at some point you just have to do it.

Lydia highlights the difficulties that capable yet conscientious trainees may face. Their reluctance to be used by the hospital as service providers (in this case she was being asked to do an operating list on her own to reduce waiting lists) can be perceived as a lack of confidence. As a senior trainee with sufficient experience, surely she should be comfortable and safe to operate independently? But, in reality, Lydia views herself as a trainee who should be guided and supervised. This is also a very desirable trait: a conscientious surgeon who prioritises the patient's welfare. The confidence of some of her colleagues, as she states so vividly in the above excerpt, is not a demonstration of safe or competent practice but a reflection of their attitude and state of mind. This comment emphasises the complexities involved in how 'skill' can be recognised.

This example of a WBA demonstrates how notions of 'competence' are constructed around particular discourses of what is visible and measurable in practice. 'Competence' can be described using Jacques Lacan's theory as a *point de capiton*:

> The point de capiton is the point through which the subject is sewn to the signifier, and at the same time the point which interpellates individual into

subject by addressing it with the call of a master signifier (…) - in a word, it is the point of the subjectivation of the signifier's chain (Zizek, 1989: 101).

A point de capiton is an upholstery button which once pinned down on a surface, causes folds of material to radiate from its centre. In the assessment discourses, competence forms such a pin, from which conclusions about a trainee radiate like the little lines of on cloth, made by the button. It is the point of convergence that enables everything that happens in this discourse to be situated retroactively and retrospectively (Lacan, 1993: 268).

Zizek expands on the idea by discussing through a quilting metaphor, how subjectivity and identity are constituted by interpellating (Althusser, 1971)) individuals into particular positions through specific discourses. The meaning conveyed in these discourses is structured through a series of points de capitons. Another example is the use of *patient safety* as a point de caption around which discourses on standards in practice, professionalism, regulation of trainees etc. are configured.

Conclusion to this section

What is the purpose of instituting these assessments of practice which replace the former subjective evaluations of performance made by senior surgeons? Is it, as suggested by Lydia earlier in the chapter, to remove perceived biases and prejudices to foster a more equitable system? Whose interests are served in an '*a-subjective*' conception of assessment? I have not described the latter system as 'objective' because my purpose is to emphasise the *absence of a surgeon's voice in this structure of assessment*.

These post MMC assessments, although described as 'objective measures of performance' (ISC, 2016; xx) remain subjective tools, because they are constructed by what the official stakeholders in medical education collectively identify and believe represent 'competence'. The narrative excerpts exemplify the conflicting discourses of competence in training. One that originates from being immersed in a community of practice. The second and contrasting discourse arises from being evaluated by a

'dispassionate' and impersonal system of assessment. What distinguishes one discourse from the other is primarily the location of power in the assessment relationships. In the next section, I explore how forms of power manifest in training.

## 6.7	How Do Surgeons Conceive The Practices Of Training?

. . .training is very much like apprenticeship isn't it. You're not really trained, you just follow people round and you take on as much as you do or don't. It's hard to quantify, it's hard to dispute whether it's a good way to train. My absolute favourite example of this is when I began Vascular surgery as a registrar (senior trainee) and I worked with Mark, who was my SHO (junior trainee). Mark had been an ST 8 in cardiology (final year trainee prior to becoming a consultant) before joining my team. He got to the end of his cardiology training, he'd had kids and he thought, "you know what? I can't do this (cardiology) for my whole life." He retrained as a GP and in his GP training rotation he had come to vascular surgery to do a six-months placement.

His next training job as a GP was to be an SHO (junior trainee) in cardiology, based on the same ward that he had worked on as an ST8 in cardiology. So he phoned up the deanery and said, "look guys, I was the ST8 on that ward and I've also just finished being the consultant for cardiology on that ward, so in terms of training, this placement is not going to be of any further benefit to me the six months I'm based there. And they said, "that's not true, because you'll learn completely different things being a junior on those wards." I mean, the mind boggles! And that's because its some administrator who is just ridiculous. But he (Mark) thought, you know what, just sod it! He was just waiting out his three years training to be a GP and thought, "I'll do it, it'll be piss easy for six months!" He had tried to change it to something more useful, but they had refused . . .

(Lydia, ST7 trainee)

Lydia illustrates her belief and experience of surgical training as a passive process for two reasons. First, training relies on how much a trainee can absorb or learn during an attachment. Second, the trainee himself is a passive subject in the power

structures of training, without the authority or 'voice' to raise objections or suggestions.

a)　　　　The transcendence of training

In this example of relations in training, Lydia's narrative of the trainee's (Mark) thoughts and actions and the training body's response (the deanery), contributes to how she constructs herself (and Mark) as a particular kind of trainee and the deanery as a particular authority of training (trainer). Two questions arise from this story. First, Mark is told that there are valuable lessons to acquire as a junior doctor in a specialty that he is already an expert in. What can be ascertained from these comments, about the ways in which a trainee is conceptualised by the all powerful training body? Second, in accepting the junior role in Cardiology, what does Mark's actions infer about the nature of pedagogic relations in this encounter?

Lydia describes the deanery as populated by 'administrators'. In other words, non-medical folk who are unfamiliar and unappreciative of the realities of medical training, concerned only with the practicalities of organising a training programme. I would suggest here, that Lydia views the official training body as a 'transcendent organisation'. In this interpretation of Lydia's comments, trainees are categorised according to approved norms that are predefined. As such, this framework of training may disregard or diminish the value of qualifications or experiences that are not recognised by the prior established norms. Hence, a conception of the trainee as 'uneducated' or 'unknowing'.

> Perhaps most importantly, we much recognise that ethics requires us to risk ourselves precisely at moments of unknowingness, when what forms us diverges from what lies before us, when our willingness to become undone in relation to others constitutes our chance of becoming human. To be undone by another is a primary necessity, an anguish, to be sure, but also a chance - to be addressed, claimed, bound to what is not me, but also to be moved, to be prompted to act, to address myself elsewhere, and so to vacate the self-sufficient "I" as a kind of possession. If we speak and try to give an account

from this place, we will not be irresponsible, or, if we are, we will surely be forgiven (Butler, 2005: 136).

Butler advocates an approach that embraces the 'willingness to become undone in relation to others'. In pedagogical situations, a trainer may be confronted by events or information that do not correspond to the accepted practices and ways of knowing that she is familiar with. But, it is exactly in these instances of 'unknowing', that extending oneself by thinking beyond the 'self-sufficient I' may, in pedagogical terms, lead to a deeper and more profound understanding. The 'risk' that Butler urges us to take is the encounter with the unknown. This in turn stimulates a line of questioning, that interrogates what constitutes us, how we are constructed as learners or teachers and what structures are in place to assure this particular format.

Such an approach may reconfigure the self-other relation in ways that allow a trainer to view the trainee as not deficient or lacking. In other words, to 'see' the trainee as knowledgeable in ways that are unappreciated or unacknowledged by the dominant mode of training and practice. Norms in training are necessary to establish stability and organised structure so that trainees and trainers alike have a sense of what must be taught and how this is best accomplished. They are also essential for setting a good standard of practice which ensures the safety and welfare of patients. However, the difficulty arises in what they might obscure such as ways of learning that may be legitimate but lie outside the confines of the norm.

b)   The power of the norm: performative resignification

We are used to thinking of power as what presses on the subject from outside, as what subordinates, sets underneath, and relegates to a lower order. This is surely a fair description of part of what power does. But if, following Foucault, we understand power as forming the subject as well, as providing the very condition of its existence and the trajectory of desire, then power is not simply what we oppose but also, in a strong sense, what we depend on for

> our existence and what we harbour and preserve in the beings that we are
> (Butler, 1997: 1-2)

Foucault asserts that power in addition to being an external force is also implicated in how a subject is formed. Butler extends his ideas to theorise that in relations of power, the 'doer' and the 'act' are fused as one and the same thing. In other words, we conform to particular ways of acting in order to receive recognition. However, these normalising processes do not prevent other ways of acting emerging at times. In this instance, Mark the trainee has been compliant with his training scheme in his efforts to become a qualified GP. However, his next rotation through cardiology caused him to question the wisdom of that placement. This is Butler's notion of *performative resignification.* An interrogation of the norms that inform action, may allow the limits of the norm to be exceeded. This would allow action to be conceived in other more expansive terms. However, in the context of training, as is seen in this narrative, it can be particularly challenging and difficult to overcome the power of the norm.

In contacting the deanery and interrogating the proposed plan to allocate him to a specialty that he was already well versed in, he challenged at least two norms established by the training body. The first norm is that the deanery (and not the trainee) is in possession of the necessary expertise and knowledge to identify the best education and training plans for doctors in training.

The second is that, Mark as a trainee, has 'stepped outside' the established boundaries (norms) that predefine and pre-assess the ways in which a trainee is expected to think and act. In this case, he is expected to go through the pre-arranged placements as organised by the deanery. His actions have challenged the authority of the deanery and disrupted the hierarchy of power relations between trainee and

training body. His attempts at resignification did not emerge 'out of the blue', but from an event of practice that in some way forced him to question the normative structures.

This is a recurrent and dominant theme in the thesis: how events of practice compel surgeons to question or 're-think' the norms that have structured their practice to date. These normative frameworks may emerge from the ways in which clinical environments are organised and structured. That is, the mechanisms that constitute how a service is delivered, such as restricting waiting times in an outpatient clinic. The norms of practice may also arise through attitudes and behaviours that develop as the physician attempts to negotiate the different tensions in her routine practice. All these competing factors can affect how a surgeon responds to unanticipated encounters with patients. The next section explores these ideas of practice.

6.8   Eleanor's Story

Eleanor is a final year surgical trainee based in London. She describes her training as a 'disappointing' experience. She had competed for a highly desired run-through training position (a ratio of 12 candidates per training place). She had expected that the training position, would guarantee her a defined period of formal training with skilled mentors. Instead, Eleanor feels that the surgical training programme has failed to ensure that trainees have opportunities to acquire the necessary technical and practical skills. The reasons she cites include; an insufficient volume of operative cases and a lack of keen and able surgical trainers who prioritise teaching in the operating theatre. In addition, Eleanor spoke about how the culture of the NHS and the pressures on it, diminish the objectives of surgical training:

> *The anaesthetists are slow and discouraged and the theatre staff have low morale and low motivation and the theatre is hideously inefficient and the whole system is against you. Then there is the pressure of targets to get the operation done. So, if there's space for you to be taken through an operation, it's just wiped out routinely. . .It's becoming evident that trainees are doing*

> *absolutely nothing, they are just assisting. Six years of assisting does not make you a surgeon*

Regrettably, the above statement exemplifies an opinion voiced by all the interviewees for this thesis research, in different ways. The working culture and practices of the NHS, including staff attitudes, make surgical training difficult to initiate and sustain. Eleanor perceives that operative training must incorporate formal instruction of a trainee through a surgical procedure ("be taken through an operation") rather than a reliance on assimilation solely through observation or by assisting a consultant surgeon. However, for effective operative training to be facilitated she believes there needs to be greater support from the wider surgical team as well as hospital systems.

I asked Eleanor if she could remember a clinical experience that transformed her practice by altering her thinking and behaviour. She produced two stories:

a)   A case of pain - I

(I have transformative experiences) all the time Arundi. That's the only way that I've learnt anything. I was called down to Casualty one night and it was when breech times were becoming tight. It was about 3 o'clock in the morning. "Can you come downstairs and see this nine-year old boy who has pain?" I was like, "well its 3 o'clock in the morning why has he turned up now with pain?!" I asked the nurse to get one of their A&E doctors to see him and establish what the problem was. I got another doctor ringing back to say I'd really appreciate your opinion about this child's pain. There was a change in culture going on where I felt it was very disrespectful of my time basically and I had previously worked as a junior in A&E where you tried to do the best you could for the patient yourself and when you needed a specialist opinion then you called on a specialist.

Anyway, the long and short of it was that I was in a bad mood. I had to get up and go down there and assess the patient and send them home as quick as possible. I went down there and it was a Bengali family and to make matters worse, the dad started trundling on about housing benefit and how they needed to move house because the kid couldn't walk up and down the stairs properly because he was constantly tired. This is all leading up to the fact that everything was in place for me to make a mistake

based on irritating situational factors. Thank the lord I didn't do that! Had a chat with the nine-year old boy who had non-specific abdominal pain. I took him into a room, pulled his clothes up and noticed a slight fullness on the right side of his abdomen. He had a Wilm's tumour (a form of kidney cancer in children). I spotted that. . . did the necessary investigations etc. and he was sent to a specialist centre to have big cancer surgery aged nine years.

That transformed my practice immediately, because I thought when GPs, or A&E nurses or doctors ring you up, they may or may not know what they're doing. They may or may not be polite. Whatever. But basically, if they know what they're doing and they've asked you to see the patient, you should see the patient. If they don't know what they're doing and they ask you to see the patient, then you should still see the patient. It transformed my attitude to that. . . it made me a safer doctor. I was having to do a lot more work, that would previously have been done by other people. But, it was a warning to me and thankfully I heeded it.

b) A case of pain - II

When I was working in Hopgood, we had a young woman who had a sarcoma (muscle tumour) in her pelvis. Having had a load of chemo and everything. She came back to the ward and in the morning she was very unwell, dropped her blood pressure, very unwell. I was running around thinking she's picked up an infection after the chemo. I sorted her out, stabilised her. It was a bunker job, where we would get there at 7 in the morning and leave at 9pm. We were leaving the building one evening. One of the nurses said to me, this epidural is not working. I asked her to call the pain team. The next day I came back in the morning and found that the patient had a compartment syndrome (a serious muscle condition that can result in the loss of a limb) and had lost part of her leg. The whole thing had been masked by an epidural. That transformed my practice because now if a nurse says anything to me on my way out, I say, 'what do you mean?' I take more responsibility now. If a nurse comes up to you and says something, then its because they're worried about something. They're questioning you because they're worried. That was a serious

error and I'm not going to say it was all my fault, but I was part of a cascade of
disastrous events.

c)   The clinical context of the stories

Surgical trainees are required to provide on-call cover as part of training requirements
and service commitments at each hospital. An oncall surgical trainee provides an
overnight consultation and treatment service and is supervised in these duties by a
consultant surgeon. However, the surgical trainee is the 'coalface' of the oncall
service. Doctors working in the emergency department (also known as A&E), as in
Eleanor's story, may call upon the surgical trainee to review or investigate patients
whom they conclude have a surgical diagnosis and problem. The oncall surgeon is
also responsible for the overnight management of all the ward based surgical patients.

