Chapter 7 Findings Part 2:
Clinical Decision Making as a Language Phenomenon – Main Themes

7.1 Introduction

It was clear that in the collective (group decision making) settings of the research a great deal of the clinical reasoning was devoted to the production of some kind of report that could be verbal or written. The students in the PBL tutorials were learning to assess patients on the wards, and in the research interviews they were asked about how the PBL experience prepared them for this. The student participants interviewed had just completed their long case examinations. In these exams they were required, as individuals, to assess a patient and then present their findings in a detailed verbal report to two senior doctors who listened to the report, asked questions about the case, and then graded the student's' performance and provided feedback on their performance. This was a formal examination, but assessing patients and giving verbal presentations to senior doctors was also a routine practice on the wards at this stage of their medical education.

In the multidisciplinary clinic each health professional presented a verbal report to the others in the assessment team at the clinical meeting held at the end of the morning's assessments. The doctors also reported the team's findings to the patients and wrote reports for the health professionals who had referred the patients to the clinic. These reports were the visible or audible culmination of the clinical reasoning that had been invested in the assessment of each patient. It became clear in the data analysis that the use of language in several layers of complexity underlay the ability to produce such reports. These layers form the themes now presented. It is not feasible to provide all the transcripts, but numerous quotations are presented to substantiate the analysis.

7.2 Language/Words

The most fundamental theme was the words and utterances that form language itself. Most participants seemed to take it for granted that simply knowing the right words and expressions was essential. However, knowing how and when to use them was a concern

sometimes expressed by the students, as they were still learning how to use them appropriately. For example, one student, David[1] said

"Medicine is about learning the language".

He also went on to say that having to articulate your ideas for others in the PBL groups could reveal if you truly knew something as opposed to only thinking that you did. This was echoed by another student, Christopher,

"they'll [the other members of the PBL group] ask you something that you can't answer and that's really helpful because it makes you go back and look it up".

One student, George, spoke of his time doing psychiatry, and the language he had needed to learn in a way that quite clearly indicated that a large part of becoming comfortable and competent working within the world of psychiatry was mastering its terminology:

"it [psychiatry] has its own little language for speaking to itself and you don't pick up on that unless you're using it every day in a group talking to someone … we'd see patients together and we'd discuss the patients and run through it using our little list of jargon terms. … So you got used to using the language and when it came time to sit your exam you felt quite comfortable".

However, at least one student, Quentin, recognised that knowing the language of medicine can have its downside when he spoke of the ways in which some doctors erect language as a barrier between themselves and their patients

"It's [medicine] like another language really. It's interesting; I sometimes wonder if it's a little bit esoteric to protect doctors from patients".

Quentin went on to explain that although doctors need the esoteric language of medicine to communicate with each other there was a temptation to use the specialised language with patients, not only because it was quicker and easier than using lay terms, but because it also asserted the doctor's authority

"To patients … so that the patient knows that the doctor is the one in control".

This notion was reflected in some of the comments from the multidisciplinary clinic staff. Three health professionals in particular had interesting insights into the words used in clinical reasoning. John (psychologist), spoke of the dismissive labels that some staff

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[1] All names used are pseudonyms.

would attach to patients when discussing them in the clinical meetings in a way that implied a definite distance between patients and staff,

> "One thing that does strike me a little bit is that … [some] clinicians tend to talk of patients in slightly derogatory ways. … It strikes me that there's a bit of in-group identification".

He later said that he believed this reflected the underlying attitude of staff to patients:

> "Clinical reasoning is guided by, to a certain degree, your belief in the nature of humankind, and you believe that people are basically honest … whereas other people believe that there are people who are genuinely dishonest".

John explained that this attitude of clinicians towards patients in general, and in particular, affected their clinical reasoning. It would seem that health professionals who believed that people were fundamentally dishonest would bring a "hermeneutics of suspicion" to bear in their clinical reasoning, an attitude of disbelief and scepticism when interpreting patients' stories.

The second insight came from another psychologist, Penelope, who spoke of advice she had received from a more senior colleague when she was a student. The advice was that it was important to acquire some facility in medical terminology in order to converse with medical staff, but at the same time too much might prevent her from being able to relate to patients:

> "Someone argued that you don't want to get that same expertise of language because you're also trying to look at the understanding from the patient's level … but at the same time you shouldn't be totally ignorant about it. So they use the analogy of it's like knowing enough of a foreign language to be able to travel in a foreign country, and I remember reading that at uni and thinking that's good enough".

Penelope also spoke of the need for patients in the clinic's rehabilitation program to learn some of the terms of cognitive behavioural therapy so that they could understand and collaborate with the program's staff. This reasoning contrasts with the situation mentioned earlier in which some doctors are described as using obscure medical language to erect a barrier between themselves and the patients. The clinic's rehabilitation program aims to empower patients to change the ways they react to and manage their own pain.

This requires not only a high level of cooperation from patients, but a willingness for patients to take the initiative in their own pain management. The clinic's rehabilitation program is not a treatment administered to passive patients, but an attempt to enable patients to be proactive in managing their pain, providing them with a variety of cognitive tools to do so. However, Penelope explained that although many patients were willing and able to accept the rhetoric of the clinic they also needed to actively apply it in their own lives, and this was where the difficult part of her job lay:

> "it's the application, thinking and doing it that makes the difference".

The third insight came from a physiotherapist, Margaret, who mentioned the impact that key words could have on patients, frequently in a negative sense. Telling patients that they had simple degenerative changes could be taken by patients to be disastrous news:

> "We might say it's just degenerative changes. Don't worry. … they're thinking that degenerative changes is like my house, that termites are in it and it might collapse".

This illustrates the powerful influence of words and the way in which patients can interpret them. For the clinic staff an important clinical reasoning task is to identify such beliefs because they can, understandably, seriously interfere with attempts by clinicians to encourage patient participation, for instance, limiting physiotherapists' capacity to encourage patient mobility. It is clear from observing the work of the clinic that most of the patients suffer from chronic pain of several years standing, and that many have received a number of differing opinions as to the causes of their pain. One of the clinic doctors, Carl, also discussed this issue and said that patients tended to believe the worst case scenario:

> "they generally totally believe one of them [opinions previously given], and interestingly, they'll believe the worst opinion".

7.2.1 Commentary

In Vygotsky's terms, the medical students were aware of the need to master the basic cognitive tool of the jargon of medicine and its specialties. They realised that once the jargon was mastered a great deal of the day-to-day business of understanding and practising medicine would be mastered with it. This is not simply a matter of learning words, but learning when and how to use them in a professional manner, and that only came with some clinical experience. This could be seen as a process of internalisation of

learning skills mastering practices for oneself by means of internalising the actions/practices performed in conjuction with more competent others It is clear that the work in the multidisciplinary clinic is strongly dialogical in Bakhtin's terms. The staff were keenly aware of the extent to which their therapeutic relationship with patients depended on the ongoing dialogue they established, especially so in the rehabilitation program. Patients, it seems, would seize upon key terms such as "degenerative changes" and put the worst possible interpretation on this. A large part of the clinical reasoning in the clinic was seeking out the beliefs that patients built up around such key terms, and the degree to which these beliefs then led into a spiral of deterioration. There was a need to be sensitive to this aspect of language in the world of patients, and the ways in which whole narratives could be directed in self-destructive ways (or with help redirected in self-constructive ways) based on the interpretation of certain words. To this extent it is clear that the meanings of these key words can be multilayered and contingent on context. The data also demonstrated that words can be abused and incorporated into a dialogue that puts up a barrier between patients and health professionals.

7.3 Categories/Models

Diagnoses and management plans are categories. A large part of clinical reasoning in the medical world is deciding on a diagnosis, that is, the category of disorder a particular patient is suffering from. This was something to which the medical students in particular gave a lot of thought, as it was a skill they were still in the process of acquiring. PBL was considered very helpful in this regard, with numerous students saying how the PBL process helped them when trying to assess real patients. For example, Christopher said:

> "this year I've realised how helpful they [PBL tutorials] are because it gives you that approach to thinking about things in categories".

Many students, like Christopher, also appreciated the importance of being able to have a category system:

> "the big thing I realised this year [is] it's about having some sort of structure to base your knowledge on".

From observing the PBL tutorials it was quite clear to me that the category system used is predominantly the biomedical model. Within this model the students are encouraged to think in terms of clinico-pathological and physiological systems and to categorise

disorders in this way. One student, Jim, had been a speech pathologist before coming into medicine and he compared the approach the two professions had to assessment:

"all of our [speech pathology] assessments were based on standardised assessment tools that we applied and then basically you categorise the patients".

More than one mentioned the "surgical sieve" which is a mnemonic device for systematically thinking through and organising clinical reasoning according to pathological categories. For example, George said:

"as you go through the weeks and months of PBL you start as a group to form a system by which to think about diagnosing patients. So you run through a surgical sieve."

The students mentioned other ways of organising categories which complemented the surgical sieve and could be used in conjunction with it. Most organisational systems were slight variations on each other. For example, George, talking of a real patient, added that he also categorised problems into three groups: primary problems, risk factors and co-morbidities:

"first of all the primary problem that's giving him [the patient] distress … then we need to look at all of the risk factors … running through all the co-morbidities that he might have".

Christopher spoke of categorising problems into acute and long-term, and also deciding which could be grouped as co-morbidities. Kevin spoke of categorising problems in terms of critical and common:

"you make sure you get the critical ones and you get the ones that are most common in society".

Alexandra continued with

"so you have your active problems … and complications that they've had and then go through your background problems".

David also discussed the issue of multiple problems and how they might be connected when he said:

> "you take each problem and put it separately, first thinking [of] them as separate problems … and then somehow at the end trying to collate everything into one problem, thinking how they're interrelated".

In order to do this at least one student, Christopher, who had a scientific biomedical background, admitted that he had gone to the trouble of completely reorganising his knowledge so that he could use it more easily within the diagnostic system of the biomedical model:

> "I've gone through my old notes and progressively thrown them out as I've rewritten them into a different format … now I approach learning the diseases in the same way that I would … a patient".

Clearly, the categories and category systems that scientists use to organise their knowledge can be significantly different from the categories that health professionals use, even though they are supposedly dealing with the same knowledge base about the human body. Practice has a powerful influence on how the knowledge required for that practice is conceptualised and organised. Christopher's words imply a belief that clinical knowledge needs to be organised more on a case-based system. It can be argued that the relationship between knowledge and practice is an example of a dialectical/dialogical pair.[2] Practice cannot proceed without adequate knowledge, but the practice determines the form that knowledge will take.

Another insight into categories also came from Christopher. He related the following incident:

> "a doctor who called up saying that he had a 40 year old Papua New Guinean man with severe chest pain and thinks that he's having a heart attack … he called up a more senior doctor and he [the senior doctor] said 'give me one reason why it's not tuberculous pericarditis?'"[3]

This is a very good example of the way in which context can have a profound effect on categorisation.

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[2] As discussed in Chapter 4
[3] Tuberculosis is relatively common in Papua New Guinea but rare in Australia.

The clinic staff had other insights into categorisation. Simon (doctor) spoke of three main categories that were suitable for assessing chronic pain patients:

> "I think in three components. One is nociceptive … and a neuropathic[4] component … then often I will put in … psychosocial contributors".

William (doctor) used slightly different categories and taught them to more junior doctors coming to work in the clinic. It was also clear that management would be considered within the same categories:

> "if they can give a diagnostic formulation (i.e. biological, psychological [and] social things contributing to the person's pain) they can then go on further to the management strategies … [within the same] biological, psychological [and] social realms".

John (psychologist) spoke of his assessment in different terms, reflecting his psychologist's perspective:

> "the assessment is to try and determine how this individual thinks and feels and behaves in relation to his or her pain problem, trying to identify aspects of those three domains [thought, feelings and behaviour]".

The pain clinic is well known as an advocate of the biopsychosocial model, and all the staff accepted this as superior to the biomedical model for their work there, because the vast majority of the patients were suffering from chronic pain and usually had major psychosocial issues to deal with. Carl (doctor) spoke of making the mental switch from anaesthetics (predominantly preoccupied with acute problems) to pain:

> "you very much have to switch into the chronic model".

However, when assessing new patients, the doctors clearly saw their job as pursuing the biomedical model and looking for treatable, organic causes of pain, even though they acknowledged that by the time most patients present themselves at the clinic all the organic options for curing people of pain have usually been exhausted. They believed that it was still their duty to scrutinise new patients for any organic cause of pain that might have been missed, especially serious causes, the so-called "red flags". Carl said:

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[4] Nociceptive pain is "conventional" pain due to noxious stimuli being transmitted through healthy nerves. Neuropathic pain is due to damage to the nerves themselves. It is quite different in character and responds to different medications.

"I think it's important to confirm the diagnosis [because] they [the patients] often haven't got a pain diagnosis that's … been in any way accurately ascertained, and it's certainly rarely been accurately communicated to the patients".

This position was reiterated by several members of the clinic staff. New patients frequently arrived with great confusion about what precisely their problem was, beyond having pain. Thorough intensive assessment and, finally, being given a clear statement as to the nature of their problems and options for management were frequently cited as therapeutic in themselves for many patients. In other words, it seems that patients, as well as staff, felt the need for a clear category for their problem. Having some kind of definite label, seen as the result of in-depth assessment, was enormously helpful to many of the patients.

However, from my observations of the work in the clinic it was clear that a definitive clinico-pathological diagnosis, located in a distinct anatomical structure, was frequently not achieved. A diagnosis of non-specific low back pain, for example, was often the final diagnosis. This is not a criticism of the clinic or any of the staff there. It seems to be in the nature of chronic pain that a definitive clinico-pathological diagnosis is often not possible. If a patient's management was to be the clinic's rehabilitation program then it was not judged appropriate or fair to subject the patient to exhaustive investigations in order to establish a diagnosis. However, if an invasive intervention such as a dorsal column stimulator or intrathecal pump was envisaged, then a more definite diagnosis would be pursued. Gareth (doctor) spoke of this:

"we generally say this patient has got low back pain, or we might be as specific to say of musculoskeletal origin … but I guess if you're thinking about a pump or an invasive procedure we are quite specific … so you need to be able to say this is neuropathic pain predominantly in the legs. So it would be more appropriate for a dorsal column stimulator".

William (doctor) was also well aware of this situation:

"the pragmatic situation is that for the majority of patients that we see, we are unable to come up with a mechanism. So whilst I emphasise mechanistic-based practice, the pragmatic situation is that we can't be specific about a lot of the mechanisms that underlie pain. So I think it's good to maintain a mechanistic

approach … but in the end the distressed person who has come to see you, they want answers, they want pain relief, they want solutions and so you've got to deal with that".

The doctors were well aware that their biomedical assessment of new patients was quite different from the assessments made by the psychologists and physiotherapists. The doctors saw the assessments done by other health professionals as being more functional in orientation, with a focus less on what was causing the patient's problems and more on what patients could and could not do in their lives. Carl (doctor) said:

"my examination's more focused … on the medical issues and less on functional issues".

The reason for the contrasting assessments was seen by one doctor (Simon) as being driven by the management options offered by the clinic. A large number of patients, the majority in fact, were considered suitable for the clinic's rehabilitation program, which is founded on principles from cognitive behavioural therapy. As Simon said:

"because in one sense you can almost apply cognitive behavioural therapy without a [pathological] diagnosis … so there is a need for a structural, pathological diagnosis".

The doctors saw their role as providing a counterbalance to the functional assessment of the other health professionals. One doctor, Gareth, gave a detailed example of a patient seen in the clinic. The patient's behaviour was bizarre and it had been tempting to attribute this to a non-organic (psychological) cause. However, it eventually emerged that there was a definite, and very serious, organic cause. As Gareth said:

"It just brought it home – always rule out the organic pathology first and go hard with it".

Carl (doctor) was well aware of the need for a balance between the clinico-pathological and the functional approaches, and recognised that this, in a sense, isolated the doctors in the assessment team:

"that's the medical job to decide … is it appropriate to purely view this patient as a functional problem? … you have to recognise that you are probably the sole … person in that group who … has the obligation … to go and do that for the patient and chase the diagnosis".

It can be argued that the two approaches together are an example of a dialectical/ dialogical pair. Neither a purely clinico-pathological diagnosis nor a functional diagnosis is sufficient on its own in complex chronic cases. Both are needed to ensure that these patients have been comprehensively assessed. In the dialogical pairing of the two, neither assessment is lost and each gains from the strengths of the other. In my observations of the work of the clinic, and especially the clinical case meetings, it was clear that nobody saw the two approaches to assessment as contradictory, and it would seem that this is an example of the whole being greater than the sum of its parts.

At least one of the clinical psychologists considered that a large part of their assessment task was to decide whether patients were suitable to benefit from the clinic's rehabilitation program. Penelope (psychologist) said:

> "that seems like that's what the meeting is for … that's true because obviously we [psychologists] can't assess their suitability for other treatments. So yes, it is are they suitable for the program or not … do we think they're at an appropriate stage for this".

It seems that management options strongly drive the assessment practices in the clinic. This is not a criticism of the clinic. It can be argued that this is true for every health professional engaged in clinical reasoning. The importance of establishing a diagnosis, and the detail in which it is described, are in large part determined by the options available for management. If a health professional is in no position to offer suitable management then it makes little sense to go to great lengths to establish a diagnosis beyond what is required to refer the patient to someone else who can. The pain clinic is well supplied with staff who can provide the rehabilitation program. The task of doing so falls mainly on the psychologists, physiotherapists and nurses, although the doctors have some input. Under these circumstances it is entirely appropriate to intensively assess the physical and psychological status and readiness of patients who might benefit from the program and to devote attention to how other interventions might be integrated with the program. There seems to be a dialectical/dialogical tension between diagnosis and management, with each one, in a sense, determining the other. The management options determine, to some extent, the diagnostic categories that can be found, and the detail with which they will be described.

In discussion with some of the psychologists about this issue it was clear that some were unhappy with this notion that management somehow determines diagnosis. On reflection this is probably because they believe that their assessments are completely objective and free of bias of any kind. This, in turn, is probably due to an underlying belief that clinical assessments are like holding up a mirror to the patient, simply reflecting what is already "there". This is similar to the widespread belief that the mind is a mirror that we hold up to nature, and the categories of things that we perceive in the world are already inherent properties of nature (Rorty, 1979). Certainly the medical student, Jim, who had been a speech pathologist, spoke of speech pathology assessments as attempting to be objective:

"to be good at assessment in speech pathology you'd have to follow the protocols correctly so that you're not biasing your results".

This also seemed to be a belief of the psychologists who used a number of psychometric questionnaires routinely with all patients. However, it also emerged that psychometric questionnaire results needed to be interpreted within the context provided by information from clinical assessment. John (psychologist) discussed this issue:

"you've just met with them [the patient] and spoken to them and had an hour's discussion with them, where they stayed on track, and yet according to this questionnaire they should be lying in a vegetative state, catatonic".

However, John also had the hermeneutic skill to understand why there might be such an inconsistency:

"So it's expressions of need for help that come out of these things [the questionnaires]".

It seems clear that, in practice, the psychologists frequently did not use the psychometric questionnaires simply as mirrors reflecting particular aspects of the mind, but realised that they were instruments that provided information in need of interpretation. Accepting that management options strongly influence what diagnoses can be found implies accepting that diagnostic categories are, to an extent, constructed and contingent rather than discovered. This is a fundamental philosophical challenge to the assumptions of cognitive psychology. This is because cognitive psychology has always strived to imitate the natural sciences and attempts to accurately and objectively measure mental entities, as if they were like objects in the material world, independent of human interpretation and concerns.

Another aspect of categorisation comes out of the rehabilitation program. The program staff consider that an important part of their job is negotiation with individual patients to decide the functional goals of the program. The functional goals also come under the heading of categories in clinical reasoning. These goals need to be, as far as possible, practical and concrete aims that can be measured and assessed at the end of the program, as well as being achievable and beneficial to the patient. Typical goals might include medication reduction or attainment of a specified exercise tolerance. Wherever possible these goals are related to the individual patient's lifestyle. The intention is to make the goals relevant to the patients, and therefore encourage them to comply, as patients can then presumably see the personal advantages of compliance.