The purpose of the oncall surgeon is to deal with emergencies such as serious or life-
threatening illness as well as trauma. An example is, stabilising a patient bleeding
from a fractured pelvis following a road traffic accident or operating on a person
admitted with symptoms consistent with appendicitis (inflammation of the appendix).
Invariably, as is the case in many emergency departments in the UK, the majority of
patients seen do not require emergency care but investigation of their presenting
symptoms and reassurance.

The introduction of limits to the time patients spend waiting to be seen ('breech times')
as well as political initiatives to guarantee patients are seen quickly by specialist
doctors, has altered the way patients are managed when they initially attend the
emergency department. Eleanor expected that she would only be called in the early
hours of the morning if there was an actual surgical emergency, such as a
dangerously sick patient who needed immediate operative intervention. Any other

presentation of illness, that was not imminently life threatening should, in her opinion, have been investigated and dealt with by the emergency doctors.

She references her own experience as an emergency doctor to support and validate her views and expectations. Eleanor had expected the emergency team to first investigate the nature of the child's pain and call her once they had made a diagnosis. Her task, she believed, was to confirm or refute their diagnosis and subsequently make a surgical plan. Instead, she felt "disrespected" that she was asked to investigate a generic complaint of pain where no prior investigation had been initiated by the emergency team.

In the second story, Eleanor works long hours as part of a multidisciplinary team in a specialist cancer centre. This means that there are several medical specialities and non-medical personnel (physiotherapists, occupational therapists) involved in the care of any one patient on the ward. It is not uncommon for tensions to arise amongst the members of the team, particularly regarding who assumes responsibility for certain clinical problems. Eleanor told me that she is frequently expected to 'sort things out' even when the clinical problem does not implicate her skill set. In this example, she felt the patient's pain should first be addressed by the pain team, who are primarily anaesthetic doctors, because the symptoms may be due to inadequate pain relief or a non-functioning epidural.

d)   How is Eleanor's practice actualised?

Deleuze in *Difference and Repetition* (1994, chapter five) discusses how individuals are not isolated or discrete entities. Instead, he suggests, individuals are made up of an ongoing series of *relations* that connect the sensations, emotions and thoughts with the intensities that trigger them. These intensities or affective relations, have the capacity to produce specific outcomes of behaviour or *actualisations*.

> Thus, at every moment, my experience […] is objectively problematic, which
> means that it has the structure of a problem, constituted by virtual elements

and divergent series, and the exact trajectory that "I" will follow is not predictable in advance. In a moment from now I will have actualised certain of those virtualities; I will have, say spoken or gestured in a certain manner. In doing so I will not have "realized a possibility" (in which the real resembles an already-conceptualised possibility) but will have "actualized a virtuality" - that is, I will have produced something new, a difference. (Smith, 2013: 253)

In the above statement, Smith describes Deleuze's view that the way in which something develops cannot be predicted ahead of time, it is "objectively problematic". It is not known exactly how Eleanor will act from moment to moment during the oncall shift. Deleuze's 'virtual' or 'potential' (Whitehead) represents an unknown course of action (has not previously been conceived or predicted) but along with the actual, it constitutes the real, it is what can happen (how Eleanor chooses to act and react).

However, the virtual is distinct from the realm of *what-is-possible* because it brings into being something that is novel, that which has not been considered or actualised yet. Deleuze asserts that the 'possible', is what is already known, it is a given. The possible is what is preformed and pre-existing, "an already-conceptualised possibility", awaiting realisation.

For example, Eleanor may have chosen to behave in the following ways: refusing to see the patient, reiterating to the emergency team that this patient was their responsibility to manage, asking the patient to return during day time hours, reviewing the patient but missing the diagnosis because her irritable mood occludes her ability to be open to the clinical problem, reviewing the patient but missing the diagnosis because she approaches the clinical problem with fixed ideas of what the cause may be. These forms of responding are known and may have been realised in the past. They do not contribute towards creating something new or expanding the capacities of the individual beyond what is known or expected.

e)   Virtual multiplicities

However, Eleanor's actions that night took on a different course, put simply she did not just 'go through the motions' of a duty surgeon, she did not act in one of the

multitude of ways that is known or expected. Instead, she made a choice to persevere with the clinical event, to be curious and responsive to an evolving surgical encounter. Her conduct actualised a particular *virtual multiplicity*, referring to the infinite number of ways in which she could act in a *novel* way that was a departure from more routine practices of thinking and doing. Engaging with the surgical encounter in the form in which it presented itself to her (a case of apparent non-emergency pain in a clinical atmosphere that she perceived as hostile to her being) developed in surprising and unanticipated ways.

Eleanor detected a rare tumour and in the complex process implicated in her discovery, new modes of thinking and doing emerge from the relations that formed and developed between how she views herself, her practice, her colleagues and her patients. In her own words, the experience was a "warning sign", she feels she was complacent in her attitude to clinical practice. The virtual therefore does not produce a new 'thing' or 'phenomenon', it creates new relationalities. In the case of Eleanor, she develops new relations to her practice which makes her a more careful, thoughtful and "safer doctor".

The second narrative reveals a very different outcome which in a sense is a reverse of the previous narrative but still brings about a learning event for Eleanor. In this learning event Eleanor takes the routine pathway and follows established clinical procedure by referring the nurse to the pain team. After passing on the nurse's request to see the patient because the epidural was not working, Eleanor learns the tragic outcome for the patient the next day. The patient was suffering pain due to a developing surgical pathology that claimed their leg. She then realises that she should have responded to the nurse's request because it underlined a serious concern that the nurse had but was unable to verbalise adequately, perhaps due to the relation of authority.

Eleanor speaks of how this event changed her, so that now she listens carefully to anything a nurse has to say because their questions or requests may imply real

clinical concerns. At the time the nurse requested her assistance, Eleanor acted by deferring responsibility, thus signifying a realisation of the 'possible'--behaviour that is known and pre-exists the encounter. We might say that it was the shock of what happened on the following day that 'opened up' the virtual for Eleanor in the sense that it opened up other ways in which to act.

f)   Intra-actions

An important question arises from both encounters concerning the processes of actualisation. Put another way, there are processes of selection that underlie Eleanor's actions. An example is in the first narrative, why did she perceive the oncall encounter as an irritant, how and why did her response to see and treat the child become actualised, how did a particular solution emerge from the problem? The questions posed constitute issues of clinical decision making, an area that is well written about in medical literature and which I reviewed in chapter 4.

However, my questions refer to how we are *enabled to act* in specific ways when immersed in the contingent nature of clinical practice, a central motif of this thesis. It is difficult to predict or anticipate how clinical events can materialise at any one moment. As Medicine is a discipline grounded in science, fact and evidence-based practice, one may expect clinical decision making to be a transparent process dependent on a rational evaluation of indisputable facts. But, the process of *acting on* factual data cannot be reduced to a linear sequence of discrete steps.

As seen in earlier narratives such as the story of Mr. Pitt's stent insertion as well as the above clinical accounts, clinical decision making is steeped in the '*messiness*' of human interactions and relations. In the theoretical chapter, I discussed Barad's notion of *intra-actions*, the idea that agency arises from the relations that emerge between human actants (previous experiences, affects, thoughts, bodies) and non-

human actants (examination findings, radiological images of a tumour, the oncall pager, discourses on patient care, concepts of ethics).

For this reason, we cannot predict Eleanor's clinical decision-making process nor anticipate the outcome because it is contingent on a series of intra-actions that form and develop within the clinical encounter. How she takes account or *prehends* (Whitehead, 1929: x) the living and inanimate entities, imply how her practice matters to her, and cannot be known in advance, adding another layer of complexity to an already mysterious process. The formation of these prehensive relations is distinct from concepts of cause and effect or subject-object dichotomies.

Two further issues arise from how Eleanor actualises her practice. First, what is the role of the structurisation of medical practice in enabling and also controlling the way in which Eleanor actualises her practice? Put another way, how do the structures and organisation of clinical medicine condition how Eleanor perceives, thinks and acts in an event of practice. Second, what are the ways in which Eleanor experiences the clinical encounter, how is she capacitated to produce particular ways of thinking, being and doing?

g)   The structurisation of medical practice

In the first narrative, Eleanor is aware of her emotive state (*"I was in a bad mood"*) identifying the 'triggers'; an unsatisfactory encounter with A&E staff on the phone, disappointing workplace etiquette, her sense of being disrespected, her expectations of colleagues, the impact of breech times, her irritation at having to review a patient whom she felt was a non-emergency, her annoyance at the father's housing comments. Each trigger factor in this encounter reflects the day to day stressors and tensions that a surgeon must negotiate. In addition, the elements cited, construct or

(in)form her practice: the way she experiences clinical events and how she responds through thoughts and actions.

Eleanor herself is only too aware of this fact, stating that "*everything was in place for me to make a mistake based on irritating situational factors*". She opines that the culmination of the triggers had structured the encounter in such a way that conditions were ripe for a potentially serious error of practice and disastrous outcome. Eleanor argued with emergency staff because she viewed the patient referral as inappropriate, exemplifying how the actualisation of practice (arguing and refusing to see the patient) had been controlled by the structure of the hospital working practices and culture.

Later, she describes what expectations were created by these structures, "*I had to get up and go down there and assess the patient and send them home as quick as possible.*" She defines a transcendent framework of practice, the well-established duties and tasks of an oncall doctor, that control how she organises and enacts practice (Foucault refers to these structures that govern attitude and behaviour as *dispositif*).

The ways in which hospitals organise their staff and working patterns (for example through rotas and specified roles) and the uptake of policy initiatives (such as the breech times), as well as the concomitant discourses that evolve alongside, contribute to an *interpellation* (within a particular dispositif) of Eleanor as a particular subject in an oncall scenario. She is interpellated as a doctor who when called upon, must assess the patient and manage his physical complaint efficiently so he can be rapidly discharged home. The culture of medical practice within the hospital, her previous experiences both as an oncall doctor and as a surgeon and her communications with other staff constitute part of a particular discourse of clinical medicine implicated in the interpellation process.

Her feelings and perceptions of the injustice of the oncall encounter or asking the nurse to contact the pain team as in the second story narrative, may be attributed to

her incarnation as a particular interpellated medical subject: tasked to manage emergencies or specific pre-identified surgical problems, not field general complaints of pain. I would argue, that processes of interpellation may obscure and occlude a surgeon's capacity to access the virtual dimension of their practice.

I often ask my experienced trainees to think about how they can 'shake off' the confines of conventional medicine. What I mean is to encourage their efforts to exceed what they are told, have read and believe to be their clinical duties and limits of practice. To do so is to be wholly capacitated within an encounter in ways that allow one to answer the question posed by Spinoza and others, 'What can I do?' rather than 'what must I do?' I expand on these ideas later in the chapter when I explore the ethical realm of practice.

h)   'Thinking feeling': Affect and intensities

The pedagogical task of surgical educators is to consider how one may attempt to capture the internal resonance of this clinical event because this is how one understands what matters for a trainee in a clinical learning encounter. What are the ways in which she engages with the clinical encounter? Deleuze proposes that experiencing within an encounter can spark powerful affective forces or a series of intensities, that arise from the relationalities (how one relates to something) that develop. Relations not static events between subject-subject or subject-object. Rather, affective relations refer to dynamic local intensities that form and develop within the flows of experiencing. Put another way, a series of intensities emerge from

the immanence of the clinical encounter, within the thisness of practice, what Massumi calls the 'thinking-feeling' aspect of experience (2002).

> […] that shift in polarisation an organism undergoes due to disparities that occur within itself over time, due both to its inherent metastability as well as its relation to an exterior via sensation. (Mills, 2015; 74)

In the above explanation of Simondon's theory of affect, Mills describes how being is composed of layers of relationalities constituted by how the individual orients to itself as well as how it relates to the environment it finds itself in, creating 'polarisations'. Polarisations are similar to micro-potentials in that they produce a change in the internal resonance, capacitating the individual to think and act in certain ways. Affect is both precognitive and pre-linguistic, it can begin vaguely before being organised by emotion into something meaningful.

For example, Eleanor's bad mood is an emotive state created by the series of affects she experiences within the encounter with emergency staff. Simondon postulates that it is through affect that the subject attains form. Affect is what allows the individual to grasp the immanence of an event in ways that reflect how the encounter matters to the individual.

Eleanor engages with the encounter through intensities that arise within the clinical encounter. These intensives constitute the form of her experience and reflect how the encounter matters to her. By 'mattering' I refer to Whitehead's notion of prehensive relations, it is how she takes account of things within the encounter, how she affects and is in turn affected in the relations. For example, affective relations are sparked by a series of encounters for Eleanor; the encounter with the child, the encounter with a slightly abnormal looking abdomen, the encounter with her own expectations of colleagues, the encounter with the radiological images of the child's abdomen, the encounter with her prejudices regarding social housing and welfare and the encounter with herself as a practitioner who is safer and more responsible now. The way in which she prehends the encounter, effect certain affective intensities that relationally

activate (Massumi, 2012) Eleanor to think and act in particular ways. In Simondon's words, 'the individual is not a being but an act'. (Barnaby Norman, 2015: 26)

6.9   Miranda's Story

Miranda is a consultant surgeon and senior lecturer of five years standing. She works in a central London teaching hospital. She completed most of her surgical training in hospitals within London and Essex. She had a strong interest in clinical research as a trainee and undertook a research degree as part of her training. Her present role is supposedly split between NHS clinical work and academic research. However, she is frustrated by the increasing demands of her surgical practice which encroach on valuable time she should be spending conducting her research and supervising her PhD students. She is exasperated by the fragmentation of her junior surgical team.

> *Well I think the first thing to say is that there is nobody to train! My clinics. . . I don't have a registrar, be it for training or service and I have set up the clinics in a way which means I don't need them (the trainees) because it's too unreliable to rely on their presence. Initially, when they were available it was not reliable to depend on them because they would be away doing nights or whatever, so you can't run a service this way. . . Theatre lists. . . you do have somebody to train, but usually . . . the person who's in theatre on Wednesday is often off after an oncall night, so I end up texting them to give them a heads up, which other (consultants) don't do, and you can complain about the trainees but at the end of the day it's the system. Emergencies. . . I am increasingly called to go and just deal with it. So, as a trainer, well, there is nobody to train! And also it's very difficult to train because you don't know what their training needs are and you're not seeing them on a regular basis.*

Miranda's anxieties and complaints about 'the system' are common threads in all the research interviews. There is an exasperation that the shift system and the organisation of the hospital prevent the existence of teams of surgeons who work and train together consistently, building a sense of camaraderie, shared responsibility and

common goals. Similar to Eleanor's story, the hospital structures and working patterns control actualisations of practice.

In the above, Miranda refers to her weekly Wednesday operating list. She is aggravated by the situation, as frequently her trainee is scheduled to on the Tuesday night oncall leaving them unable to operate on the Wednesday morning list. The hospital is legally required to ensure that the trainee is sent home to rest straight after an oncall and not permitted to engage in clinical work. However, some trainees, mindful that they are missing out on valuable opportunities to operate, practice and learn, attend the operating list once discharged from their oncall duties. Miranda looks upon these trainees kindly and will often alert them via text message as to what surgical cases are scheduled and who the patients are.

However, the surgical tradition is such that, in order to attend an operating list and be taught, trainees are expected to come into work early on that morning (usually 7 am), see all the pre-operative patients, read their notes, be familiar with the medical information and prepare patients for surgery. This is a challenging task if the trainee has been oncall the previous night and busy in the morning hours organising an appropriate patient handover.

For Miranda, the structure of the hospital and work schedules control how she actualises her medical practice. An example is how she organises her clinic to function without trainee involvement, because she cannot rely on the rota to grant her trainees who are unencumbered by other scheduling commitments such as an overnight oncall.

In the below narrative, Miranda describes her early experiences of dealing with ruptured aortic aneurysms, encounters that transformed her practice and attitude to patient care. An aneurysm is an abnormal dilatation of the main blood vessel in the body (aorta), see appendix Fig. 1. Consequently, the walls of the blood vessel are weakened and at risk of rupture, which can be fatal. In some situations, it is possible

to operate or use radiological guidance to insert a stent and potentially save the patient's life. However, these are high risk situations and frequently the prognosis is poor even if the patient survives the procedure. If the patient has a pre-existing physical condition that is poor, intervening to repair the rupture is not appropriate and a decision is made to allow the patient to pass away comfortably.

a)   "When you can't operate . . ."

Everybody thinks that a rupture is so exciting and you want to do the surgery. But then there are the cases you can't operate on because its too late. What I hadn't realized back then was that sometimes patients with a ruptured aneurysm (who are unsuitable for surgery) don't die that quickly, so you put them in a side-room. But they're still alive the next day, what do you do then? You've already told the family and relatives the night before that the prognosis is very poor. And now that they are relatively stable, well, can they go home? Can they die at home? I remember that the first time that became difficult for me was somebody who was still stable about twenty-four hours later, quite comfortable and the family said we would like to take her home, so we put her in an ambulance and then she became unstable so she came back to us and died in the hospital. And that was obviously traumatic for everyone. . . Nowadays, people expect the full explanation, they normally will understand but then it's when the patient doesn't die. . ."are you sure?" . . . Even though we have a CT confirmed diagnosis. We get asked, "will they be aware? will they slip away?" Sometimes they do, sometimes they don't. . .

Recently on an oncall I found that I wanted to spend more time with that patient and their family than someone we would take to theatre and operate on. Because I think, if you're explaining an operation to a patient, the family, they understand and they have questions, you explain and get on with it. But in this sort of situation, you can imagine it's very difficult to understand. . . Very often it's too tempting for the team to say. . ."the patient is still alive, we'll address all the symptoms, make sure they're not in pain". And then it's very tempting to say, "there are no more decisions to be made on the ward round" or "we'll see this patient last or if at all" or "the Palliative team will see them". But actually, that's the family/patient who has the most questions, isn't it? Or another family member will arrive and say, "they're still with us, but for how long?" All those questions I think you cannot give a clear answer to but giving a stab at it is

important. Whereas, there are other life threatening conditions where you know you can do an operation and fix it.

(Miranda, consultant surgeon)

The mortality associated with emergency aneurysm surgery is very high. From a purely technical stance, the steps of an aneurysm surgery involve making big incisions, a considerable dissection of tissue, strong efforts at controlling rapid and catastrophic bleeding, all the time aware that the patient may die on the operating table itself. The surgeon needs to be decisive, quick and fluent in their technique. The heroic intra-operative efforts can appear exciting for a trainee who is enthused and keen to learn surgical method.

Miranda was initially excited at the prospect of participating in the aneurysm surgery. However, she had not expected to be most *affected* by those patients for whom she would never provide an operative solution. The actualisation of the virtual occurs for her the following day when a patient is still alive following a ruptured aneurysm despite forewarning patient and family. She is relationally activated in this moment before being able to *think through* why she feels this way. Massumi describes this process:

> You own the feeling as your own, and recognise it as a content of your life, an episode in your personal history. But in the instance of the affective hit, there is no content yet. All there is is the affective quality, coinciding with the feeling of the interruption [. . .] That affective quality is all there is to the world in that instant. It takes over life, fills the world, for an immeasurable instant of shock. Microperception is this purely affective rebeginning of the world. (Massumi, 2008: 5)

The 'affective hit' in this instance are the intensities sparked by seeing the patient-alive-and-yet-to-die the next morning. The expressions of affect may be imperceptible or manifest as, stunned silence, standing agape, a quickening of the heartbeat or teary eyes. The intensities have not been explicated or interpreted into rational thought or meaningful emotion, "there is no content yet". For example, no emotion of

sadness or anger has evolved in the moment of the affective hit. Her *feelings* (Whitehead, 1929) or affective intensities rupture 'the world' of surgery and human life as she has come to understand it. The patient-yet-to-die does not fit into the transcendent categories that she has read about in textbooks or been advised on by her community of mentors and peers. This patient does not neatly fit into the 'survived the rupture' or 'died from the rupture' categories. The latter and former outcomes belong to the realm of the possible, as proposed by Deleuze.

For Miranda, the affective interruptions of this encounter being precognitive and prelinguistic, form Badiou's 'event'. Her pre-existing understanding and knowledge of both aneurysm pathology, surgical intervention and the human condition are *punctured* by the reality of a yet-to-die patient: 'the event [. . .] compels the subject to invent a new way of being and acting in the situation' (Badiou, 2001: 42). Miranda's 'new way of being and acting' translate into a desire to spend more time with the families of patients' she is not able to operate on. She rationalises after the affective hit that it makes sense to do so, because these families have the most questions owing to the confusing but fatal outcome. One may suggest that she is relationally activated in these attempts.

Massumi iterates that the ability to affect and in turn be affected causes a transition between 'one state of capacitation to a diminished or augmented state of capacitation', (Massumi, 2008: 2). Miranda observes that patients close to death may not require any active clinical intervention (for example, medication or a blood transfusion) and this can lead to doctors removing themselves from any direct involvement with the patient or family. However, her experiences have enabled her or relationally activated her to view the situation differently. Her process of affectation has compelled her to make attempts at answering the difficult questions posed by the patient/family.

6.10   The Pedagogical Implications

Eleanor and Miranda narrate clinical experiences describing how they reacted and coped with the immediacy of unexpected surgical events which questioned their perception and understanding of practice. These vignettes describe *disturbances* of practice in that each surgeon emerges from their experience of the clinical encounter forced to think and act in ways that they had not conceived of prior to the event. The interruption to practice shifts the focus from '*being*' a trainee to '*becoming*' a surgeon. There are two or three pedagogical issues that arise from the narrative analysis which I discuss below:

a)   Surgeon identifications

The vignettes demonstrate how *individual identifications* as surgical professionals emerge through experiences with contingent clinical practice. In other words, each surgeon identifies specific priorities that are of concern in surgical practice and which can be traced back to how the clinical encounter mattered to them. For example, Miranda explains that her technical practice will never become stale for her even though she is engaged in repetitive surgeries. Each operative encounter, she believes, affords an opportunity to better the patient experience or improve the team dynamic.

Eleanor describes herself as a "safer doctor", who assumes "more responsibility" after the encounters with patients in pain. The particular priorities, voiced by the individual surgeon, appear to arise as a consequence of how the surgeon engages with or *prehends* the initial clinical event. I suggest that what is being described is how the individual encounters the *form* of the event, how they grasp the specific clinical event so that it becomes a matter of concern. Whitehead in his theory of experience identifies the 'subjective form' as the, 'immediate novelty; it is how that subject is feeling that objective datum' (1929: 232). By 'novelty' he refers to the fact that *how* a

datum is perceived at a given moment cannot be reproduced (re-lived/recreated) or replicated.

I suggest therefore that the individual subjectivities of the two surgeons arise through unique processes of mattering (how a datum is perceived/how a subject encounters something) in an encounter: '*in any case, the subject constitutes itself in and through its experience; and thereupon it perishes, entering into the "objective immortality" of being a "datum" for other experiences of other subjects*' (Schaviro, 2012; p. xii). For Whitehead (and Deleuze), the individual emerges through the relations it forms within the process of experiencing something before dissolving in the process of becoming so that new relations may emerge. For example, Eleanor becomes a subject (comes into being) through the affective relations that arise as she engages in the encounter: how she affects the encounter (feels her time and specialist skills are not respected) and is in turn affected by the encounter (being called to see a patient in the early hours, the limits on the time a patient is permitted to wait). The intensities triggered by the immanence of the affective relations cause her to emerge relationally activated and capacitated to think and act in ways that were not conceived prior to the encounter but which reflect how the encounter *matters* to her.

The distinction I wish to make here is that official documentation like *GMP* (2013) and *GSP* (2014) interpellate subjects along prior established and instructive ways of thinking and doing. There is no pre-existing surgeon identity: the surgeon emerges through ideological interpellation. Put simply, the inherent capacities that Miranda and Eleanor possess to act and think are not legitimised outside of the documentation. The training materials anticipate a particular surgeon identity with specific recognised and all surgeons must demonstrate these skills.

What the official documents do not embrace are the affective experiences that surround the singular happenings of putting these skills into practice. These singular happenings are described by both my accounts of practice and my interviewees experiences of practice, discussed in this thesis study. These stories contain

descriptions of the local flows of experience that emerge from the immanence of practice. However, the official documentation deals only with listing and describing the skills required, in a kind of decontextualised space. But, as is seen in the examples of actual practice, the application of these idealised forms of thought and behaviour are difficult.

Miranda outlines how repetitive practice is dull. It becomes routine. Patients who are dying tend to receive less attention, because there is no appropriate surgical intervention to be offered, besides supportive measures. Eleanor, for her part, highlights the difficulties of seeing all the patients in an oncall. These various challenges to enacting practice are not expressed in ways that reflect the reality of the difficulties encountered by surgeons in practice. Instead, the documents present clinical practice in idealized forms: a sanitary environment devoid of the challenges or conflicting tensions of the real world. To encourage the desired clinical behaviours and propagate satisfactory patient experiences, there is a requirement for an understanding of the implications of the affective dimensions of practice.

b)   Immanent practice emphasises a process of becoming

The individuation of Eleanor and Miranda through their accounts of practice illustrate processes of self-transformation in their beliefs and practice. The immanence of each learner's pathway, is a story of their becoming through learning encounters which trigger new ways of thinking and being.

Norms are individuated

Established criteria of practice interpellate the surgeon as a particular subject of ideological practices and surgical training because, their actions can only be recognised and legitimised within that specific framework. However, this is to deny the ability of an individual to individuate through processes of immanent reflection, reflexive practice and critical thought. Through such individuation, the generic

medical guidance on practice is transformed in ways that are relevant and meaningful to trainees, as individuals engaged in real practice.

c)   Ethics of practice

If one were to contrast the deployment of care in the official guidance (*GMP,* 2013; *GSP,* 2014) with the narrative accounts of doctor-patient relations detailing how care is performed or thought to be performed by the doctor, two kinds of ethics emerge. First, ethics as prescribed in the literature is presented as a moral code, a set of rules and criteria by which to judge and evaluate the thoughts, intentions and behaviours of a physician. Deleuze stipulates that an ethical code based on morality is founded on a transcendent framework of values, which society or an organisation deem to be important in directing and influencing our thoughts and actions at that moment in time. Secondly, an ethics of practice emerges from *real events of clinical practice*, in which the doctor must make decisions in the 'here and now' according to the contingencies of the actual doctor-patient relations. Deleuze advocates such a conception of ethics: a set of facultative rules that 'evaluate what we do according to the immanent mode of existence that it implies' (Smith, 2012: 176). This counteracts criticisms that Deleuze is promoting an unethical practice or practices that are wrong or inappropriate, because there would be no norms by which to judge or assess conduct.

Deleuze answers this concern by reiterating that an immanent mode of existence refers to how far we push the limits of what we can achieve in a situation and what separates us from acting in a certain way. In other words, Deleuze poses the question that an ethics of practice must raise, "What *can* I do, what am I *capable* of doing?" rather than "What *must* I do?" (which refers to issues of morality).

This is exemplified in Eleanor's second narrative. She is aware of her clinical duty and ethical responsibility to the adult female patient. However, it is late in the evening, she is constantly interrupted by nurses making demands of her that she views as inappropriate. In her opinion, there are other members of the team who

should first review the patient, because their primary task is to respond to issues of organic pain. She is fatigued and excited to go home 'early' for a change. These tensions in practice are implicated in her decision to not see the patient and defer responsibility.

A Deleuzian conception of ethics would pose the following questions to direct Eleanor's conduct in an actual event of practice, "given my power to act, what am I capable of achieving in this situation, what are my capacities of doing? How can I come into active possession of my power? How can I go to the limit of what I can do?" (derived from Smith, 2012: 176). In short, Deleuze promotes a view of ethics that is a form of responding to the situation that we as individuals find ourselves immersed in. It is characterised by the individual's attempts to consistently push themselves to the limits of what they are capable of 'doing' in that encounter.

Deleuze is critical of those elements that distance the individual from the power to act. Transcendent frameworks of ethical behaviour may constitute such a separation from our power to act. Such frameworks prescribe a fixed response to a situation and thus prevent the individual from 'dreaming' or conceiving other ways to think and act that exceed what is known.

> Rather than judging actions and thoughts by appealing to transcendent or universal values, one evaluates them by determining the mode of existence that serves as their principle. A pluralist method of explanation by immanent modes of existences in this way is made to replace the recourse to transcendent values; an immanent ethical difference. (Smith, 2012: 147).

Therefore, ethics for Deleuze is not grounded in the notion of the transcendent subject, such as the projected figure of the 'good doctor' in *GMP* (2013) who's actions are recognised within a pre-existing framework of 'moral practice' that is not subject to the realities of clinical medicine (e.g. time constraints).