Goals have the function of providing a definite target for both patients and staff. Penelope admitted that without such concrete targets there was also a danger to the staff of burnout, as otherwise it would be difficult to decide if the program had achieved anything:

> "we always try and define the parameters of what we can do. We can't miraculously change people's lives, and I think it puts too much of a burden on us if we think we're going to be able to do that. If we think of ourselves as rescuers I think that places us under too much stress. If we think of it in functional, practical terms … we can help them [patients] make some steps towards their goals. Then I think we're going to get much more satisfaction ourselves out of our role".

Categories and category systems clearly provide a foundation for clinical reasoning in a number of different ways, from diagnosis to ensuring the mental health of health professionals.

7.3.1 Commentary

The data collected in these studies can be interpreted as supporting the weak form of the Sapir-Whorf hypothesis (Lakoff, 1987), which holds that categories shape and strongly influence the ways in which people think. It is almost inconceivable to try to visualise how any health professional could decide on diagnosis and management without using some form of category system. To this extent, categories shape and direct thought. Categories help provide a frame of reference (Goodman, 1978) within which problems

can be conceptualised, and this data supports Lakoff's (1987) work on categories, with his contention that category systems shape understanding and behaviour. The medical students realised that to master the knowledge base of medicine they had to recategorise their existing scientific knowledge into a new case-based structure that lent itself to reasoning about clinical problems as they were experienced in practice. Purely scientific categories frustrated their attempts to reason through real clinical problems.

The pain clinic health professionals had found that utilising Engel's (1977) biopsychosocial model enabled them to engage meaningfully with the chronic pain patients and the many complex problems that the patients brought with them. The enactment of the biopsychosocial model in this particular clinic had a distinctive Bakhtinian dialogical aspect to it, in the sense that there were two discourses in dialogue with each other. The doctors adopted a more clinico-pathological discourse, in contrast to the more functional discourse of the allied health professionals. Recent literature has called for a move to a biocultural model, based on the argument that the term "biopsychosocial" is becoming somewhat hackneyed, and fails to emphasise the role of culture (Morris, 1998). Certainly it can be argued that the approach to the psychosocial in the pain clinic is still reductionist, due to the dominance of cognitive psychology and its insistence on seeing the psychosocial in terms of discrete variables and subvariables. There is also a dialogical relationship between management and diagnosis, with one determining the other.

7.4 Metaphor

As explained in Chapter 4, I accept the view that thought and language are fundamentally metaphorical. However, it can be argued that words and categories are more foundational. A simple view of metaphor is that it enables us to conceptualise an abstract category in terms of a more concrete category, as in the MEDICINE IS WAR metaphor referred to in an earlier chapter. From this viewpoint, metaphor presupposes categories which can be seen in terms of other categories. However, a more fundamental view of metaphor begins with the semiotic notion that because all language (words/utterances) is a means of expression, all language is necessarily metaphorical from the start (Franke, 2000).

Numerous metaphors were apparent in the interviews. Some were explicit whereas others were implied. The more common and more important metaphors will be described. These tended to fall into groups. There were metaphors that saw clinical assessment as different types of looking (at the patient/problem). Other metaphors framed assessments in terms of constructing pictures, or finding patterns, or processing lists or proformas. Some metaphors that can be thought of as base metaphors underlie the conceptual basis of health care practice, and other metaphors give insight into how some of the informants conceptualised thinking. These are summarised in Figure 7.1.

Many metaphors of clinical reasoning were expressed in terms of vision and pathways. The majority can be summarised as ASSESSMENT IS LOOKING. This had a number of variations such as ASSESSMENT IS NAVIGATING A PATHWAY. For example, Mary (student) said:

> "I proceeded to ask her down that line".

Gareth (doctor) spoke of closing off particular lines of inquiry as assessment proceeded:

> "don't go down that corridor".

Another student, Jim, felt that medicine had quite a different approach to assessment to speech pathology:

> "to be good at assessment in speech pathology you'd have to follow the protocols correctly so that you're not biasing your results … but in medicine you get to follow paths that you want during your assessment and following clues".

Elsewhere he also said:

> "medicine … lets you explore to a greater extent".

For example on finding that a patient had diabetes:

> "that opens up a whole new channel of questions".

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ASSESSMENT METAPHORS

        ASSESSMENT IS LOOKING

        ASSESSMENT IS NAVIGATING A PATHWAY

        ASSESSMENT IS FOCUSING (THROUGH A MICROSCOPE)

        ASSESSMENT IS DETECTIVE WORK


        ASSESSMENT IS LIST PROCESSING

        ASSESSMENT IS COMPLETING A PROFORMA


        ASSESSMENT IS MAKING A PICTURE

        ASSESSMENT IS FINDING PATTERNS


MIND/BRAIN METAPHORS

        THE MIND IS THE BRAIN

        THINKING IS ACTIVITY IN THE BRAIN


MISCELLANEOUS

        LEARNING IS TRAVELLING


BASE METAPHORS

        THE BODY IS A MACHINE

        LIFE IS A JOURNEY
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Figure 7.1 Some of the more common metaphors and the groups they formed.

The students reported that examiners also appeared to use the metaphor of navigating/exploring a pathway. In their feedback to Jim, after his formal long case examination, the examiners apparently said:

> "you're very organised but you've got to get to the point now where you can lead us to where you want to go. You can be a bit more specific".

This appears to mean that above and beyond the comprehensive assessment the examiners wanted the exploration and navigation of his clinical reasoning to be more purposeful and more decisive. One way of interpreting this is that the examiners wanted to see a more definite narrative structure and flow to the case presentation. Jim also referred to this when he said:

> "the difference between good presenters and poor are the ones that could make it look like it flowed nice and smoothly".

The flowing notion can be seen as applying to the ASSESSMENT IS NAVIGATING A PATHWAY metaphor. Alexandra seemed to be well aware that examiners wanted a good flow, and at the same time she realised that the direction and flow would also influence the questions she would be asked at the end of her presentation:

> "pick your direction and go down that direction. So you're picking your issues and you're directing the discussion the way you want to have it go … they have to be the important issues, but also things that you're comfortable to discuss as well".

In other words, Alexandra knew that the right flow and the right emphases in her case presentation could encourage the examiners to ask questions she was happy to answer.

Other variations on the navigation metaphor included Carl's (doctor) comment that:

> "chasing the diagnosis any harder is inappropriate".

In this context he was referring to the ability to recognise when the pursuit of a definitive diagnosis is no longer appropriate in the assessment of chronic pain. Janet (doctor) referred to:

> "different pathways for different situations".

This appeared to mean that acute and chronic conditions required different approaches to clinical reasoning. There were rarely disagreements between staff during clinic meetings, but when there were they were spoken of in exploratory terms. Gareth (doctor) said:

> "sometimes you just accept that there's an impasse and you're going to go that direction and I'll go this direction".[5]

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[5] Impasses were ultimately resolved by the doctor whose responsibility it was to go back and see the patient. However, all staff emphasised that impasses were rare.

In the clinic the staff also applied this metaphor to the patients, implying that patients used it too. Simon (doctor) spoke of patients frequently being much happier after hearing the results of the intensive assessment because:

> "at least they go home at the end of the day with a clear idea of where they are going".

Therefore the metaphor does not appear to be restricted to the health professions, but seems to be shared by the wider public. Some participants used more than one metaphor to express the same idea. This would enrich the rhetorical force of what they were saying. For example, Simon used the ASSESSMENT IS NAVIGATING A PATHWAY metaphor followed soon after with ASSESSMENT IS MAKING A PICTURE metaphor. Continuing his description of patients' reactions to hearing the results of the assessment, Simon said:

> "they don't mind coming for a day if it means having a clear picture at the end of it".

The metaphor that ASSESSMENT IS MAKING A PICTURE occurred frequently, and a common variant was ASSESSMENT IS FINDING PATTERNS. Alexandra (student) said:

> "you're trying to paint a picture of a person in the long case".

George (student) also said:

> "you have patterns in your mind … five or six patterns of headache … you're looking to find something that fits a pattern as opposed to excluding pathologies".[6]

The clinic staff used the picture/pattern metaphor as well. Penelope (psychologist) said:

> "you're coming up with a picture".

Margaret (physiotherapist) spoke of patients:

> "locking into a[n unhelpful] pattern of thought"

This was seen as preventing the patients from coping with pain, and there was an urgent need for clinic staff to find out about unhelpful thought patterns so that they could address them as part of the management.

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[6] In this case George was discussing Eastern forms of medicine. George had been trained in both traditional Chinese medicine and Indian Ayurvedic medicine. Eastern and Western medicine will be discussed later.

Carl (doctor) also mentioned:

"patterns will then emerge".

In this case he was discussing multidisciplinary assessment, giving an example of how patients' reactions to the intensive assessment can give useful information:

"if they've seen a physio after me [and his doctor's physical examination] and they're in too much pain to move for the physio that tells me they've got very low activity tolerance".

Later, Carl went on to mention:

"the pattern of those illnesses"

meaning that the assessment of chronic pain patients involved forming a pattern from all the findings both organic and psychosocial. The biopsychosocial model encourages health professionals to formulate all the problems affecting patients rather than come up with one definitive diagnosis as in the biomedical model.

Another metaphor was ASSESSMENT IS DETECTIVE WORK. Jim (student) spoke of:

"trying to pick up clues".

Margaret (physiotherapist) used this metaphor when she spoke of her clinical reasoning in the clinic:

"and so I'm picking up clues about why they haven't followed through on the exercise program".

This could be seen as a variant on both the ASSESSMENT IS FINDING PATTERNS and ASSESSMENT IS NAVIGATING A PATHWAY.

A metaphor used by nearly all the medical students was ASSESSMENT IS LIST PROCESSING. The PBL process as taught to the students explicity encouraged them to generate a list of differential diagnoses as soon as they were presented with a clinical problem, and to stop at key points in order to reflect on the list and refine it using the information gathered. Key points would typically include immediate presentation, after the history, after the physical examination, and after any special tests have been conducted. Joshua (student) said:

"I come up with a differential [list] almost immediately".

Joshua went on to give an example:

> "if I hear [that] somebody [has] abdo pain I've got a list of … common problems
> that people have and things that you have to ask them and be aware of".

For the students, the main goal, following the biomedical model, was to reach a definitive
diagnosis. Mary (student) said:

> "the way I refine them [lists] is by ruling things in or out".

She later gave a concrete example of assessing a real patient saying:

> "I thought her shortness of breath … was due to a chronic lung disease like
> emphysema which [is] what I found in my physical … ruled out the cardiac causes
> definitely".