Atkinson (2016) describes the unique dual experiences of standing in a waterfall and the states of affect that emerge from within compared to the experience of standing

outside on the banks of a river and watching the waterfall, observing it. Caught in the strong rushes of water standing within the waterfall, the force of the flows of water can trigger powerful affective states: the crashing flows of water may leave you utterly terrified or supremely exhilarated. This lies in stark contrast to the affect precipitated by the act of watching the tumbling torrents of water from the river banks. One may still feel a sense of thrill or fear but the local intensity of the experience is different to the flows of experience that come about as an observer. Standing within the waterfall, represents the immanent nature of experience, capturing the flows of affect and emotion. This can be used as an analogy to how we experience something in the moment, to how we experience it later when recalling, recollecting and reflecting on something. The latter is also how teachers would observe or asses a trainee, they cannot know how the trainee experiences or feels events of practice.

How is a mode of existence determined? The learner or teacher arise out of a specific instance of learning or teaching rather than through the assessment criteria of a WBA, for example. The subject as such does not exist prior to the experience. The mode of being is determined either through the power to act in an encounter and the relations of affectivity or otherwise through the inability of the subject to act to their fullest capacity. Therefore, Deleuze moves beyond a process of judgement facilitated by reference to norms. Instead, he advocates that individuals should look to see whether their actions are in keeping with their full capacity to act in a given situation. Through an augmented state of capacitation, the individual brings about a self-transformation and the potential to create new modes of existence.

Prioritising a notion of immanence in teaching/learning means to subscribe to an ethics of immanence where the pedagogical priority is to try to understand learning from the perspective of the learner's capacities to grow and not to judge such capacities from external criteria. This is not to diminish the need for course material, syllabus, assessment etc., all of which help to educate a learner in terms of what they need to know and the skills necessary to manage other human lives. An *ethics of*

immanence is about trying to understand how something matters for a learner in a particular encounter. And a pedagogy of immanent ethics refers to how a teacher may draw alongside a learner to better understand the experience of the learner and to assist the learner in unpacking the encounter.

An example, is the encounter between Eleanor and the child. What caused her to go and meet with the child and examine the child as thoroughly as she did given all the factors that were dissuading her from that particular actualisation of practice? How did the encounter affect her as it did? How did the affective relations emerge to make this a matter of concern for her? These affective relations constitute the immanent criteria which determine how an individual grasps the encounter, what Atkinson (2016) calls a 'necessary transcendence'. Transcendence in the way I use the term, following Deleuze, implies appraising things in accordance to some law, body of knowledge or religion. Therefore, what is being considered is along established ways of seeing, practicing etc. The notion of immanence relates to that which emerges from within practice itself. However, that which emerges from within practice may for the practitioner be equivalent to a 'necessary transcendence' that allows grasping the meaning of the particular experience of practice.

Therefore, there is a difference between *external transcendence*, with established rules, criteria, methodologies and *necessary transcendence* emerging from within practice, constituted by ways of coping, understanding, emerging from within the flow of practice. This argues for an approach in learning as well as clinical practice where the learner (surgeon) is sensitive to the form in which a patient with a problem presents and responds to that problem step by step as the issues arise. She poses questions, rather than working from universal values that totalise the experience. She decides the path ahead. This is the power of becoming, answering to the event and generating the that-which-is-not-yet that exceeds established practices and has the potential to create new worlds of practice. Whitehead in his theory of experience

places aesthetics before ontology because, he wants to emphasise that 'how' we experience is the primary concern, before looking at the process of becoming.

6.11 Conclusion

The tale of surgical training that unfolds in these pages, derived from the stories of training and an analysis of educational material, precipitates a call for emancipation; a deliverance from entrenched bureaucratic systems of continuous surveillance, relentless assessment, pernicious regulation and a socio-political mantra of tireless reform. That these elements of the modern day surgical education model were well-intentioned, conceived and designed to primarily protect and promote the welfare and safety of patients, is not contested (DoH, 2000, 2010; NPSA, 2009; Berwick, 2013; HEE, 2016).

However, as the narratives illustrate, the affectations, thoughts and behaviours of the surgeon are dynamic, unanticipated and *affected* by various factors. These include; rotas, schedules, physical fatigue and mood, colleague relationships, policies, prejudices, bureaucratic inertia etc., which in turn can neither be accurately predicted nor fully accounted for but have to be negotiated or *integrated* (Simondon) for the principles of 'good practice' to prevail. The difficulty arises when the normative criteria specified by the current system of assessment and evaluation act to occlude the intensities and ideas precipitated through local flows of experience which are crucial to learning and making meaning out of practice.

There is therefore a need to recognise the governance of established and valued procedures in medical practice that have been accumulated through time. But there is also a parallel requirement, to acknowledge personal forms of governance-in-practice that emerge from a surgeon's experience.

Chapter 7

Surgeon Education: Entangled Subjectivities, Affective Dispositions and the Heterogenous Obligations that Emerge from Events of Practice

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7.1   Seeing Red

It is 3.37. AM. Operating theatre 14. Mr. Cunningham, the recipient of the shiny new liver transplant, lies on the operating table, his abdomen spliced open. On the prep table behind me sits a blue tub which holds his shiny new liver, bathed in special juices, glistening under the theatre lights. I pack the insides of his belly with pristine, crisp white swabs. Almost as soon as I place them, the white of the swabs instantly disappear, drenched in a deep crimson hue. My hands move quickly and methodically across the four corners of the abdomen. Removing blood soaked swabs, squeezing out a shower of sticky, scarlet juice that sloshes around in a bucket while the cell saver hoovers up each precious red cell and pumps it back into the patient. Every few seconds I quickly glance up at the rising tide of blood in the upper cavity of the abdomen; a concave hollow, occupied up until a few minutes ago, by a cirrhotic liver—ugly, rotting, bulbous flesh. The operating theatre is littered with empty bags of various blood products. All given in what is becoming a futile attempt to stem catastrophic bleeding.

I say nothing, I am speechless. Speech-less, mute. My eyes dart quickly round the raw tissues of the abdomen, planning where next my hands must go to mop and pack the bleeding. My feet squelch inside my clogs, a mixture of my sweat and fluid draining from the sides of the operating table.   I keep going—this is not what I'm here to do I think, increasingly getting angry and irritated. I didn't come here to watch this man exsanguinate to oblivion! And yet, here I am.

JE, the consultant surgeon in this surgery is annoyed and exasperated. 'We have to do better Arundi, really we do. This is not going to work out for him (the patient). . . Can someone get me Eva on the phone? I want to know why we decided on this man *for* this transplant*?! Has he got family outside? Who brought him in to hospital? This is really . . . just not good enough!. . .'*

I've noticed that the conversation at these moments always takes on the same tone, the same exasperation, the same questions, the same need to blame someone, anyone, when things don't go according to plan. When patients don't return from the operating theatre, leave alone make if off the operating table. Surgeons seem to believe that we can somehow pinpoint a patient's demise to one particular decision. One wrong move in what is otherwise presented as a flawless game of chess, careful calculation and evaluation gets the patient from waiting list to the operating theatre. The worlds of the operating theatre; excitement, good things, heroics and success, transforms in minutes or hours to a place of failure, despair and death. Many worlds inhabit one space, yet I struggle to figure out just where I should tread, where I should belong.

I glance up at the clock, 3.53 AM. Someone is holding a mobile phone to JE's ear, as he mutters and paces. He walks away from the operating table. Perhaps he's calling another colleague for help. Perhaps he's arguing with night staff working at the depleted blood bank, demanding more products to be sent. Or, perhaps he's scolding the beleaguered Eva. I don't know and I don't care. I return to Mr. Cunningham's belly which still weeps red. I continue to 'pack and squeeze'.

(Excerpt taken from my surgical journal, 10th August 2011.)

7.2   Structure Of The Chapter

In this final chapter, I draw on key aspects of my research to put forward recommendations for the development of surgical training and education. I begin by revisiting the initial questions that stimulated the development of this study. My decision to use philosophical theory and discourse to examine aspects of learning and practice, is a novel research venture in the field of *postgraduate surgical education research*. I chose to do so, because it is difficult to reduce the entangled relations that form and develop within an encounter of clinical practice into discrete categories, in attempts to identify the implications for learning and teaching. This is not to diminish the findings of those research studies that have employed established techniques to unpack the content of learning encounters. Such techniques include quantitative methods such as statistical analysis or qualitative approaches such as grounded theory to examine interview data.

Instead, I asserted that studying complex phenomena, such as learning encounters in clinical practice, requires a *wider research methodology* than is currently available. I proposed that a critical approach to philosophical theory may provide one way of achieving this objective. However, the current education agenda in surgical training does not recognise, incorporate or investigate the potential pedagogical value of philosophical theory and discourse.

Therefore, I discuss how the theory driven methodology of this thesis has extended and enhanced what is known and understood about experiencing and learning within actual encounters of clinical practice. I review the findings and consider the limitations of my research. I conclude by commenting on the significance of modes of mattering in surgical models of teaching and learning.

7.3   The Purpose Of The Research Study

In the opening chapter of this thesis, I presented an experience of surgical training, taken from my early days as a trainee in transplantation surgery. The autobiographical account, told the story of how I experienced my first organ procurement surgery, a retrieval of abdominal organs. It was this experience of learning 'in the field', that had a profound *affective* impact upon me. It emphasized the pedagogic relations that form and develop in the local flows of experiencing events of practice. Organ procurement surgeries are extraordinary procedures in themselves, and not typical of the daily routine of surgical practice. However, as I argued in chapter 1, my purpose in using this exceptional event of practice, was not to shock or be provocative. Instead, I chose to include the encounter, because it perfectly illustrates the daily complexities implicated in how a learner experiences contingent medical practice. That is, clinical events are uncertain, they cannot be accurately predicted, the ways in which a learner experiences and subsequently learns within the encounter may not be fully anticipated (by the learner or teacher) and risk being nonvisible or intangible. These elements have implications for the development of pedagogic strategies. They also provide a strong commentary on the

present day system of assessment and evaluation in medical training and practice.

a)   Research aims

From these observations and thoughts, I developed the following research questions to direct the study and structure the findings:

i)   How do surgeons make sense of their day to day experiences, *in* and *of* practice, as they happen in actual time?

ii) What are the educational opportunities embedded in the day to day phenomenology of practice?

iii) What are the ways in which a trainee constructs meaning in and of routine surgical practice?

b)   Rationale of the study

I made the assumption that the way in which a surgeon 'makes sense' of events of practice was intimately connected to how that learning encounter comes to *matter* to a trainee, how it attains significance for a surgeon. It is possible that an encounter with an event of practice may affect clinicians in the same way. However, 'experiencing', as seen in the narrative accounts, tends to be a personal, unpredictable and often unique process. As such, an event of practice has the strong potential to affect individuals differently.

Therefore, I concluded that the multiple realities immanent to an encounter of practice, may be more fully accommodated and explained using a critical theoretical approach derived from a close examination of philosophical theory. I devised a theoretical framework based on philosophical ideas and concepts to hypothesize an alternative theory of experiencing ('affective thinking'), to inform the mode of inquiry of the study and to construct the analytic method of data analysis.

c)   Summary of research strategy

I hypothesized that on encountering a clinical event of practice, the initial impact was experienced as an 'affective learning', prior to the development of cognitive and rational processes. I proposed that the *thinking* that emerged from *clinical encounters*

could also be affective in nature (Whitehead, 1929; Simondon, 1992, 2005a; Massumi, 2008), in addition to the dominant view of thought in the biomedical sciences, as primarily a rational process of cognitive reasoning. I suggested that the affective dimension of learning encounters may be non-visible or intangible, assertions originally made by Whitehead (1929) and Massumi (2002). However, I hypothesized that, it was critical to examine the insensible nature of these affective aspects of experiencing, if learners and teachers of Surgery were to deepen their understanding and develop effective pedagogic strategies in clinical events of practice.

Thus, the objective of my research study, was to critically examine the immanent nature of events of clinical practice from the perspective of affective forms of experiencing. I gathered data from three sources, which were analysed using a philosophy-based theoretical framework. The results were derived from; an analysis of policy and curricular documentation, a critical exploration of interviews conducted with surgeons in practice and an examination of auto-ethnographic accounts of practice.

7.4 What Is The Original Contribution Of This Research Study? How Does It Extend What Is Already Known?

a) How is postgraduate surgical education presently studied?

Philosophical theory is a much neglected field in postgraduate medical education. However, the application of theoretical concepts as a set of critical tools to examine surgical encounters of practice, is a novel direction in which to develop research into surgical education. It is an alternative yet complementary research paradigm. One which may exert a dual effect: enhancing current research strategies whilst also creating a conceptual framework that is better suited to examining the multiple realities that exist in a learning encounter. Deleuze says, 'a theory is exactly like a box of tools... It must be useful, it must function,' (Foucault and Deleuze, 1977: 210).

I have approached learning from the question, how are actual encounters of practice experienced by a learner? Why is this important? It is in how we respond to uncertainties in practice, even when we anticipate them (from prior experience or through studying established bodies of knowledge), that we demonstrate our understanding and ability to negotiate the reality of complex medical practice. It is in these moments that one grapples with the anxiety, discomfort and confusion: feelings that emerge from how we experience a particular event of practice. At these times, 'finding our way' can be challenging, perplexing or even enlightening.

An application of the principles of evidence-based medicine

My research journey began with an investigation into how clinical experiences in surgical practice were reported, described and analysed in the literature. It was quickly evident that research into surgical experience was strongly influenced by a paradigm of evidence-based medicine (EBM). In this approach, how surgeons encounter practice was defined by identifying prior categories of performance which could be directly measured and analysed. Examples include, the acquisition of discrete sets of professional and clinical skills (ensuring aseptic technique prior to surgery, demonstrating clear communication with team members).

Thus, actual experiences of clinical practice such as a trainee's operative encounter with a particular surgical procedure or a trainee engaging in a difficult patient communication, were fragmented into discrete areas that were pre-defined. This approach converted an *encounter* of practice into a *performance* of practice, which could then be measured and assessed. These are necessary measures if training programs are to ensure that skilled, proficient and safe practitioners are produced. However, these pedagogic strategies become problematical if they totalize a learner's experience of practice. In doing so, they risk obscuring other non-visible and non-tangible aspects of learning, which signify how something matters to a learner and therefore, how it attains significance for the trainee.

Limited application of social theory and philosophical discourse

Within postgraduate surgical education, the application of social theory was restricted to sociological methodologies such as interviews and case studies to accumulate data. There was an absence of philosophical theory and discourse being used to formulate research questions, as well as critical inquiries into surgical training and education.

b)   A novel approach to postgraduate surgical education research

Chapter 1 begins with a narrative account of my first organ procurement experience. I describe my affective response to the reality of the procurement surgery as a *'speechlessness of practice'*. This phrase allowed me to emphasize those aspects of a learner's mode of being which interested and intrigued me the most: the non-cognitive and non-rational forms of 'thinking' and 'doing' that emerge from the initial flows of experiencing in unanticipated encounters of clinical practice. It is this investigative analysis of the affective dimension of practice and learning, that my research contributes to the broader field of medical education research.