David (student) spoke of:

> "generating the list immediately"

as soon as he knew the basic complaint that a patient had back pain. David also spoke of:

> "you always have … in the back of your mind that other list".

In this context, which was assessing people with chest pain, he was referring to looking
for common causes first, but always being aware that rare causes might be involved and
that he needed to be aware of these, and the rare causes made up the "other list".
He followed this with a slight variation on the metaphor:

> "you just put it [rare cause] lower on the list".

David went on to describe his long case exam. An issue with long case exams is that
patients frequently know what is wrong with them and the medical students quite
naturally ask them, and David was no exception. However, he described his assessment in
list terms:

> "you don't necessarily believe them [patients] 100%. You always have a suspicion
> and just leave that [the diagnosis the patient claims to have] lower down on the list
> … you keep that top space open just in case".

David appears to be no fool. He realised that patients can be wrong and that it was still up
to him to do a thorough assessment and find a diagnosis that would take the "top space"
on his list.

Christopher too spoke of list refinement:

"if you've advanced [through the assessment] you can chop some things off your differential [list]".

Alexandra gave a concrete example from working in the casualty department. A senior doctor would give her the triage sheet (filled in by a nurse as soon as a patient arrives) and ask Alexandra to generate a list of problems the patient was likely to have based on the triage information. The triage information would include only a brief statement of the patient's complaint together with personal details such as age and gender:

"He'd say 'this is the triage sheet. What do you think?' … So you're already forming a problem list and putting together some diagnoses".

A related metaphor has an even greater focus on the actual process of assessment. This is ASSESSMENT IS COMPLETING A PROFORMA. A large number of participants spoke of having something like a mental checklist that they used to ensure that all the appropriate questions and examinations were done in a manner that guaranteed comprehensive assessment. For the students there seemed to be universal agreement that the PBL format provided a good basis for such checklists, as Christopher said:

"now we think in terms of the PBL structure and that's a useful way for doing the job".

George spoke of the importance of structure:

"the most important thing was having it structured so that you didn't forget anything".

George had a mental checklist based on physiological systems:

"I tend more to run through [physiological] systems in my mind, now that I have all the systems more or less in my head".

This was in large part because:

"I understand their anatomy and physiology and the more common pathologies that go along with them".

George seemed to be describing a mental checklist with a great depth of meaning behind it, which presumably allowed him to remember the things he needed to cover, and to make sense of his findings as he went along. In his description of his assessments on the wards, George gave a little more detail about his checklist:

"history of presenting illness, past medical history, medications, allergies … so I'd have almost a proforma to follow through, and that way I didn't leave out any major area. I was sure to have asked some sort of question about each major heading".

In the clinic the staff mentioned thinking with similar checklists. These varied across the different health professions. John (psychologist) spoke of

"the checklist that's in one's head about the areas that one needs to cover … it's a proforma in one's mind of asking the patient how they would describe their pain".

Penelope (psychologist) also spoke in similar terms:

"I've got a structure in my mind of what I go through".

William (doctor) mentioned:

"I've got a bit of a checklist in my mind … in daily practice if you see a person you can go through and tick the list … I have that biological list … in the back of my mind".

A less obvious metaphor that emerged, but one which plays an important part in much clinical reasoning is THE BODY IS A MACHINE. Some participants used language that clearly implied this metaphor. Jim (student) related that the early PBLs were very oriented to drawing out the pathological mechanisms underlying disorders:

"in the initial PBLs it was more important that we spent more time on the actual underlying mechanisms … we spent a lot of time trying to understand what is actually happening here, the underlying pathophysiology of the problem".

The same language concerning machine-like mechanisms of pathology and body function was present in the clinic. For example, William (doctor) said:

"I emphasise mechanistic-based practice".

However, the staff in the clinic, including William, realised that a mechanistic-based approach was inadequate for many patients. This seemed to be linked to a number of reasons. Firstly, it was frequently impossible to establish a pathological mechanism that could be corrected. Secondly, in many cases the original pathology had healed as far as it could but patients were left with secondary changes, in both peripheral and spinal cord nerves, that predisposed them to ongoing pain. Thirdly, many patients also had secondary psychosocial problems which seriously complicated their management.

The BODY IS A MACHINE metaphor implies that cure is always attainable, but this is a problem. With machines, humans know that in principle at least it is nearly always possible to repair a machine, even if this means replacing parts. The metaphor seems to be widespread in Western culture, with the public as well as health professionals accepting the metaphor. It certainly seems to be an underlying metaphor in my profession, dentistry. Most dental problems, e.g. toothache, are acute and lend themselves to the metaphor. A patient with toothache visits a dentist who "repairs" the underlying mechanism with a filling or an extraction, for example. This removes the problem and patients can leave knowing that they have been "fixed". The growing number of successful joint replacements in the Western world are also examples of procedures which comply with the metaphor. The enormous and growing success of the health professions over the last century and beyond has been in the management of acute problems, which can be seen as substantiating the metaphor. However, this success has brought with it a problem. The number of people with chronic problems is on the increase, and chronic problems lend themselves less easily to the metaphor. Certainly pain has usually been perceived as an acute problem which should be curable, so there is enormous frustration for patients and health professionals when it defies cure, if they persist in using the machine metaphor.

The clinic staff spoke of spending a great deal of their time and effort in persuading many patients that a cure was not feasible. It seems that many patients, presumably following the BODY IS A MACHINE metaphor, believed that any pain was a sign that "damage" was still occurring, and the longer the pain persisted then the more the damage accumulated. Many of the clinic staff saw it as one of their prime duties to educate patients away from such beliefs. Tara (physiotherapist) spoke of patients

> "just getting the message that it's OK to move, that yes, there is a problem there but it's not going to cause you more damage".

Margaret (physiotherapist) reiterated this:

> "for some people they just need to know that pain doesn't equal damage any more".

Margaret was also well aware that this was not always easy:

> "[moving away from] that thought shift that pain equals damage … is a very hard thought shift to make because it's almost counterintuitive that pain doesn't equal damage".

My interpretation of this is that the metaphor is so ingrained that it comes to be obvious.

From my observations of the clinic work it seems clear that the staff are frequently trying to work with a different metaphor, especially those staff engaged in the rehabilitation program. The metaphor that suggests itself is LIFE IS A JOURNEY. The program is designed to try to equip patients with various strategies and plans for dealing with pain and getting on with life. The equipping is done in several ways, which need to be customised for each individual patient. For example, one way is medication reduction and, where possible, medication elimination. Most patients are on high levels of analgesics which give little pain relief but do cause side-effects. Patients are also taught to identify their unhelpful thoughts about their pain which can sometimes be so bad as to be described as catastrophising, and which then become disabling thoughts, preventing normal activity. The patients are taught relaxation techniques, how to pace themselves, how to cope with flare-ups in pain, and they are encouraged to begin exercising and moving as normally as possible. The underlying message for the patients seems to be that they can live a relatively normal life despite pain, and that life can go on. It would seem that by adhering to the machine metaphor and searching for a cure many patients have ended up on a downward spiral of increasing disability. The program seems to be offering patients the alternative metaphor of life continuing its journey despite pain.

Another metaphor that emerged was to do with learning. The term "self-directed learning" suggests the metaphor LEARNING IS TRAVELLING. This was clearly the way some participants thought of their learning. The students were aware that their course expected them to take on self-directed learning. The problem that some had, particularly in the beginning, can best be described as "getting one's bearings". Some felt that the course should have provided a little more direction for them at the start, as the world of medicine was so new and strange they wanted some sense of how far they were expected to follow up subjects and which were more important. Jim complained that in the early years,

> "there was a lot to incorporate and you didn't know how far to take it … that was the hardest, knowing initially how far to go".

Alexandra said:

> "in the early days you don't know anything and so it's good to be guided, and that's one of my big problems with the course, is being self-directed, it's a bit hard to know where to start and where to direct yourself".

Alexandra also mentioned a senior doctor she came across in the early part of the course:

"there's got to be a bit of direction at the beginning to tell you which way to go down, and so he said 'I'm happy to do that'. So the time you're at his hospital he puts on weekly tutorials for everyone who's there and he'll talk about anything you like, and it's great".

A metaphor about thinking and the mind that recurred a few times was THE MIND IS THE BRAIN and closely related was THINKING IS ACTIVITY IN THE BRAIN. David (student) spoke of:

"actually using your brain".

Joshua (student) several times made comments such as:

"I want to work the problem through and make my brain think about it".

In the clinic, Victor (dentist) wanted to emphasise that his assessment was as much to do with patients' thoughts and beliefs as with their mouths, saying,

"you get to find out what's going on in the person's head or brain compared to what's going on in the jaw".

Carl (doctor) reflected on the trouble medical students have trying to make sense of all the information they obtain about patients:

"all the stuff in the books is floating around in their heads … and they're trying to mesh all that in their heads in one go".

Here, the metaphor seems to be a slight variation: THE MIND IS A MACHINE.

Other metaphors were also apparent. These included seeing clinical reasoning in terms of digging or crystallising. For example, one evident metaphor was ASSESSMENT IS FOCUSING (THROUGH A MICROSCOPE). There were many examples of people talking of focusing or sharpening their vision, which is what one does when examining a slide under a microscope. For example, Joshua (student) said:

"when you go in to see a patient you're fairly focused on what you're looking for",

and Margaret (physiotherapist) spoke of the effect of a multidisciplinary setting:

"it causes you to be a bit sharper in your reasoning".

7.4.1 Commentary

Metaphors seem to play a fundamental role in clinical decision making. They are a good example of Vygotskian (1978) cognitive tools. It is not likely that so many informants developed similar or identical metaphors completely independently. These metaphors are provided by the community of practice that makes up each health profession, and some are fundamental (general public) ways of thinking and communicating. Metaphors provide a foundation for higher mental functions such as clinical decision making. They are socially formed and culturally transmitted, along with the language of the profession and its knowledge base. The staff in the clinic seemed to be attempting to dialogically combine two different base metaphors, that of THE BODY IS A MACHINE and LIFE IS A JOURNEY. This had a profound effect on how they conceptualised clinical problems. As Vygotsky wrote, "If one changes the tools of thinking available … [the] mind will have a radically different structure" (Vygotsky, 1978, p. 126). This different structure of mind gave staff the ability to cope with the myriad and complex problems of patients with chronic pain.

The expressions that reveal the metaphor of equating the mind and the brain are of particular interest (THE MIND IS THE BRAIN). This is because to many people in the Western world such expressions seem to be expressing a literal truth, and they are an example of a metaphor now so deeply embedded in the culture and the language that it is difficult to see that there is a metaphor present at all. It is certainly true that thought and mind must have a conscious and working brain in order to exist in the first place. However, as many have argued (e.g. Bennett & Hacker, 2005; Harré & Tissaw, 2005; Toulmin, 1979), the neurons and their activity only provide the substrate for the mind and thought to occur. They are not necessarily synonymous. It is similar to the misguided reductionist argument that because living systems are entirely dependent on matter, we can completely understand living systems by restricting our study of living things to physics and chemistry.

In earlier chapters I presented the work of many scholars, such as Vygotsky (1978), Wittgenstein (1958) and Bakhtin (1986), who argued for a conception of mind in intersubjective and dialogical terms rather than being purely intrasubjective, and seeing the mind as a boundary phenomenon. Seeing the mind as identical with the brain is a

metaphor and an assumption that has become widely accepted as reality in the Western world. It also causes great confusion as it is an example of a category mistake as described by Ryle (1949). A Wittgensteinian analysis of the ways in which we use language reveals that THE MIND IS THE BRAIN metaphor is only a problem due to confusions in language.

From Wittgenstein's viewpoint, words such as believing, thinking, and decision making can be attributed only to whole persons, not to parts of a person such as the brain. The language games from which these words originate mean that such words can only make sense when the words are used in relation to people, not brains. It is part of their logical grammar to be used only in connection with whole people. The confusion has been compounded in the twentieth century by scholars such as Chomsky (1969), with his conception of a language acquisition device within human beings, and Fodor (1975), with his notion that all humans have an inherent mental language, sometimes referred to as "mentalese". These notions, which encourage us to speak of persons as being synonymous with their brains, invite the kind of confusion which is rife within the cognitive literature of the late twentieth century. Essentially, THE MIND IS THE BRAIN metaphor causes confusion by prompting people to look for brain functions and operations that cause phenomena such as clinical decision making. However, the criteria for deciding what is clinical decision making, and what constitutes good or bad decision making, are not neurological, but public and social. Therefore, inquiry into the nature of a phenomenon like clinical decision making needs to be from within the social realm. In saying "social", I am consciously including the notions of social construction of knowledge and of acceptable health outcomes and cultural variety, rather than constraining clinical decision making to the realm of objective, positivistic, scientific thinking and parameters.

The difficulty in seeing past THE MIND IS THE BRAIN metaphor is itself a testament to the pervasive power of such base metaphors. Edelson (1984) asserted that metaphor creates perspective. It must also be remembered that metaphor can also restrict perspective. The tension in the pain clinic between the metaphors THE BODY IS A MACHINE and LIFE IS A JOURNEY is a tension between two different perspectives that organise words, category systems and the narratives built upon them in entirely different ways. Dialogical

combination of the two metaphors permits dialogical combination of their perspectives, with both held in balance, so that one does not obliterate the other.

7.5 Heuristics/Mnemonics

The next theme that emerged from the data was heuristics or "rules of thumb". This also includes mnemonics and other cognitive tools to assist the clinical reasoning process. Mnemonics help a person recall things, or recall things in some order, whereas heuristics help to frame things. It is clear that in order to be competent at clinical reasoning a vast amount of factual knowledge needs to be known by health professionals. In addition, during assessment a great deal of information is frequently needed from the patients. Health professionals invariably use various devices to help them cope with all this information and ensure that important information is not missed. With time and practice many such devices become internalised and automatic, in much the same way that many skills, such as driving cars, become internalised. Experienced car drivers tend not to concentrate attention on the actions needed to drive but on reaching their destination. It was clear that the health professionals internalised many mnemonic devices in order to make decisions. Some of these have already been referred to. The use of mental checklists was widespread (as discussed in the section on metaphor). However, I concluded that heuristics and mnemonics form a distinct theme, since they are used to organise the underlying words, categories and metaphors.

The mental checklists and proformas used by many students and health professionals alike have already been mentioned and will not be described further. The medical students reported that by the third year of the course they were entirely familiar with the PBL format. Most reported using the PBL format when assessing real patients as they believed it was both a rigorous and a comprehensive approach to clinical reasoning. As Mary said:

"I think it's a really good idea. It's how you think clinically".

She was also persuaded of its normative nature:

"it's how you should think clinically".

Kevin admitted that he was sometimes still struggling to organise his thoughts. He mentioned that earlier in the course they had been given a diamond diagram to help them organise thinking about the case:

> "they gave us that pyramid diagram … it starts with … a presentation and expands a list of different possible diagnoses and then by the end of it you try and taper it back in at the bottom. So it's like a diamond or something".

In the diamond diagram the clinician begins at one point at the top of the diamond, which corresponds to the initial complaint of the patient. As inquiry proceeds and as more information is gathered the diamond widens out. Eventually as the differential diagnosis list is refined the diamond tapers in again to a final point which is the definitive diagnosis. According to Kevin, in the early part of the course students were encouraged to widen the diamond out as much as possible. This corresponds to considering all potential pathologies that could cause the patient's complaint.

However, Kevin admitted that in the third year the students did not widen the diamond as much as they used to and were also much quicker:

> "at the start we … were thinking about the most bizarre things that it [the diagnosis] could possibly be just to have it in the wide part of the diagram. … I think the way it seems to work [now] is that you think of the most obvious things, investigate them [and] if that's not true then you start broadening it again. So you don't necessarily have to think of everything at the beginning. You try and streamline your things so that you're working effectively".

Kevin's description is remarkably similar to the notion of breadth versus depth search algorithms in computer science. A breadth-first search, to find the way out of a maze for example, will simultaneously search all available options. This has the advantage that the solution must eventually be found, as all possibilities are considered. The disadvantage is that it is time-consuming and labour-intensive. However, a depth-first search will select one option and explore that exhaustively. If that fails to provide the solution another option will be selected and then that will be searched exhaustively. The advantage is that if the right option is selected early then the search will be quick. The disadvantage is that the correct solution might not be investigated until many other options have been tried, and this means the depth-first search can be more time-consuming and labour-intensive than the breadth-first search. To take advantage of a depth-first search strategy it is

necessary to have some indication of which options are more likely to be successful. What Kevin seems to be saying is that at the beginning of the medical course students were encouraged to use a breadth-first search to ensure all possible diagnostic options were covered. Now, with growing clinical experience and better knowledge, the students are acquiring the ability to select diagnostic options that are likely to be correct and can therefore engage in a diagnostic search that is more like a depth-first search. As Kevin said:

"it was a good way to get us to think broadly … you start to think of other things … [but now] if you put it into practice you'd be there all day. So people don't do that. People think logically".

This was confirmed by Jim, who said this about the third year PBLs:

"everyone is starting to use some clinical experience, as limited as ours is. Everyone's starting to think 'well actually I've seen somebody like that' and it's probably appropriate … you can start to have … a more realistic approach than what we did in first and second year".

George had this to say on the topic:

"we still tend to run through the process, although the PBL process as you go on seems to streamline itself quite a bit more, and you're not throwing out as many … out of the blue ideas because your knowledge is becoming more focused, and [there is a] more clear idea of what could be going on … you go for 'where the money is' as opposed to doing a full … exam on every patient that comes through".

Explicit mnemonic rhymes and sayings were used by many participants. These can be powerful memory aids. I can still vividly remember some of the more obscene ones from my own education in anatomy. Both students and health professionals made use of mnemonic sayings in their clinical reasoning. Thomas (student) found them particularly helpful. Thomas had been an infantry officer and found that one mnemonic taught to him in the army was easily adapted to medicine. This is SMEACC, which stands for **S**ituation, **M**ission, **E**xecution, **A**dministration, **C**ommand and **C**ontrol. The mnemonic was designed to encourage good communication from commanders to more junior ranks, but Thomas found that it helped when explaining diagnosis and management:

"They're not too different really. The art of military communication and the art of medical communication are bound up in dealing with people in extreme

circumstances, and whether … you're talking to someone who is facing cancer as an ultimate battle in their life or you're talking to a soldier who's facing … an actual battle the principles are the same. … You demilitarise that [SMEACC] and that's a really good framework upon which to hang a clinical consultation".

Thomas also described some clinical mnemonics that he had been taught and found very useful. One was **D**ressed **I**n **A S**urgeon's **G**own, **M**ost **P**hysicians **I**nvent **D**iagnoses. This expands to: definition, incidence, aetiology, sex, geography, macroscopic/microscopic changes, presentation, investigation, drug treatment. The doctor who taught Thomas this mnemonic advised him to learn at least two points of information for each "slot" in the schema. Thomas had been extremely impressed because, by using the mnemonic, his mentor:

"sounded like he knew everything about medicine".

So impressed was Thomas that he had reorganised all his study notes using this mnemonic:

"that's the format of the database".

Other students mentioned the well-known VITAMIN D mnemonic which stands for: **V**ascular, **I**nfectious, **T**raumatic, **A**utoimmune, **M**etabolic, **I**nflammatory/**I**diopathic, **N**eoplastic and **D**rug-related. Interestingly, the students who mentioned being taught the VITAMIN D mnemonic also said they no longer consciously used it. This may be because they used other mnemonics or else the mnemonic was now so ingrained that they were no longer conscious of using it.

Many informants used what can be best described as a template for assessing patients. This has already been mentioned in the section on metaphor, but it is worth adding that those who explicitly followed such templates claimed that assessments of patients became relatively straightforward. Thomas (student) claimed that he had been given a long case template to work through and that when it was combined with the other mnemonics he found his long case examination relatively easy, even though it was clear that the patient he had to assess had numerous problems. By practising the use of all the mnemonics in combination Thomas seemed to be able to move to a more expert level of clinical reasoning and have a more holistic sense of the patients he assessed:

"You use all of them [mnemonics] together … you go from being a computer sorter of signs and symptoms to trying to figure out what's going on with this person … working out that mechanism and then plugging it into the person. Like my long case … I had a [patient with] a vision disturbance who turned to turn off a light, but because of his mixed parietal problems and his … motor perceptive deficit … failed to adjust his balance. So he fell over and broke his hip".