Crucially the affective dimension of practice and learning in surgical training has hitherto been a neglected area of research. The ways in which the affective domain impacts on how events of practice come to matter to a learner have yet to be explored or theorized by postgraduate medical education research. My research thesis is an adventure of surgical pedagogy that is novel and innovative. It generates new insights within surgeon experiencing and learning that extend the existing knowledge practices.

The second contribution that this research thesis makes is in the methodological approach to examining learning encounters. I introduced a philosophy-based theoretical framework to inform the investigation into events of surgical practice. For me, this mode of enquiry has opened up aspects of surgical training and surgeon practices that may otherwise not be explored. In particular, it has sparked a line of

questioning that interrogates the ideas and intensities of clinical experience that emerge from events of practice. Previously, these affective elements of experiencing were either neglected or occluded by the official discourses of care and surgical practice

I hope that the process of reading this research thesis, constitutes an 'event' (Badiou, 1992) for the reader as they contemplate some of the ideas and theories about learning and practice, which may rupture existing assumptions and attitudes to education in the field of medical practice. Alternatively, the encounter with this thesis may in itself trigger 'affective forces' (Massumi, 2008) that precipitate a reconfiguration or re-examination of dominant ideologies of pedagogy and practice. Either way, my intention in constructing this research study, was to imagine new and original ways to explore how events of practice may be experienced in the moment, and how they come to matter to the surgeon through a *pedagogy of the surgical event*.

7.5 The Findings Of The Research Study

The development of a pedagogy of the surgical event (PSE), encapsulated philosophical theories of experiencing (Whitehead, 1929), affect (Deleuze, 1994, 2004; Massumi, 2002; 2008; Simondon, 2005a, 2005b; Mills, 2016), immanence and transcendence (Deleuze, 1994, 2004) truth and event (Badiou, 1992), Individuation (Simondon, 1992; 2005a) and ethics (Deleuze, 1977, 1994, 2004; Mills, 2016). The research study identified four major themes that emerged from a close examination of experiencing within events of clinical practice. I present the key themes below with a discussion of their significance for surgical training.

This study has identified that in the *thisness* of clinical practice, how surgeons make sense of their daily encounters in and of practice involves forms of *affective thinking*. This was best illustrated in the narrative accounts from Eleanor and Miranda in Chapter 6. Miranda described how caring for 'yet-to-die' patients had transformed the business of her daily ward round. She discussed the importance of finding time for

these patients and their families because, she concluded that 'they have the most questions' when confronted by a relative who is still alive despite being given a fatal prognosis.

Eleanor similarly described how an encounter with a child in pain reconfigured her attitude regarding how she responded to the demands exerted upon her as an oncall doctor. The analysis of both surgeons' encounters with the thisness of actual practice raises the following question: *what modes of thinking and being are important in cultivating an ability to cope with the immanence of surgical practice?* This is the central question that guided the examination of events of practice. It is answered in the four themes that are discussed below.

a)   The affective force of events of practice

> The affections are an orientation of a portion of the living being in relation to itself; they realise a polarisation of a determined moment of life in relation to other moments; they coincide to being with itself across time, but not with the totality of itself and its states; an affective state is that which possesses a unity of integration to life, it is a temporal unity which is part of a whole, according to what one might call a gradient of becoming. (Simondon, 1989: 119, as quoted in Mills, 2016: 74).

In the above statement, Simondon identifies the problematic of affect as the requirement to act or 'orient' oneself in ways that provide a resolution to the disparity. The disparity arises as a consequence of how the subject experiences the event. In the example of Miranda, her mode of thinking and being, when confronted by terminally ill patients and their families, may arise from the affectations precipitated by the complex situation. Namely, by choosing to interact in specific ways with these patients, she resolves the tension that exists within herself and the challenging situation she finds herself in, allowing her to continue as a doctor and a human being. This form of affective response is implicated in the emerging subjectivity of Miranda.

Thus, the affective force of encounters with unanticipated clinical practice can be

experienced in ways that reflect how the individual *prehends* (Whitehead, 1929) the event of practice. That is, how the surgeon takes account of the event has implications for how the encounter with practice comes to matter to her. This notion of mattering resonates with Simondon's concept of invention. He asserts that invention is more than finding a solution to a problem. Instead, he emphasizes it as the act of *establishing coherence* (Chabot, 2012: 20), integrating incompatible elements to create a 'regime of functioning' (Massumi, 2010: 39) that provides an answer to the initial question. In this case, immanent modes of thinking and being in clinical practice can be conceived as *inventive ways* of developing coherence when confronted with complex situations and emotions. These inventive processes are critical to the process of mattering and how the subject 'goes forward' from the event.

b)   Form is immanent to clinical encounters of practice

The training materials and official documents of clinical practice anticipate a particular surgeon identity associated with specific skills. This was presented in Chapter 4 through the comparison of Official Care and Real Care. In the former, documents such as *Good Medical Practice (2013)* and *Good Surgical Practice (2014)* prescribe certain ways of being and acting that are framed as 'safe' and desirable attitudes and practices. These transcendent frameworks of practice are necessary to ensure that surgeons are trained with the critical skills that ensure competent and safe practice.

However, the reality of how a surgeon actually provides appropriate care in unexpected situations of clinical practice, does not fit neatly into the prior categories of skill and practice. This is illustrated in the auto-ethnographic accounts of Chapter 5 describing the discovery of an 'errant testicle' in a hernia operation and Mr. Martino's refusal to engage with his medical team. The surgeons in these separate clinical episodes are forced by the *form* of the encounter to think and act in ways that are not necessarily subscribed to by the formal bodies of knowledge and practice.

The difference between providing *official care* and *real care* demonstrates how the

immanent nature of clinical relations and practices is not captured by the hylomorphism of established modes of being and acting. The difficulty arises when surgeons are confronted by contingent events which have neither been described nor discussed by the official manuals of practice. These documents and ways of acting, do not embrace the affective experiences that surround the singular happenings of putting approved skills into practice. This is exemplified by the 'speechlessness of practice' that characterizes my experience at the organ procurement, an encounter in which I am unable to demonstrate the surgical skills that I have come to acquire. Such responses and reactions represent the local immanence of clinical events of practice.

How then are clinicians to be guided and supervised through the uncertainty of clinical events? I have argued using the theories of Whitehead, Deleuze and Simondon for a recognition of the intrinsic form that is immanent to all events of practice. That is, as an event of practice unfolds, the clinician prehends or takes account of the event by grasping the inherent form of the clinical encounter. The form of the encounter emerges through the relations that evolve and develop through processes of intra-action (Barad, 2007) and interaction, creating complex layers of experiencing within the event of practice.

Therefore, in conceiving effective pedagogic strategies and practices, it is imperative to consider how best to support learners as they grapple with prehending the form of events of practice. This struggle to grasp the event in a way that becomes meaningful to them either within the encounter or after it, may exceed the resources of knowledge and skill that they are already familiar with (because it has been taught previously or experienced in the past). For surgical teachers, this may constitute a contemplation of *the ways in which a trainer can draw alongside a learner* engaged in the thisness of practice, to attempt to 'see' and understand how the form of the learning encounter arises for them. Atkinson (2008, 2011) describes this principle as a 'pedagogy against the state': it resists the traditional practices that normalise learning encounters

according to established categories of thinking and doing, otherwise regarded as transcendent values. This stance allows the learner and teacher to respond in ways that reflect what matters to them in the encounter, and so embrace the *differences* that emerge from specific events of practice. Put another way, this approach supports an engagement with the form that is immanent to an encounter of practice.

c)   Power-Knowledge: official training manuals and practice

In Chapter 5 and 6 I used Foucault's theory of power-knowledge (as well as insights from Butler and Bourdieu) to examine how training materials and policy documentation pedagogised the surgical trainee and trainer. I concluded, using the example of how a trainee's operative practice was scrutinised, that a learner's ability to operate is not viewed as an intrinsic capacity that can be discovered or developed. Even though, this may appear to be the objective of the technical teaching and assessment exercise. Instead, I suggested that the present paradigm of operative training constituted a particular discursive practice: it identified surgical skill in ways that inhibit or neglect to acknowledge other representations or signifiers of technical skill.

This becomes problematic within an educational and training context, if such a discursive practice occludes alternative signifiers of ability, which may constitute how operative practice *matters* to trainees and therefore, how such forms of mattering may constitute personal forms of governance that affect how they learn.

This analytic finding was not asserted to diminish the very important role that established foundational practices provide in training surgeons to operate competently and safely. Rather, what I advocate is an increased awareness of how curricular strategies can mould training practices to reflect exclusively, established components of skill which are considered critical to forming competence. The subjectivities of both trainee and trainer emerge from submitting (unknowingly) to the forms of power and

governance inherent in this conception of operative practice and which also appear as obvious and natural processes.

d)   An ethics of immanence

At the heart of this thesis is the finding of a necessary tension between an ethics of actual practice, contrasted with an ethics of transcendence. The former, I have contended emerges from *real events of clinical practice*. In these encounters, a doctor has to make decisions in the 'here and now' according to the contingencies of the actual doctor-patient relations: *an immanent ethics of clinical practice*. An ethics of transcendence, refers to the forms of surgical care, set out in terms of clinical guidelines and ethical codes. Although they provide guidance for a doctor, they are not situated in actual events of practice and as such, I have argued, can be ineffective when confronted by problems in the 'here and now' of practice. In addition, I have shown that even when formal guidance is clear and applicable, surgeons may not follow the approved practices due to various 'barriers' (personal beliefs, the conflicting demands of busy practice) that preclude this. This was demonstrated in Chapter 5 in the tale of the unusual hernia operation and in Chapter 6 in Eleanor's second account of a woman in pain.

To explore how surgeons actualise practice and to theorise on how the structurisation of medical practice can enable and also control actualisations of surgical practice, I applied Deleuze's concepts on the virtual-actual dimension and his notion of ethics.

> Virtual difference has the power to become in unforeseen ways, always more than this actual world and not limited by its already present flow (Colebrook, 2002: 96).

This concept of learning, is consistent with my assertions about how events of practice come to matter to a learner. Deleuze proposes that *real learning* (Atkinson, 2008) is a process in which a subject expands on their capacities through an engagement with virtual potentialities, or ways of thinking, being and doing that are yet to emerge and become concrete. This echoes the earlier point I made about

surgical pedagogies attempting to include strategies that allow a teacher to 'draw alongside' a learner. Such an approach complements the teaching of important foundational knowledge and skills as well as enhancing local flows of learning that can extend, enable and strengthen a learner in practice.

Deleuze advocates a conception of ethics as a set of facultative rules that 'evaluate what we do according to the immanent mode of existence that it implies' (Smith, 2012: 176). This theory of ethics exceeds moral concerns and instead precipitates the following questions; "what *can* I do, what am I *capable* of doing?" rather than "what *must* I do?" (which refers to issues of morality). Therefore, the mode of being is determined through a subject's power to act in an encounter which is influenced by relations of affectivity, or otherwise through the inability of the subject to act to their fullest capacity. A surgical pedagogy grounded in an onto-ethics of immanence, is a concept of learning and teaching in clinical environments that is premised on notions of becoming (individuation) and difference within local flows of events of practice. It promotes an ethics of practice which encompasses transcendent frameworks of how doctors should and shouldn't behave (as prescribed in guidelines), and then proceeds to exceed these confines. This is not to devalue the assimilated values and practices of surgery but to draw attention to how they may be limited in dealing fully with the complexities of actual clinical practice.

An ethics of immanence, recognises the ideas, actions and subjects that emerge from the dynamic flows of local experiences of practice. Put another way, an immanent ethics of surgical practice is grounded in the *thisness* or 'here and now' of an encounter of clinical practice: it may trigger the following question, 'what does it mean to provide care for this patient?' Such a response is consistent with the nature of entangled practices and subjectivities that constitute the worlds of surgical practice and which I have sought to illustrate in the arguments presented in this thesis.

7.6   Limitations and future directions of the study

I have identified four areas in the research strategy which have implications for how the findings can be interpreted. These include; researcher bias, the selection of interview participants, the choice of training/policy documentation, the challenges of examining experience, trainer experiences, the use of other methodologies to broaden the data collection further.

a)   Researcher bias

My aim in devising this research investigation was to explore new and alternative ways of examining the learning experiences of surgeons engaged in actual events of practice. In particular, I derived my hypothesis from personal struggles with surgical training and practice. I was also highly motivated, when moving institutions from an organization of science and technology to a liberal arts school, to use philosophical discourse and social theory to construct both the research strategy and method. It could therefore be argued that what I have presented in the preceding pages of this thesis constitutes my personal *prior* beliefs and concerns with surgical training. Thus, this thesis is not an 'objective' work of research, but rather an elaboration of my personal ideologies of practice. Even though, I argue in this thesis for a relaxation of the established transcendent ideologies of knowledge and skill. As such what I have presented is a particular view of surgical practice rather than committing to the 'unknown' adventure of research.

I would counteract this criticism by first asserting that it is my personal experiences of clinical practice that have helped to draw attention to the 'reality' of events of practice, which I return to continually in this thesis. These examples of actual clinical practice, are a departure from the sterile environments devoid of entanglements which are created by the official manuals and policies of practice. However, all the interviewees provided accounts of actual practice which described similar realities: the entangled subjectivities and complexities embedded in real events of practice. These aspects of

practice have been written about extensively in various fictions and non-fictions and are not in doubt (Becker, 1976; Bosk, 2003; Weston, 2009; Kalanith, 2015)

I stated in the methodology chapter that my intention in analysing the interview data was not to prove the veracity of the accounts nor identify objective truths about training practices. I was concerned with what aspects of clinical encounters came to matter to the individual surgeons in their reflections on practice.

As such this study is not limited by concerns with the accuracy of the data. However, by applying philosophical concepts to narratives of experiencing what I have attempted to identify includes understanding the complexities that constitute actualisations of clinical practice by surgeons and what factors are implicated in how a surgeon comes to think and act in the thisness of encounters. My purpose is not to mistreat or misunderstand established modes of practice. Instead, I hope that the findings of this study challenge the conservative views of assimilated ideologies and practices in surgical education and thinking, with the aim of broadening our concepts of how surgeons come to construct meaning in and of clinical practice which is both an uncertain and risky venture.