According to Thomas, the examiners commended him on his long case examination, saying it was worthy of a candidate doing a physician specialist exam.

In the clinic some of the staff said they used a basic structure to organise their assessments. Bridget (physiotherapist) said:

"You do need to [have a structure]. Obviously things come up in the assessment that might throw the structure out of the window a fair bit, but there is a basic structure that you follow in both the subjective and the physical assessment".

Margaret (physiotherapist) confirmed this when speaking about teaching physiotherapy students who came to do attachments in the clinic:

"I encourage them to have a format to start with, because you can get lost in these patients because they can go off on many tangents".

Clearly, with complex cases, as in chronic pain, there may be a need to vary from a rigid format, but it still needs to be there guiding the assessment. As Margaret said further, without such a format,

"before you know it [it's] 50 minutes later [and] you're [only] up to question three".

Penelope (psychologist) gave a little detail about the mnemonic device she used:

"we have quite a structured interview. So we have a fairly good idea about what we're going to cover beforehand, and it's always in relation to the pain … I've got a set idea of wanting to find out the impact that the pain has had on their life, so how they might view it, so the cognitions that they might have about their pain, how it affects them behaviourally, so things that they do, things that they don't do, and the emotional stuff".

William (doctor) described the mnemonics he used and also tried to teach to more junior doctors:

> "I encourage the fellows to have a schema, a management schema, and a diagnostic schema, and so forth in their minds … I've got a bit of a checklist in my mind, biological, psychological, social are the three main headings".

Some participants talked about mnemonic devices that were not internalised but existed in the outside world and helped them to organise their clinical reasoning. For example, Victor (dentist) described the use he made of a questionnaire that patients completed about their orofacial pain problem before they attended for initial assessment in the clinic. This had 600 questions. Victor would peruse each completed questionnaire before the assessment and use it to target his questioning:

> "the prime reason [for using the questionnaire] is that I can get a complete picture of the patient's pain problem and treat them appropriately … I'm targeting areas that … I think I need to ask about so that I've got a good baseline set of information … in areas that I would consider important for that patient".

Clearly for Victor the questionnaire was an invaluable tool. The psychometric questionnaires the psychologists used were generally not even looked at until the clinical meeting, when they would be rapidly scored. From my observations of the meetings it seemed that the psychologists relied far more heavily on their clinical interviews than they ever did on the questionnaire scores. It seemed that the questionnaire scores were being used to provide "objective" evidence to back up the clinical findings. We saw earlier in the chapter that sometimes the psychometric questionnaires would contradict the clinical findings and would then need to be interpreted so that all the findings together could be used to construct the patient's narrative.

7.5.1 Commentary

The data reveal little evidence of the heuristics and biases discussed in the literature on medical decision theory, such as anchoring and adjustment (Elstein *et al.*, 2002). If these biases were present the informants did not seem to be conscious of them, and certainly did not express their interpretation of the experience of clinical decision making in such terms. It should be remembered that such heuristics and biases have been described in

laboratory studies of clinical reasoning, and it can be argued that they may be a laboratory artefact. However, the kind of heuristics described by Hunter (1991), who adopted a narrative and hermeneutic approach to medical practice, were in evidence. The medical students had been taught a variety of heuristics and mnemonic devices which they certainly made conscious use of, even if it was only when they were starting to learn the basics of clinical decision making. At least one student found that the coordination of various mnemonics could be an extremely useful reasoning strategy. These types of heuristics can be viewed as powerful Vygotskian cognitive tools, provided by the culture of each health profession. They can be internalised through practice and become an intrinsic part of the higher mental functioning we call clinical decision making. Some of these memory aids, like the various questionnaires, may be too cumbersome to memorise, but still function as cognitive tools in addition to providing documentary evidence of findings at assessment.

7.6 Ritual

The theme of ritual is closely related to and dependent upon the previous theme of heuristics and mnemonics. There are two major aspects to ritual in clinical reasoning emerging from the data. These are rituals of data gathering and rituals of data presentation. Mnemonics, etc. aid clinical reasoning but it is also clear that many participants gathered information in a highly structured and ritualised process in order to construct a patient narrative as the basis for diagnostic and treatment decision making. Many of the participants were aware that they had not only to establish the patient's narrative but also to present it to others. The presentations too were frequently done in a ritualistic manner.

The PBL process itself can be seen as a ritual for gathering information that the medical students accepted and applied to their assessments on the wards. When asked if the PBL process transferred to the wards George answered,

> "Absolutely, it really does give you a framework for running through it; because every week you're running through a case and you run through it systematically which I think is one of the things that the PBL process teaches you".

When asked about the clinical application of the PBL process David said,

> "Examples are well – having just done Emergency; patients would come in and I would actually go through the whole process from the beginning to the point where we find out who has to take care of them. So I'd do the whole examination, history and all that".

Quentin confirmed this when describing his assessment of a patient on the wards:

> "when we were in first and second years in PBLs we'd do the history of presenting illness, past medical history, social history, drug and alcohol. So I guess I probably did that – a pretty structured history and physical examination [of the patient]".

Thomas had the following insight into the importance of the ritual of the PBL process and its transferability:

> "it's like with a kid when they're learning to use manners at the dinner table. You don't understand why until you're much older and maybe that's like us as medical students. When you first start off … you're much more interested in ticking all the boxes. You're not really thinking too much; but by the end of it when you're … in the Emergency department at night … you're trying to work out 'what's going on here?' You're actually forced into that thinking mode and you do apply those processes … it's not until you're in that place of responsibility … that you really start getting it".

For Thomas the ritual of assessment only became truly meaningful when he discovered that he really needed to use it in the real world.

Christopher too noticed that doctors on the wards assessed patients in a similar manner to the PBL process:

> "because you see that is the way that doctors are approaching their patients … and you'll all of a sudden realise that 'OK that's why we're learning things the way we do, because that's the way we'll be doing it on the wards'".

Christopher spoke of having knowledge but not knowing how to apply it in a clinical situation, but then realising that applying the ritual of the PBL approach was a way to bring that knowledge to bear on the problem:

> "if someone was to come in with abdominal pain and they'll [senior doctors] ask you the causes of it … you can sometimes get a bit intimidated by it I suppose.

There are so many structures in the abdomen. And you'll tell them the causes and they'll ask, 'What questions do you want to ask them [the patient] to eliminate those?' So you start asking questions, and then it's the PBL process. 'What investigations do you want to do?' And you realise you did know all the things you needed to know, but you forgot how to approach them".

Many of the clinic staff also used a formal, ritualistic approach to assessment. For example, Penelope (psychologist) said:

"Well I guess we're quite fortunate … we have a quite structured interview. So we have a fairly good idea about what we're going to cover beforehand … I've got a structure in my mind of what I go through".

Penelope spoke in terms of the ritual of assessment as being an advantage. Presumably this is because ritual, together with mnemonics, allows a large part of clinical reasoning to become automatic, in the same ways that the skills of driving a car can become automatic. This permits health professionals to devote more of their attention to the goal of establishing some form of diagnosis and treatment plan without having to worry too much that adequate and appropriate information will be gathered. The ritual, in a sense, guarantees that the proper information will be gathered. It can be argued that ritual, therefore, empowers health professionals and is an important way through which they achieve expertise. Carl (doctor) also believed this when talking about how people learn clinical reasoning in medicine:

"I think that [doing] lots of short cases and long cases is necessary so that that process becomes semi-automatic".

The medical students in the study were still immersed in the experience of being exposed to many cases, and were still in the process of internalising the rituals of information-gathering.

The clinic staff had other insights into the ritual of assessment. When conducting a physical examination, health professionals have to invade the "personal space" of patients. The ritual and formal nature of a medical consultation permits this invasion, and Carl felt that this intimacy would encourage patients to answer more personal questions:

"it's a good idea to do that [ask personal questions] when you've actually got your hands on them and you're examining them, and say … 'How's it been making you feel?' … they [the patients] feel you're more interested because you've got your hands on them".

The other aspect of ritual was the performative presentation of information to others, especially other health professionals. This was something that preoccupied the medical students; it was something that they were still learning to do, and something that they were graded on in their long case examination. At this stage of their medical education they were expected to do presentations to senior doctors on a frequent and regular basis. The ritual nature of this is illustrated in the following example. Christopher related how he had discussed a theoretical problem of antibiotic prescription with a registrar, only to have the same registrar ask him exactly the same question when faced with a patient later that same day:

"I brought in one of my old exam papers … and there was one question where you have to give someone antibiotics for an abdominal infection, like they've a perforated viscus … and so I had a list there and he [the registrar] said 'That's a really good answer. That is exactly what you should do'. And then we saw someone that afternoon who had a perforation, and he said 'What are you going to give this person?' and it's like, 'you know that I know the answer to the question, is there some trick here? Am I allowed to give the same answer again?' and it was, it was the same answer".

Presumably the registrar was simply trying to reinforce the learning of the morning, using the rituals of medical presentations.

Mary felt that different levels of seniority predisposed doctors to react in particular ways to case presentations:

"the interns are good 'cause they've just got out of med school and they know what it's like. The registrars can often be tougher than the consultants, especially because they're studying for their [specialist] exams, and the consultants can be a little bit softer because they think 'I'm a professor of this and that and we don't expect them to know that much'; whereas the registrars think 'Right I'm going to nail this med student'".

Medical courses have long had a reputation for regular and ritualistic humiliation of medical students. There is a perception that this has diminished with the newer PBL courses, especially those which take older graduate students. However, it seems that some of the old habits (rituals) die hard. Alexandra (who already had a PhD) had this to say:

> "you're not even treated like a human being a lot of the time on the wards, and you're some kind of subspecies as a medical student, and that's really hard to swallow. I'm too old … to put up with that sort of thing. I don't think just because it's the way it's always been done that it should still be done like that".

The long case examination appears to place a great emphasis on the correct ritual of presentation and several of the medical students had comments about this. Alexandra referred to some of the formal elements of a long case presentation, and used a formal introduction and conclusion in her presentation:

> "in the introduction I put his presenting problems and stated diagnostic or management issues, and prefaced the long case with that; and at the end go again through the summary of the man and his presenting problems, his background issues and sort of give a summary".

Quentin also framed his long case presentation in a similar fashion:

> "I basically clarified what I was going to say and put in an introduction and a conclusion".

George had this to say:

> "I ran through the history and examination in a very sort of stylised way, 'I saw Mr X. His presenting complaint was' and you know you've got the litany that you run through".

Thomas followed a detailed ritual of presentation that he learned from a registrar, which even specified some of the wording to use:

> "I gave a very templated response and I felt it was almost like cheating, because I would go in and I would say 'I spoke to Mr name, age and occupation' … and just have this template of rehearsed framework so I could just sit down and hang it all out".

By mastering the rituals and the accompanying mnemonics Thomas felt quite comfortable in his ability to apply knowledge and assess relatively complex cases.

Alexandra discussed the problem of deciding what information to include or exclude from the presentation. Some examiners seemed to want more than others:

> "some examiners want you to have just your relevant past medical history … and other examiners say 'Well it's a bit hard to assess what's relevant and what's not'. … Say a lady comes in with abdominal pain … it might be relevant to say that she's had an appendectomy when she was 20 and now she's aged 80, but other people might say that's not relevant. So it's hard and different examiners have different ways of doing things".

David related that there was a requirement to mention many normal findings in addition to abnormal findings. In one case presentation he gave there was a possibility of liver involvement in a patient with cancer:

> "I found that her liver was normal … I didn't say the liver span was normal … I just said it was pretty unremarkable. Then they said 'You should have told me that'".

In yet another case David said

> "they [the patient] didn't have night sweats … but if they didn't have any you should say they didn't have any, as opposed to having the clinician [examiner] assume that they didn't have any. It's just little things which I'm not really good at still – but getting the hang of it".

Alexandra also had the experience of being told by one senior doctor that her case presentation was "too polished". Christopher had been told that he was "too nervous". It seems clear that the ritual element is judged as being an important aspect of case presentations.

In the clinic, presentation of findings also had a strong ritual element. Simon (doctor) felt that the mere awareness of having to present your findings formally to colleagues at the meeting made the assessments more thorough:

> "when you've got to write something down and you know you're presenting to your colleagues that forces you, almost, to be a bit more thorough and systematic in the way that you approach assessment".

In the clinical meetings the doctor presented findings first, followed by the physiotherapist and then the psychologist. William (doctor) said:

> "I remember we tried to change it once, or we got out of order once, and one of the team, one of the physiotherapists actually said 'we're not doing it in the right order'. So I've always stuck to the order".

It seems that people like some ritual as it provides a routine that everyone expects, and then nobody has to think about unimportant details such as who will be the next to speak. Ritual frees individuals so that they can concentrate on the important matters.

Ritual was also an aspect of reporting the team's findings back to the patient and to referring practitioners. William said that he had spent some years refining the approach he used for writing reports to referring practitioners and gave a detailed description of its format.

> " 'The following recommendations were discussed with Mr and Mrs' … 'Bloggs. Number one: Pain', and then I talk about their pain and our feelings about the things that contribute to their pain, and that 'Mr Bloggs describes symptoms consistent with neuropathic pain etc., etc., etc'. Or as is commonly the case, 'Mr Bloggs has had no sinister cause identified for his ongoing pain. In the absence of a sinister cause our discussions therefore focused on pain management rather than relief'. Then going to talk about the general things that people referring want to know. Are there any procedures that can be done to relieve the pain? Are there any medications that would be helpful? So I make comments about them, and often it's point number two, 'Unfortunately there are no specific procedures or medications that are likely to provide pain relief in the long term in this person's situation' and then I go on to number three, 'Our primary recommendations for this person are:' and if there are procedures actually then I would outline the procedures and what they involve, and if it's the [rehabilitation] program then I'll make a comment about 'Our main recommendation is that they undertake a program designed to help them develop their coping strategies' and go on from there … I usually make it clear at the end what my follow-up intentions are, a paragraph saying, 'I've not made a specific appointment for this Mr Bloggs to come and see me again but of course I'd be happy to talk to you at any stage about this person's management'. It's generally that sort of flavour."

Another aspect of ritual also emerged from the data. This is the ritual of being an inpatient or an outpatient in a hospital. The patients in the clinic were all assessed and managed wherever possible on an outpatient basis. This was largely due to reasons of economy. However, one doctor, William, had also worked in a setting where patients were assessed on an inpatient basis, and this apparently changed the relationship between the health professionals and the patients. As William said:

> "it [outpatient status] encourages patient autonomy … they're an independent person … and I think that's one of the reasons why the [rehabilitation] program is in an outpatient setting as well. It's trying to encourage people with persistent pain to remain independent … it's very hard to maintain normality when you have people sleeping in hospital, potentially wearing their pyjamas, and not wearing their normal clothes, and not involved in normal daily activities".

It can be argued that this is largely a ritual effect. The daily rituals of being an inpatient encourage people to become more passive and dependent on hospital staff. The outpatient approach not only saves money but also removes these rituals of dependence and encourages more responsibility for self, which is what a large part of what pain management is about.

7.6.1 Commentary

The data provides strong support for the findings of Hunter (1991) and Atkinson (1995) who described ritual within the world of medicine. In the settings in my study ritual played an important role in many ways. Atkinson found that ritual and formality are culturally prescribed devices that afford predictability and stability to the practice of haematology. My study confirms that ritual provides predictability and stability to multidisciplinary practice, and to the settings in which medical students learn their profession. The reports about the medical students doing their long case presentations, in particular, emphasise the importance that senior doctors attached to the performative ritual of communicating case summaries.

This ritualistic aspect was not merely a feature of the examination setting, but reflected the requirement for ritualistic performances within the practice of medicine. The pain

clic meetings that I attended were superficially informal and relaxed affairs, with people consuming lunch throughout, but there was clearly a formality and conformity to "rules of performance" underlying the proceedings, that permitted the smooth running of the business at hand.

One medical student echoed the words of Schön (1987) when he related that it was only practical experience of following the rituals of assessment that eventually brought true understanding of what they were doing and why it was important to do it that way. Schön claimed that it was not possible for beginners in any profession to fully appreciate what the work involved until they had been completely immersed in the routines of that work for some time. Appreciating the power of ritual in one's profession is an aspect of growing competence and expertise. Ritual establishes what the business at hand is to be about. As Perelman wrote, "Ritual … and rules of procedure fix, with more or less precision, the matters which are the objects of communication" (Perelman, 1982, p. 10). The data completely supports this contention. It can be argued that much more attention should be paid to the explicit teaching of ritual to newcomers within health professions than occurs at present. Although ritual procedures are taught, the fact that they are rituals is often glossed over. If students were made aware of why rituals are so important they might reach the point at which they appreciate them more quickly.

7.7 Narrative

William (doctor) in the pain clinic frequently gave a copy of his recommendations to referring practitioners to the patients, as did Victor the dentist. All the verbal and written reports, together with the summaries formulated in the PBL sessions, are examples of narratives; they are stories about the patients that permit health professionals and patients to make sense of all the findings, and they indicate options for management, that is, how the narrative might continue in the future. Narrative is the next theme in the iceberg model.

Rituals, mnemonics, metaphors, category systems, and words are all cognitive tools that enable participants to undertake one of the major tasks of any health profession, and this is to construct a coherent story about each patient that makes sense of all the information available. This needs to be a story that not only makes sense of the past but has a

narrative trajectory into the future. With the resources available to them, the health professionals should be able to suggest the course that future might take. All the previous themes provide a foundation for the narrative skills required to perform well in these professions. For example, Jim (student) discussed his growing awareness that he needed to develop skills beyond simply gathering relevant information:

"I guess that's a skill to learn in the next few years, is start tailoring our history and examination to what we need rather than writing everything we can possibly get our hands on in terms of information".

His long case examiners had told him that now this relevant information needed to be processed so that it had a definite point to it. His long case examiners had said to him,

"you've got to get to the point now where you can lead us to where you want to go".

The participants in the clinic spoke of abilities that come under the heading of narrative skills. The multidisciplinary setting required health professionals to present summaries of their assessments during the clinical meetings. The meetings were typically intended to be an hour long, and six patients assessed by two separate teams would be discussed by the teams. Comments from other people who had not assessed the patient were welcome during the discussion. This arrangement gave the three health professionals in each team ten minutes per patient to present and discuss their findings, and this was generally considered to be only just enough time. Therefore an important skill discussed by many participants was the ability to summarise their assessment findings.

As each health professional had been given an hour to assess each patient this meant that a lot of information needed to be compressed into a summary form that had to be delivered within two or three minutes to allow time for discussion of the case. This was an issue for many of the staff. William (doctor) discussed this issue:

"the repetition of each clinician presenting in detail their findings I find to some degree less than productive. So I have been tending to move much more towards a very brief summary of the patient that I've seen, and my preference is that the other clinicians and therapists do the same, so that we can get into a discussion about treatment. Whilst the findings can be interesting and enlightening at times, I think we spend the majority of our time telling stories, when we may be able to spend more time in planning, forming plans and treatment strategies".

This raises a number of issues. There is the issue of presenting summaries. Staff new to the clinic had to learn the skill of reducing their (frequently complex) findings to a brief summary. Carl (doctor) also believed in brief summaries that included only the significant information needed:

> "You become expert at summarising things down to the brutal essentials. I mean one thing I find difficult in a meeting is to … [hear people] go into detail about a patient. I find that sort of thing boring really. I think … it's not going to get us anywhere and we're always short of time, and I'm really interested in hearing what the psychologist and physios have to say. … So I try and summarise it to the punchy stuff because that keeps people's attention, and that's something you learn over time I suppose".

Gareth (doctor) confirmed this when he said:

> "it's very hard to concentrate when someone is droning on and you've listened to them for ten minutes and you think 'I don't know anything about the patient'".

Gareth believed that while it was interesting to hear a little detail, as it could make the story more memorable, it was still important to stick to basics:

> "emphasise the bits that are important … it is nice to hear … the story about how the dog died last week … that makes you remember the patient. Those bits are important rather than just saying 'This is a 37 year old with low back pain, had an MRI which shows this and we're going to do that.' I think that's too brief".

Carl realised that the major problem for newcomers in this regard was being able to judge what was important and what was not:

> "if you're just beginning, you feel that you don't have the right to exclude certain information from people because it may be important to them … so they [the beginners] tend to tell you more rather than less".