I would ask that readers of this thesis, be they surgeons or from a non-medical background, ask how the themes, issues and outcomes identified in the findings of this study, resonate with their own experiences of work. Be that in clinical environments or other professional environs.

b)   The selection of interview participants

The greatest challenge I met with in the data collection process, was in 'securing' participants for the study. The complicated and busy schedules of NHS surgeons made it particularly difficult for candidates to guarantee that they would be available to interview at the agreed time and place. As a consequence, the majority of interviews were conducted over skype. This created a 'magpie' like opportunistic approach to interviewing—if a surgeon was suddenly free to chat, I encouraged them to call me

and I organized my interview schedule to fit around this. Some of the surgeons who made the effort to call me and commit to the interview process may have done so because they had a prior interest in education or were keen to 'rant' about their experiences in surgery.

For these reasons, the breadth and range of surgeon interviewees was limited to a network of London surgeons, except for one surgical trainee based in the South West of England. I suspect that the demands and pressures of training and practicing in London may be very different from the experiences of those surgeons working in other cities and towns of the United Kingdom. This difference in experience may contribute to alternative ways of thinking and reflecting on practice. For example, the study strategy may have been strengthened, by opportunities to interview surgeons from northern towns in England as well as from the devolved countries that constitute the United Kingdom, Wales, Scotland and Northern Ireland.

In particular, the ways in which national health policy impacts clinicians working in other parts of the country would have been interesting to examine. There may be variations in how the internal structures of medical practice, such as waiting lists, patient volume, hospital funding etc. affect the ways in which surgeon practice is actualized and controlled.

c)   Absence of a longitudinal study

In the methodology chapter I explained how I came to choose senior trainees and junior consultants as my participants. These recounted experiences of practice are static in that they are reflected on by individuals who are engaged in practice at definite time points. That is, a senior trainee reflects on their earlier practice but from the perspective of a senior trainee, she is not able to comment on the experience of practice as a junior trainee or as a senior consultant. The passage of time may alter the way in which events are reflected on, so that they come to attain differing levels of significance or are remembered in other ways.

It would have been useful to explore the effect of time on how views of experiencing clinical events change. It is possible that more experienced surgeons may develop expanded insights with time, or that junior trainees with much less experience, have a more insightful view of practice because clinical medicine is still fresh and new to them. As a consequence, the novice surgeon is more thoughtful or creative in the way he thinks about practice.

Further investigations into experiencing in clinical environments could explore how events of practice are viewed at different stages of training by collecting surgeons from a variety of training positions. It may also be useful to consider how to organize a study that followed a few surgeons over a period of time, to gauge how their views, thoughts and actions in events of practice evolve, change or develop as they accumulate more experiences.

Such a study may identify different factors that enable and control actualisations of practice. It may also find that the impact of affective thinking varies with time. Investigating why this may be could have implications for how pedagogic strategies are developed, depending on the year of training of the surgeon.

d)   Training/policy documentation

When I first investigated the scope of documentation pertinent to surgical training, I found that a discourse analysis of training materials alone would constitute a PhD project in itself. For example, there are at least ten assessments of practice used to measure and evaluate a trainee's performance. Therefore, it was difficult to discretely identify a few documents that I could examine closely and thoroughly. In addition, each document itself referred to many other prior documents that had been used to construct the text I was interested in.

The documents I chose to analyse were picked because they were official representations of how practice was conceived. However, I am aware that there are numerous other documents that inform how a surgeon develops their practice. An

example includes an SUI form (serious untoward incident) which is used by a clinician to document an adverse event of practice that he has been involved in. Another example is the surgical consent form that a patient signs when agreeing to undergo a surgical procedure. These examples of documentation identify, position and regulate the subjectivities of both doctor and patient in particular ways. Therefore, they are implicated in how doctors develop their practice and the ideas and experiences of clinical encounters that emerge as a consequence.

e)   Trainer experiences

This study prioritises the experience of learners in surgery over those of the surgical trainer. The main reason for this is that I had to focus the scope of the research in one or two areas which were manageable from a data collection stance and could therefore be investigated within the constraints of a single PhD study. In the opening narrative of the organ procurement, I describe my interaction with Vinny, my mentor in the surgery. In an ideal research scenario, I would have gathered an account from Vinny about how he reflected on the episode and contrasted this with my trainee narrative. This may provide a dual perspective of the same learning encounter, which could have been unpacked to identify how teachers and learners engage and interact with the *thisness* of uncertain practice.

f)   The use of other methodologies to broaden the data collection

I used a mixed methodology (interview analysis, document review and autoethnography) to improve the integrity and applicability of the results (Schifferdecker and Reed, 2009). Originally, I had planned to organize focus groups to pose collective questions to surgeons, to explore how ideas and thoughts may be shared as well as to collaborate the findings. However, the difficulty of scheduling agreed upon times for the interviews made this mode of enquiry impossible.

I suggest that a future extension of this study would be to observe the ideas and intensities of experience that emerge from routine shared encounters of practice, such

as departmental meetings in hospitals. An example of this is the Morbidity and Mortality meeting that all surgeons attend once a month, to discuss the complications and deaths that have occurred in the department over the previous four weeks. These are considered important educational meetings where colleagues can learn from each others' experiences and reflections.

From an educational stand point, I would have liked to include ethnographic data from observing a trainer and trainee engage in an assessment of practice such as the reflective exercise of a case based discussion. Another interesting ethnographic exercise would have been to observe an ARCP (Annual Record of Competence Progression) of a surgical trainee. In this panel interview, a trainee's progress is reviewed by a panel of surgical educators to make an assessment about the candidate's fitness to proceed with training.

7.6 Modes Of Mattering And Becoming: The Wider Implications Of The Research Findings

This thesis explores how events of clinical practice come to *matter* to surgeons. Through a process of mattering, events of practice make sense and become meaningful for the individual practitioner. As such, encounters with clinical practice can have the effect of producing ontological and epistemological growth. Modes of becoming and modes of being (ethics) emerge from an engagement with clinical events of practice. The question arises therefore, as to how to create surgical pedagogies that are sensitive to the different modes of mattering? How can surgical practices inherit the specific modes of mattering of the entities with which they are entangled?

Surgery is distinguished as a craft specialty characterised by 'doing' in response to what is seen, felt and anticipated. It is a discipline that relies on visual and tactile stimuli to provide information to the surgeon both in operative and non-operative (clinics, wards) environments. The potent odours, the graphic and acute images of

flesh and viscera, the differing textures and vivid colours of tissues all combine to elicit strong sensations and responses. These experiences constitute a whole world of affects and senses which the trainee can also encounter as a sense of apprehension. I assert in this thesis that these entities, the affective responses they spark, and the intra actions that form and develop between them, come together in a *dynamic mode of becoming*. This composes the doctor patient relation in an event of practice.

The paradoxical challenge to surgical practice is to resist thinking about these entities as detached, discrete components of experience but at the same time being careful to consider their independent and differential modes of existence. Therefore, clinical practices must develop ways of responding to the dynamic problem of different modes of mattering that can coexist in a clinical encounter and which compose the becoming of an event of practice. The onto-ethical concern that arises from these processes of mattering is how to respond in the thisness of a clinical encounter in ways that attend to the heterogenous obligations posed by the many entities (the human and non-human actants in the situation). An example is the 'problematic existence' of Mr. Cunningham, the transplant recipient I describe at the beginning of this chapter, whom I operate on. In the environment of the operating theatre, his 'stubborn' existence as a human being with past experiences and a life story are reduced (unavoidably) to the medical parameters that constitute his being as a patient.

What I advocate in this thesis, is an approach to clinical practice that is first concerned with recognizing and understanding the *various modes of mattering* that develop and form within an event of practice. Second, a consideration of how the differential modes of mattering determine how the demand of the patient's mode of being institutes itself in the clinical situation so that his 'stubborn existence' is captured beyond the medical parameters of his clinical status. This has implications for how the surgeon becomes 'response-able' (Harraway, 2008: 88). This is the challenge of an immanent ethics of clinical practice, to be situated in relation to a complex of entities (Whatmore, 1997).

7.7 Summary

In this thesis, I argue for a surgical education that exceeds the traditions of the original craft of surgery. Instead, I advocate for pedagogies of surgical training that are liberated from the tyranny of competency based training and meticulous assessments. The latter are necessary to develop a system of medical training that is accountable and transparent. Its purpose is to assure the competence and professionalism of doctors, thereby ensuring that patients receive the best care and their welfare is prioritised.

However, I propose an educational project that remains sensitive to these existing concerns but, reconfigures learning as a responsiveness to the haecceities of practice. In this conception of learning, surgical training is grounded in a metaphysics of immanence and becoming. This would create an alternative yet complementary epistemology of clinical practice. One that is concerned with exploring how to cultivate connections between the mode of mattering of an entity and the mode of responding of the practice. In surgical practice, this is best illustrated by the affectations triggered within a clinical encounter. First, how the encounter with practice affects a surgeon: in terms of how she is obligated by the human and non-human actants in the encounter. Second, how the encounter itself is affected by the surgeon's obligatory positions.

Engaging an epistemology of practice through an ethics of response-ability is a way of being accountable for what emerges from the uncertainty of clinical practice.

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Appendices

Appendix A: Documents discussed in Chapter 2

Modernising Medical Careers (MMC) Inquiry reports

House of Commons
Health Committee

Modernising Medical Careers

Third Report of Session 2007–08

Volume I

Report, together with formal minutes

Ordered by The House of Commons
to be printed 24 April 2008

1 Introduction

1. In March 2007, thousands of junior doctors took part in public demonstrations in London and Glasgow. Their protests were followed over the next few weeks by the resignation of several leaders of the medical profession, a legal challenge to the Secretary of State for Health, and a series of emergency statements in parliament. The source of this acrimony was a new recruitment system for selecting junior doctors for training places, the Medical Training Application Service (MTAS). The introduction of MTAS was part of a wider reform programme known as Modernising Medical Careers (MMC).

2. MMC, established in 2003, was a set of changes aimed at addressing long-standing problems with the UK medical education system and the wider medical workforce. MMC aimed to address the uncertain career prospects of the "lost tribe" of Senior House Officers and to make medical training more flexible and more streamlined. The implementation of the initial phase of change was relatively successful, with a new Foundation Programme established in 2005 for medical graduates.

3. The subsequent introduction of new arrangements for hospital specialty training in 2007, however, ran into serious difficulties. The MTAS national selection system was seen as unfair by many applicants and suffered serious operational problems. Large numbers of overseas doctors were allowed to apply freely for UK training posts, creating intense competition in many areas. The rigidity of the new "run-through" training system and the lack of planning for transition left many UK doctors facing the apparent prospect of long-term unemployment.

4. The Department of Health acknowledged problems with the recruitment system and established a Review Group to consider the future of the selection process. The Review Group decided not to scrap the MTAS system altogether, but made repeated changes to recruitment, heightening uncertainty. A legal challenge by the pressure group RemedyUK called for the recruitment process to be abandoned; the challenge was unsuccessful but the High Court verdict described the new recruitment system as "disastrous". Following serious security problems, the on-line recruitment system was subsequently discarded anyway. The majority of training posts were eventually filled in advance of the 1 August deadline, but many doctors were left with uncertain future prospects and bitterness and resentment of the new selection system remained rife.

5. The 2007 crisis was the subject of intense media coverage and caused a breakdown of relations between the Department of Health and the medical profession, as well as considerable strife within the profession itself. In response, the Department established an independent inquiry led by Professor Sir John Tooke to look at the causes of the 2007 problems and the changes required to restore confidence in the MMC programme. At the end of July 2007, the Committee agreed to hold an inquiry to examine MMC and to consider the findings of the independent Tooke Inquiry. We announced an inquiry with

ASPIRING TO EXCELLENCE

FINDINGS AND FINAL RECOMMENDATIONS OF THE
INDEPENDENT INQUIRY INTO MODERNISING MEDICAL CAREERS

LED BY
PROFESSOR SIR JOHN TOOKE

JANUARY 2008

ABSTRACT

MMC sought to reform postgraduate medical education and training to speed the production of competent specialists. Reform comprised: a two year foundation programme; centralised selection into 'run-through' specialist training; the creation of fixed term specialist training appointments (FTSTAs); revisions to the non-consultant career grade.

The Inquiry systematically analysed areas of concern arising from MMC: 1 Policy; 2 Professional engagement; 3 Workforce analysis; 4 Regulation; 5 Education and selection; 6 Training commissioning and management; 7 Service implications. The Panel proposed corrective action to resolve issues in the eight domains listed below. The resulting Interim Report with its associated Recommendations was published on 8 October 2007. Consultation on the Report revealed strong agreement: 87% of the 1440 respondents agreed or strongly agreed with the 45 Recommendations:

ISSUES

1. The policy objective of postgraduate medical training is unclear. There is currently no consensus on the educational principles guiding postgraduate medical training. Moreover, there are no strong mechanisms for creating such consensus.

2. There is currently no consensus on the role of doctors at various career stages.

3. Weak DH policy development, implementation, and governance together with poor inter- and intra-Departmental links adversely affected the planned reform of postgraduate training.

4. Medical workforce planning is hampered by lack of clarity regarding doctors' roles and does not align with other aspects of health policy. There is a policy vacuum regarding the potential massive increase in trainee numbers. Planning capacity is limited and training commissioning budgets are vulnerable in England now that they are held at SHA level.

5. The medical profession's effective involvement in training policy-making has been weak.

6. The management of postgraduate training is currently hampered by unclear principles, a weak contractual base, a lack of cohesion, a fragmented structure, and in England, deficient relationships with academia and service.

7. The regulation of the continuum of medical education involves two bodies: GMC and PMETB, creating diseconomies in terms of both finance and expertise.

8. The structure of postgraduate training proposed by MMC is unlikely to encourage or reward striving for excellence, offer appropriate flexibility to trainees, facilitate future workforce design, or meet the needs of particular groups (e.g. those with academic aspirations, or those pursuing a non-consultant career grade experience). It risks creating another 'lost tribe' at FTSTA level.

CORRECTIVE ACTION

1. There must be clear shared principles for postgraduate medical training that emphasise flexibility and an aspiration to excellence.

2. Consensus on the role of doctors needs to be reached by the end of 2008 and the service contribution of trainees better acknowledged.

3. DH policy development, implementation and governance should be strengthened. DH should appoint a lead for medical education, and strengthen collaboration, particularly the health: education sector partnership.

4. Workforce policy objectives must be integrated with training and service objectives. Medical workforce advisory machinery should be revised and enhanced. SHA workforce planning and commissioning should be subject to external scrutiny. Policies with respect to the current bulge in trainees and international medical graduates should be urgently resolved.

5. The profession should develop a mechanism for providing coherent advice on matters affecting the entire profession.

6. The accountability structure for postgraduate training and funding flows should be reviewed. Revised management structures should conform to agreed principles but reflect local circumstances. In England Graduate Schools should be trialled where supported locally.

7. PMETB should be merged within GMC to facilitate economies of scale, a common approach, linkage of accreditation with registration and the sharing of quality enhancement expertise.

8. The structure of postgraduate training should be modified to provide a broad based platform for subsequent higher specialist training, increased flexibility, the valuing of experience and the promotion of excellence.

CONCLUSION

To deal with many of the deficiencies identified and to ensure the necessary concerted action, the creation of a new body, NHS:Medical Education England (NHS:MEE) is proposed. NHS:MEE will relate to the revised medical workforce advisory machinery and act as the professional interface between policy development and implementation on matters relating to PGMET. It will promote national cohesion in England as well as working with equivalent bodies in the Devolved Administrations to facilitate UK wide collaboration.

The Inquiry has charted a way forward and received a strong professional mandate. The Recommendations and the aspiration to excellence they represent must not be lost in translation. NHS:MEE will help assure their implementation.

Excerpts from Michael Eraut's (2008) investigation of Intercollegiate Surgical Curriculum Project (ISCP)

Evaluation of the Introduction of the Intercollegiate Surgical Curriculum Programme

Professor Michael Eraut, University of Sussex

Summary

1. External factors affecting the introduction of ISCP (pp9-15)

The biggest challenge for this evaluation was that the changes introduced by ISCP were almost swamped by other changes already in progress.

The *European Working Time Directive (EWTD)* will reach its final figure of 48 hours a week in 2009, and this has significantly reduced the time that trainees can spend in both formal and informal learning environments. This situation has been further exacerbated by the growth of *Sub-specialties*, which limit the range of consultants' domain of expertise. The combination of both these factors has led to the dissolution of the *"firm"* structure and the introduction of *shift working* for both trainers and trainees in several branches of medicine. In surgery, the overall work patterns of trainers and trainees in a shift system cannot be matched; so the time they can be in the same place together has been significantly reduced.

Modernising Medical Careers (MMC) was intended to reduce the time taken to become a consultant by 2 years, which might have been possible if other factors had stayed the same. However, the understandable focus on reducing waiting lists for elective surgery has led to the disappearance of "training lists" from many hospitals to improve their productivity. Moreover, the recruitment of the first cohort of the new MMC surgical trainees through MTAS coincided with the introduction of ISCP and created a very negative mood among surgical educators, which did not help evaluators seeking data on the progress of ISCP.

Although ISCP was able to negotiate the restoration of the two lost years, the effect of all the other changes was a steady reduction of access to training at all levels before the introduction of ISCP. For example, an increasing number of surgical registrars feel unready to take CCST, because they have had insufficient access to practice during their postgraduate training.

2. The Evidence Base for this report (pp7-8)

- Data collected by the ISCP website, the centre for formal communications between trainers and trainees.
- Three surveys from different agencies: a JCST Quality Assurance survey in November 2007, a PMETB survey at the beginning of 2008, and a small survey of a group of London trainees doing Anatomy courses at RCS.

- Four research studies commissioned by ISCP from different deaneries:

    1. **Warwick** focussed on continuity of care and factors impacting on surgical training and patient outcomes. Their evidence was collected from 12 focus groups between October 2007 and May 2008.
    2. **Kent, Surrey, & Sussex (KSS)** focussed on the nature and value of the support for trainers, especially the role of Trust-based faculty groups from January 2007 to March 2008.
    3. **The Wales Postgraduate Deanery** focussed on the impact of the ISCP website and the assessments it carried from October 2007 to March 2008
    4. **Southampton** focussed on the most critical features for a good placement between October 2006 and October 2007.

- Six elite interviews with senior surgeons.

3. Early Implementation of the ISCP (pp16-26)

ISCP brought in three new features to improve the focus and management of the learning support system. The first change was a new role, that of an *Assigned Education Supervisor* (AES), whose first job was to negotiate the second new feature, that of a *Learning Agreements* (LAs) between the AES and their assigned trainees. The third innovation was the development of a learner led *Website*, which held the curriculum and through which communications were expected to be conducted. The website design was being improved throughout the year, and trainees were more able to use it than some trainers.

Although most trainers and nearly all trainees appreciated the goals of ISCP, its implementation was challenging. In May 2008 78%of validated trainees had an AES and 51% had a Learning Agreements; and there were large variations across both deaneries and specialties. This makes it very difficult to interpret the data. The evidence reported by the PMETB survey in February 2008 suggested that AES and LA functions were being pursued off the website by a substantial number of trainees. 95% of general surgeons said they had an educational supervisor, who was being responsible for their appraisal, and 78% said they had a learning agreement. This was confirmed by the Wales study; but the actual use of the LA may have been more limited, because two questions in Table 2 (page 17) showed that formal meetings with a supervisor to discuss their progress and formal assessments of their performance in their current post had not yet occurred for almost half the sample.

The evidence on issues relevant to supervision appears to be reasonable, but our small survey of London trainees in May 2008 discovered a huge variation in the hours spent working with more senior colleagues. Their estimates for an average week were that 31% spent from 0 to 12 hours, 31% spent from 13 to 24 hours and 38% spent 25 hours or more. With this type of distribution the use of averages can be profoundly misleading, and the JCST use of dissatisfaction indicators becomes very important.

addition to time spent and the balance between different settings, the qualitative data brings out other important factors: the quality of relationships in any particular setting, the appropriateness of the work allocated, the quality and timing of advice and feedback (undermining feedback is still quite common), opportunities for enhancing their understanding of surgery and sustaining a sense of purpose and progression.

Experienced surgical trainers, both in interviews and informally, also refer to the main problems in these settings. *Elective surgery* gets most attention from ST3 onwards, but is retarded by the lack of trainee access to operational experience and the loss of training lists to meet urgent targets. Even under the old system trainees are increasingly unready to become consultants at the usual time. *Emergency Surgery and Trauma* are allocated considerable time from higher level trainees, but without the support they need to learn how best to handle the complex and time critical cases they receive. This is a much neglected problem in need of urgent attention. *Clinics* no longer allow time for trainers and trainees to see patients together, although they can consult with each other about patients examined by the trainee. One consequence is that FRCS examiners are finding that trainees are becoming increasingly weak diagnosticians. Although ward work take up a great deal of the time of junior trainees, the approach to their learning is surprisingly *laissez faire*. The answer to the current difference of opinion between trainers and trainees over the value of ward work must surely be that some of it is acknowledged as valuable by both groups, some of it would probably be acknowledged as having little learning value by both groups and some of it could be made valuable by giving appropriate advice and support. This needs to be explored on a wider scale, rather than leave it to every individual trainer to work it out for themselves. Hence the chapter concludes with sub-sections on *"When is Service Work a Learning Opportunity?"* and *"Apprenticeship and Coaching"*.

5. Competence and Assessment (pp 41-45)

The current assessment advice is both impractical and confused. It neglects the time required and the difficulty in finding assessors; and it assumes that trainees will suddenly treat what looks like a test as being formative rather than summative, even when they have been reared in a culture of competition. Given the great variation in posts and circumstances and the ISCP claim to be competence based, it makes no sense for the three main assessment instruments for junior trainees to be normative rather than criterion based like the PBA. Nor will most of the available assessors have sufficient experience to make normative judgements in rapidly changing contexts, a new MMC trajectory and a new surgical curriculum. Trust-backed processes are required that integrate assessments with the individual trainee's ongoing learning and supervision.

6. Teamwork and Relationships (pp 46-50)

There is an increasing recognition of the importance of teamwork both within and across professions, just as the shift systems are making it more difficult. The key issues are continuity of patient care and reduction of risk, and improved modes of communication need to be turned into communicative practices. It is now very clear that the same issue is

Excerpts from the public inquiry led by Sir Robert Francis (2013) into MidStaffordshire NHS foundation trust

Letter to the Secretary of State

<div align="right">
Mid Staffordshire NHS Foundation Trust Public Inquiry
Skipton House
Room 204A
80 London Road
London
SE1 6LH
</div>

The Rt Hon Jeremy Hunt MP
Secretary of State for Health
Richmond House
79 Whitehall
London
SW1A 2NS

<div align="right">
5 February 2013
</div>

Dear Secretary of State

Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry

As you know, I was appointed by your predecessor to chair a public inquiry under the Inquiries Act 2005 into the serious failings at the Mid Staffordshire NHS Foundation Trust. Under the Terms of Reference of the Inquiry, I now submit to you the final report.

Building on the report of the first inquiry, the story it tells is first and foremost of appalling suffering of many patients. This was primarily caused by a serious failure on the part of a provider Trust Board. It did not listen sufficiently to its patients and staff or ensure the correction of deficiencies brought to the Trust's attention. Above all, it failed to tackle an insidious negative culture involving a tolerance of poor standards and a disengagement from managerial and leadership responsibilities. This failure was in part the consequence of allowing a focus on reaching national access targets, achieving financial balance and seeking foundation trust status to be at the cost of delivering acceptable standards of care.

The story would be bad enough if it ended there, but it did not. The NHS system includes many checks and balances which should have prevented serious systemic failure of this sort. There were and are a plethora of agencies, scrutiny groups, commissioners, regulators and professional bodies, all of whom might have been expected by patients and the public to detect and do something effective to remedy non-compliance with acceptable standards of care. For years that did not occur, and even

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after the start of the Healthcare Commission investigation, conducted because of the realisation that there was serious cause for concern, patients were, in my view, left at risk with inadequate intervention until after the completion of that investigation a year later. In short, a system which ought to have picked up and dealt with a deficiency of this scale failed in its primary duty to protect patients and maintain confidence in the healthcare system.

The report has identified numerous warning signs which cumulatively, or in some cases singly, could and should have alerted the system to the problems developing at the Trust. That they did not has a number of causes, among them:

- A culture focused on doing the system's business – not that of the patients;
- An institutional culture which ascribed more weight to positive information about the service than to information capable of implying cause for concern;
- Standards and methods of measuring compliance which did not focus on the effect of a service on patients;
- Too great a degree of tolerance of poor standards and of risk to patients;
- A failure of communication between the many agencies to share their knowledge of concerns;
- Assumptions that monitoring, performance management or intervention was the responsibility of someone else;
- A failure to tackle challenges to the building up of a positive culture, in nursing in particular but also within the medical profession;
- A failure to appreciate until recently the risk of disruptive loss of corporate memory and focus resulting from repeated, multi-level reorganisation.

I have made a great many recommendations, no single one of which is on its own the solution to the many concerns identified. The essential aims of what I have suggested are to:

- Foster a common culture shared by all in the service of putting the patient first;
- Develop a set of fundamental standards, easily understood and accepted by patients, the public and healthcare staff, the breach of which should not be tolerated;
- Provide professionally endorsed and evidence-based means of compliance with these fundamental standards which can be understood and adopted by the staff who have to provide the service;
- Ensure openness, transparency and candour throughout the system about matters of concern;
- Ensure that the relentless focus of the healthcare regulator is on policing compliance with these standards;
- Make all those who provide care for patients – individuals and organisations – properly accountable for what they do and to ensure that the public is protected from those not fit to provide such a service;

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- Provide for a proper degree of accountability for senior managers and leaders to place all with responsibility for protecting the interests of patients on a level playing field;
- Enhance the recruitment, education, training and support of all the key contributors to the provision of healthcare, but in particular those in nursing and leadership positions, to integrate the essential shared values of the common culture into everything they do;
- Develop and share ever improving means of measuring and understanding the performance of individual professionals, teams, units and provider organisations for the patients, the public, and all other stakeholders in the system.

In introducing the first report, I said that it should be patients – not numbers – which counted. That remains my view. The demands for financial control, corporate governance, commissioning and regulatory systems are understandable and in many cases necessary. But it is not the system itself which will ensure that the patient is put first day in and day out. Any system should be capable of caring and delivering an acceptable level of care to each patient treated, but this report shows that this cannot be assumed to be happening.

The extent of the failure of the system shown in this report suggests that a fundamental culture change is needed. This does not require a root and branch reorganisation – the system has had many of those – but it requires changes which can largely be implemented within the system that has now been created by the new reforms. I hope that the recommendations in this report can contribute to that end and put patients where they are entitled to be – the first and foremost consideration of the system and everyone who works in it.

Yours sincerely

Robert Francis QC
Inquiry Chairman

Appendix B Interview Materials

Interview Questions

1. 'Warm up' Questions

- *Tell me about your duties in your current role?*
- *What do you enjoy about the job? What do you dislike about your work?*

2. Beliefs and values around being a surgeon and practicing surgery

- *What is a surgeon in your opinion?*
- *What is important to you in this job?*
- *Do you feel the training of surgeons reflects these important aspects of the job, as perceived by you?*

3. Ontological aspects of training

(Aim: to gather an insight into whether the training experiences of surgeons are aligned with the official curriculum of surgery.)

- *What are your expectations as a trainee? Are these realistic, in your opinion?*
- *What do you think the purpose of surgical education/training should be? Do you feel that in your experience, it achieves these goals?*

4. Events of clinical practice

(Aim: to explore the ways in which trainees develop knowledge through affective experiencing of events of clinical practice.)

- *How do you prepare for your day-to-day practice? What resources did you use - books, simulation labs, peer groups, talking things over with colleagues, watching senior surgeons, personal experiences of practice?*
- *Were there moments/ events in your training that were powerful, because they taught you something that you had not prepared for or anticipated?*
- *Has this event or any other transformed the way you practice? Perhaps you have changed something about the way you conduct yourself in practice or perhaps in the way you engage with others?*

5. Concluding thoughts

- *Let's imagine that you have retired from professional practice and spend your days sipping cocktails on a luxury island - how would you reflect back on your training years? What lessons would you pass on to future trainees?*

Surgeon interview letters

Dear Surgeon

Re: Participation in Research Interviews

Further to my phone call yesterday, I write to thank you for kindly agreeing to participate in a research interview as part of my PhD studies.

I am studying towards a PhD in Education which is being supervised by Professor Dennis Atkinson (d.atkinson@gold.ac.uk) at Goldsmith's College, University of London. The aim of the study is to investigate the training experiences of surgeons. One of the methods employed in this study is the use of semi-structured interviews to explore how learning happens for a surgeon and how this affects their role as trainers and teachers of surgery. The study focuses on the experiences and views of junior consultant staff (defined as consultant surgeons appointed within the last 5 years) across the surgical specialties (vascular, colo-rectal, breast, urology, neurosurgery, Orthopaedics).

The final objective of this study is to use the data gathered from the interviews (and other sources - document analysis, ethnographic field work, trainee focus group interviews) to inform the shape and design of future surgeon education models.

The interviews will last 45 minutes (max) and will be recorded and subsequently transcribed. Strict confidentiality is guaranteed. The interviews will be analysed by myself and anonymized before being presented in the thesis. Should you wish to peruse your transcribed interview, please let me know and I shall forward a copy to you. Please note that I may have to contact you again if, during the transcription exercise, I notice things that need further clarification. I hope this is acceptable to you.

I would be grateful if you would complete the enclosed profile document, prior to the interview.

I know time is precious in our busy work environment but I do hope that the experience will be enjoyable, stimulating and useful for both of us.

Thank you again!

Yours sincerely,

Surgeon profile document

Surname: First name:

Present appointment (date & hospital) :

Areas of Specialty (e.g. general, vascular, colorectal, laparoscopy etc.):

Research Interests:

Teaching Qualifications:

(e.g. Masters, training the trainers, postgraduate certificate etc..)

POSTGRADUATE teaching commitments:

POSTGRADUATE teaching hours/wk:

(please list weekly/monthly activities)

Was there a training period which you feel was particularly significant for you? why?

Surgeon Consent Form for Research

Dear Surgeon

Further to my phone call yesterday, thank you for kindly agreeing to participate in my research which will take place from July 2015 to August 2015. This form details the purpose of this study, a description of the involvement required and your rights as a participant.

The title of this study:

Surgeon Education: An investigation into the ontological and ethical dimensions of surgical training and practice

Introduction & Objectives:

I (Arundathi Mahendran) am studying towards a PhD in Education which is being supervised by Professor Dennis Atkinson (d.atkinson@gold.ac.uk) at Goldsmith's College, University of London. The aim of the study is to investigate the training experiences of surgeons. One of the methods employed in this study is the use of semi-structured interviews to explore how learning happens for a surgeon and how this affects their role as trainers and teachers of surgery. This study focuses on the experiences and views of junior consultant staff (defined as consultant surgeons appointed within the last 5 years) across the surgical specialties (vascular, colo-rectal, breast, urology, neurosurgery, Orthopaedics).

The final objective of this study is to use the data gathered from the interviews (and other sources - document analysis, ethnographic field work, trainee focus group interviews) to inform the shape and design of future surgeon education models.

Procedure:

The interview will involve questions about your experiences as both a trainee and a trainer and also investigate your thoughts and opinions on surgical education. Our discussion will be audio recorded to help me accurately capture your insights in your own words. The recordings will only be heard by me for the purpose of this study and will subsequently be transcribed and analysed by myself. If at any point during the interview you feel uncomfortable, I can turn off the recorder at your request. Or if you don't wish to continue, you can stop the interview at any point.

Should you wish to have access to a transcription of the interview, please let me know and I will provide a copy.

I expect to conduct only one interview; however, follow-ups may be needed for added clarification. If so, I will contact you by mail/phone to request this.

Benefits:

There is no direct benefit to you from taking part in this study. I hope that this research will inform the design and structure of surgical training models and thus benefit the education and practice of surgeons in the future.

Confidentiality:

Your interview is confidential. Though direct quotes from you may be used in the study, your name and other identifying information will be kept anonymous. Should results of this study be published or presented, individual names and other personally identifiable information will not be used unless you give explicit permission.

To minimize the risks to confidentiality, all interviewees will be identified by codes and there will be no public access to audio recordings of the interviews.

When the research is completed, I may save the recordings and notes for use in future research conducted by myself. I will retain these records for up to 5 years after the study is over.

Compensation:

You will not be paid for taking part in this study.

Rights:

Participation in research is completely voluntary. You are free to decline to take part in the project. You can decline to answer any questions and are free to stop taking part in the project at any time. You also have the right to withdraw from the study at any time. Should you wish to withdraw, all information you provide (including audio records) will be destroyed and omitted from the study.

Questions:

If you have any questions about this research, please feel free to contact me. I can be reached at 07568 321 058 or edp03am@gold.ac.uk.

I know time is precious in our busy work environment but, I do hope that the experience will be enjoyable, stimulating and useful for both of us. Thank you again!

CONSENT:

You will be given a copy of this consent form to keep for your own records.

If you wish to participate in this study, please sign and date below.

Appendix C Interview Sample

Transcript of an interview with Eleanor (E), a senior orthopaedics trainee based in London.

E: *I am at the beginning of my final year in Colchester doing hip and knee replacements and I take part in the trauma rota. Trauma with paediatrics is what I hope to do as a Consultant at the Royal London hospital. I came out to Colchester because it has a good reputation for operative training which is what I need at this moment in time to get my volumes of procedures up and my confidence. It has been a really good experience as I've got what I needed out of it.*

AOM: *What do you enjoy about being an Orthopaedic surgeon?*

E: *I like being able to practically assist people, that's the main reason why I'm an Orthopaedic surgeon. If I talked about what I am naturally good at or what I tend towards in Medicine then I would say it's probably more general medicine. I like putting patterns together and working out what's wrong with people. you know one of my colleagues has been diagnosed with subacute bacterial endocarditis and I keep waking up at night thinking about it. I made a diagnosis of open TB in a patient on the ward last week. you know? So that's what I'm naturally good at. But I knew very early on that it would be worthwhile to gain some actual skills so that I could transform my knowledge into a change in reality for my patients, that's why I went into Orthopaedics and I think it delivers on that.*

AOM: *What don't you like about the job?*

E: *The culture sometimes is a bit narrow. You know, like we're not interested if we can't cut it. That sort of thing. Some of the Orthopods just are not interested if its not a straightforward Orthopaedic problem. That's because their background or approach is different from mine. I think that sometimes there is an element like they are blokes who've all got sheds and black and deckers and they like that, screws, plates and they're coming at it from a totally different angle to how I am. But that's not to say they're wrong, I think they're probably naturally a bit more adept at the old plates and screws practical element of it, because that's their angle. But I think it also comes potentially with an anti-intellectual, anti-complexity sometimes.*

AOM: *What is life like as a trainee?*

E: It's pretty poor I'd say. I was thinking today that I've had no life for ten years. Really. The change that I get for that is not particularly a high flying career. It's not like a . . . I haven't done a PhD or published something in Nature or published anything at all! Its not this stellar career, its just kind of still standing. That's my victory you know, that I'm still standing.

AOM: How have you 'not had a life'?

E: Well, that's unfair really. Since I qualified what I mean is that I've been working really hard, 7 to 7 on a normal day, plus oncall, plus doing nights, plus doing weekends. I kind of have had a single holiday most years and that's how I try to remember which year was which. And that's when I've seen my friends. Its obviously more intense since I've had children. I never see my friends, I never speak to them on the phone. There isn't really a chance to have a life an intellectual life, a social life, its kind of like work, eat, not very often, bathe occasionally. Its like a standing joke. My old flat mate and I used to say that when people are very ill in hospital and sometimes the situation is so poor that the ICU registrar may turn them down from going into intensive care because they just don't have the quality of life or an expectation of a quality of life if they were to survive. Anna and I used to say, if they knew what our quality of life was like, and you had a car accident they'd be turning you down. It's just a lack of basic . . I notice it out here because we're in Essex and everyone is relaxed.

I suppose the pace of life and the cost. That's the overwhelming thing, the cost of just surviving is really, really high. I don't think that is appreciated in anyway by the trainers, your superiors, its the sound of no hands clapping all the time.

I imagine it's like this in lots of jobs. But the emotional toll. . . the work that we do must have a cost in terms of how draining it is.

AOM: What made you choose Orthopaedics?

E: Essentially it was a practical thing. MTAS came around and you had to apply or you were about to become rejected from the profession. This thing about diminishing value of your achievements every six months you stayed in. So you had to apply to something you had a proven commitment to. I had done a year of Orthopaedics and six months of everything else. So it seemed sensible. I spoke to my boss and he said to me, 'well what attracts you to general surgery? is it the shit,

cancer or the fight against gravity?' In general surgery there is a lot of end of life bowel surgery which is not going to go well and a lot of cancer and death. Whereas in Orthopaedics there is a lot of pain and disability which can be made better. So I suppose it was outcome, the quality that you could add.

AOM: How do you find the camaraderie?

E: In the past, it has been good, more recently not so much, partly because I've been in and out on maternity leave. So I'm slightly out of the loop. I find Orthopods a good bunch, smart, sharp even though they revel in their stupid reputation.

AOM: On a day to day basis how does your learning develop? Are there particular sources, books, evidence based medicine, colleagues?

E: I don't really know. I've always been a bit mystified by this. I competed to get a number, 12 to 1 ratio, and then I kind of naively expected that I would be trained. And that never really happened. I . . my first few jobs were a mixed bag. I worked for a guy who has been stopped from practicing by the GMC, that was a good learning experience but not a good surgical experience. Then I worked for a bunch of people who did complex things which you as a junior can't do. Paediatric spinal surgery. I was quite under-practiced as an SHO. I'm quite a diligent doctor so I was not in theatre, I was on the ward. I'd sort of drift along and then go to the teaching. The bosses would basically try to humiliate whoever the trainee was and the tone of it was sort of 'oh my god, I can't believe you don't know that!' I used to think well I'm not going to sit here and listen to this for six years. So I signed up and did my exam in my second year for that reason.

I thought well there's a few things I can control, I can read the book and pass the exam. But I wasn't trained, it may not have been helped by three sets of maternity leave certainly. But I've always worked full time but I just haven't found essentially that there is much in the way of operative training going on. The things that I'm good at are the things that I've been left to figure out myself. There's a list of operations that I can do well because I was left to do them by myself and I've done a lot of them. I did two and half years doing hip and knee and only now in the fifth job of that sequence have I got the experience that I need. The anaesthetists are slow and discouraged and the theatre staff have low morale and low motivation and the theatre is hideously inefficient and the whole system is against you. Then there is the

pressure of targets to get the operation done. So if there's space for you to be taken through an operation, it's just wiped out routinely.

AOM: So what you seem to be saying is the book learning is the exam, which is learning that you can do yourself, but the operative training has let you down.

E: yes, and I think the deanery know that which is why they have introduced this ridiculous tick-box method. I would have the analogy similar to what has happened to nursing to this country. As it has become evident that caring has disappeared, so the documentation of care must be in triplicate. I think that that's what happened to training. When training was good, nobody was documenting how many times they spoke to their boss and now its become evident because people must present their logbook at every RITA. Its becoming evident that trainees are doing absolutely nothing, they are just assisting. Six years of assisting does not make you a surgeon. It's obvious. In Orthopaedics it's expected that you do two years of post CCT fellowship so that's obviously where you get trained. But I think that it's just a bit dishonest really to advertise a training number that people then compete for and then.

What you do learn from the bosses is how to make decisions. I'm quite good at saying 'well, I don't understand that, what's your rationale, what's your surgical strategy?' Because at the beginning you think they just know everything and I don't understand. But because I've done the exam I know that they don't know. They do things a certain way because its what they're familiar with or because he lives at home with his mum or some other social thing. . .they're processing a case and it's interesting to elucidate how people are making those decisions. I think surgery is all decision making. Some of it is intra-operative decision making but basically people go wrong when they don't know how to make good decisions. So I think for that reason it's been very good.

Watching people make decisions has been useful. Seeing people's thinking process. Some are very clear, others are indecisive.

For me it's very important that I make a decision with the patient in a cooperative manner. I've seen bosses who do that and bosses who don't. I just think when you're talking about surgery that is not life-saving, there is no role to say to somebody you need this operation. I say, my opinion is that you would benefit from this operation. 90% chance. I think it is a definite shared decision and I do that for all of them. I also want the patient to feel that they are in the journey with me. When things go wrong,

you don't want it to be, 'you told me to do this and now it's gone wrong'. That's the wrong dynamic to be in.

AOM: how have you managed with events that have come out of the blue?

E: I was called to a trauma call and I was a second year registrar. I opened up a chest having never done it before. You have a much broader life experience of these extreme events than other people. I don't know whether this blunts you a bit. It makes you a bit hard to ordinary concerns in life. you can't get your heart rate up a bit. The spectrum for most people is much narrower and you've seen how expansive it can be. It makes you a bit hard. A bit emotionally blunted. I don't know you know. I remember being in a brief relationship when I was doing neurosurgery. And this guy worked at Price House Waterhouse . . .he was sweet and lovely. And he said 'you just don't care about me'. I just said, 'I don't have any care left. Of course I don't care about you! There's nothing in here.' I think you are literally drained and if you care about what you're doing and what you're doing is so extreme in terms of the demands on your brain and your emotional resources. You become a bit blunted but I also think you have not much left.

It didn't change my practice. It gave me a quiet confidence.

AOM: How did your training help you?

E: I don't think I've had much training. The knowledge you have comes from medical school and you read up on things. Your basic knowledge comes from a long time ago and the rest of it is experience.

Training was not what I had expected. You beat off all these other candidates and then someone would say this is how you do a knee replacement.

AOM: What is the purpose of surgical education and training?

E: To teach you skills. You preselect those with the knowledge and decision making ability. Then expose them to clinical practice and teach them practical skills. It happens in other disciplines. The anaesthetists are slow because they're teaching their SHOs to put epidurals or central lines in or whatever. It's just that the surgeons are not good at prioritising that.

AOM: What happened to you at your annual performance review?

E: I was given an outcome 3, which essentially was because I hadn't done enough. They have these set numbers of things that you have to have done independently 40 hip replacements, 40 knee replacements . . . a big massive list of them. I wasn't anywhere near on hips or knees so I was given another six months to make the numbers. I made the numbers on hips but not knees. An outcome 3 means inadequate progress by the trainee. Now there is not an outcome for inadequate training which is galling. Because it's evident that I didn't have the opportunity to make up those operations. I detailed the lengths I had gone to, to try to overcome the problems, like one of the bosses was away for half the week, half his list that summer, so he agreed that I could take on that list and do simple joints with another registrar, but then my another trainer forbade that because he was clinical director and it was a new unit and he might get scrutinised and whatever . . . No matter what I did I couldn't achieve the numbers I was asked to achieve. There was no outcome to reflect a placement that did not serve the purpose.

There are other requirements for CCT like publications, audit. I have been working flat out to meet all my CCT requirements.

I did not contest it with them. I was very angry because they spent the whole RITA talking to me about childcare and I said I am going to Colchester and I had agreed this with the boss. And he had agreed. In the RITA there were seven men on the panel, no women. I don't think you should go to Colchester etc… I had a conversation about this with a bunch of men and I thought unless you're volunteering I'm going to Colchester. They mean it well, but they've probably got some equality and diversity box that needs to be ticked off. I therefore feel that the whole system is completely sexist in totally ridiculous ways.