Simon (doctor) also acknowledged this problem with newer staff:

> "they'll present a lot of their findings … without a clear conclusion … they're not sure how to bring it all together".

Summary preparation is clearly a narrative skill which requires a fine balance between presenting crucial information and including interesting background information.

Margaret (physiotherapist) recognised that when she was a beginner at the clinic there was a tendency to:

> "just deliver what I've found. It's an easier way but then there would be three separate stories rather than continuing the one story".

This brings up another issue that demands high level narrative skills from the clinic staff. The doctor would present his/her summary first, followed by the physiotherapist and then the psychologist. The more experienced physiotherapists and psychologists learned that their summaries had to add to the preceding summary. There could be repetition but only if it was needed to emphasise or confirm some crucial finding. This can be represented graphically.

Figure 7.2 shows the undesirable state of affairs when 3 separate stories are presented with much overlap and repetition and unnecessary detail.
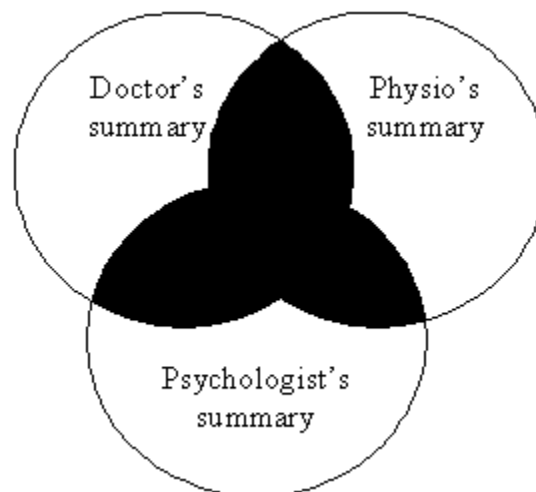
Figure 7.2 Three separate summaries with considerable overlap

The more desirable state of affairs is one in which successive health professionals add to the doctor's summary to provide a rich and multidimensional single narrative. This is represented graphically in Figure 7.3
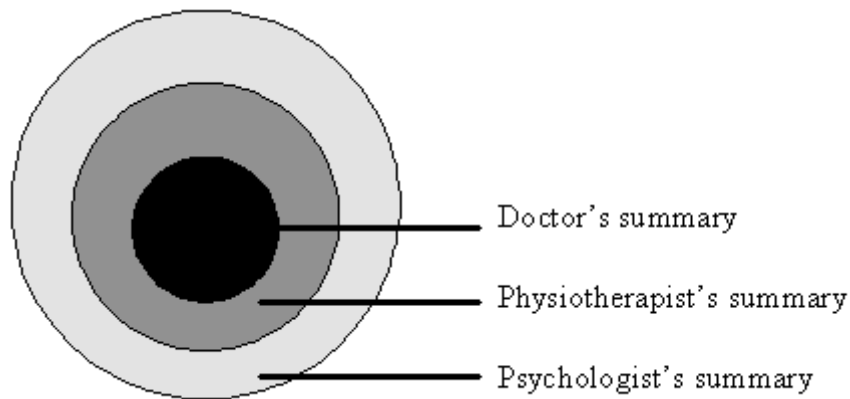
Figure 7.3 One composite and incremental summary

As Margaret said,

> "your contribution is valid if you add 20 lines rather than repeat 40".

Bridget (physiotherapist) confirmed this when she said that she had needed to learn:

> "what bit of information was it that they wanted from me ... you don't need to go into all the nitty gritty specific stuff that the doctor has already talked about. You're just basically covering ground that he hasn't covered".

John (psychologist) was still a relative newcomer to the clinic when interviewed and mentioned the issue of what to include in the summary as something he was still coming to terms with:

> "within the psychological feedback there seems to be quite a lot of variation, and some psychologists will report or give quite a lot of information about ... the broader context, whereas other psychologists will stick very closely to the specific issues related to pain and pain management. So I'm still a little bit uncertain as to which is considered the most appropriate".

It seems that John was still working out the norms and expectations of the subculture of this particular clinic. It can be argued that such norms and expectations probably exist in all clinics and hospitals. Medical students frequently speak of the different cultures of physician and surgical specialties, with surgery often perceived as being more militaristic in its attitudes.

Sometimes patients would report different things to different clinicians and this would be an occasion when there could be valid repetition in the meeting, but only to obtain clarification. As Margaret (physiotherapist) said,

> "that often happens … sometimes patients will report different things to each professional and that needs to be highlighted".

Margaret was quick to add that such discrepancies were not seen as an opportunity to catch people out:

> "I don't think it's like 'you're right and I'm wrong'. It's like 'how can we resolve this or there must be something [else] that's coming through'".

It seems that there were many possible reasons for discrepancies. For example, sometimes patients were naturally suspicious of psychologists or psychiatrists and were more willing to admit things to a physiotherapist. As John (psychologist) said:

> "I would imagine that it's less threatening to tell a physio that you've seen a psychiatrist than it would be to tell a clinical psychologist".

Many patients also had difficulty remembering some details, such as precisely what medications they were on.

Another narrative issue about the clinical meetings is that they are only partly about establishing the patient's narrative to date. They are also about making decisions for the future narrative trajectory that the patients might embark upon. Carl (doctor) discussed this issue and said that the people at the meeting only wanted and needed to hear about things they could do something about. The pain patients frequently had numerous problems and it was often impossible to deal with them all. As Carl said:

> "a meeting is to make decisions and … [needs] the information that … allows you … to make decisions for that patient".

What Carl did not want to hear about was:

> "a whole lot of new unsolvable problems for you … to deal with … you almost wish you'd never found them out".

The solution, according to Carl was to simply:

> "document the situation … one thing a [pain] physician … has to learn is that next week, next month, next year might be … the soonest you can actually sort some of these things out".

There was a need to keep to a narrative that would permit a viable future that the clinic's interventions could facilitate. John (psychologist) echoed some of this when he said:

"there has got to be a reason for asking for it [patient's history] and a reason for collecting it. You have to be able to do something with it. It's got to be valuable … so I'll give that information as it's relevant … I'll stick to the issues that we're actually going to deal with".

Some of the clinic staff had interesting insights into patients' perspectives on narrative. Some staff mentioned the importance to patients of feeling that they had been heard. One of the major reasons for the long and intensive assessments in the clinic was that the patients had long and complicated stories to tell. For some patients the initial assessment at the clinic was the first opportunity at which they had been given plenty of time to tell someone with expert knowledge what they were going through. Gareth (doctor) added that this opportunity, combined with being given a comprehensive multidisciplinary report, was in itself therapeutic for many patients:

"The patients are the … ones who want to know a specific diagnosis. So you do need to give them a story at least and not be so woolly with them, because otherwise they still walk out of the clinic going 'Doctor hasn't told me anything either. He doesn't know any more than all of the others'".

Simon (doctor) spoke of the patients at the other extreme who did feel that they were given a clear story, when he said:

"it is surprising how often people will say 'Thank you. One of the best things that's happened today is that someone's actually explained what's going on'".

For Simon this was one of the more pleasing aspects of working in this environment:

"one of the most satisfying things can be just seeing the patient happy that they've got an explanation for what's going on, or a better undertanding of what is happening".

Simon added that this happened a lot more when the clinic changed to doing comprehensive multidisciplinary assessments all on one day. Simon had previous experience of clinics in which medical assessment and interventions had taken precedence and other health professions had been brought in later on an "as needed" basis. The older approach had a number of problems. It appeared to give more importance

and status to medical assessment and interventions. There was a stigma attached to referrals to a clinical psychologist or psychiatrist, but above all it was simply harder to provide an integrated approach. The comprehensive, multidisciplinary one day assessments did away with all these problems, as every patient was seen by all three health professions and for an equal amount of time by each in turn. As Simon said,

> "I think it's a much more integrated model because then you present the treatment as a package … rather than saying 'Well we tried the drugs and we tried the blocks and they didn't work so now … you'll see the psychiatrist".

There was also a logistical advantage as patients, some of whom needed to travel great distances, often in considerable discomfort, were assessed on one occasion rather than several.

Other health professionals in the clinic spoke of the importance of giving patients a sense that the clinic offered a comprehensive overview of their problems. Victor (dentist) would often dictate letters back to referring practitioners, detailing his findings, in front of the patient, and also give the patient a copy of the letter:

> "to get down a letter of findings back to the referring practitioners in front of the patient so they're quite happy that I'm … detailing everything about them in front of them. There are no misconceptions. There's no misunderstanding and, in fact, I routinely send a copy of that letter to the patient for their own records".

William (doctor) also frequently gave copies of his recommendations to patients:

> "I write all the recommendations down and photocopy it and give it to the patient so they have a memory prompt".

It seems that being given a clear statement of what is going on allows patients to clarify their narratives and regain a sense of narrative direction and agency in their lives.

Carl (doctor) seemed to understand that the staff can become part of the patient's narrative because few chronic pain patients are cured as such, and an ongoing therapeutic relationship frequently develops. He spoke of the temptation, especially to new doctors, of doing interventions that could be seen as curative but frequently were not. This would establish a relationship with patients in which expectation of cure was built in, whereas Carl recognised that pain specialists needed a therapeutic relationship that all parties could accept as ongoing:

"I think the most important skill is to look at a treatment and a patient and say …
what are the true effects of this going to be? … What will happen to your interaction
with a patient when that [treatment failure] happens? … focusing on what the net
effects of your treatments are going to be in true, global, holistic terms".

In my opinion the skill of being able to judge the long term effects of the interaction of
intervention and patient in this way is a narrative skill, and a skill that comes only with a
great deal of reflective experience. Creating such narratives is an important part of
clinical reasoning. There is a clear overlap between narrative reasoning and clinical
reasoning.

The clinic's rehabilitation program can also be seen in narrative terms as well as
metaphorical terms. This has already been touched on in the section on metaphor. The
staff rarely used expressions that could be considered explicitly narrative. Their
descriptions were in the terminology of cognitivism and behaviourism because these
provided the theory base for the program. However, the program can be interpreted as a
way of helping patients to rewrite the narratives they were living out. Instead of a
narrative based on the biomedical metaphor of THE BODY IS A MACHINE which was failing
the patients and driving them into invalidity, the program can be seen as providing them
with cognitive tools to start living out a narrative based on the LIFE IS A JOURNEY
metaphor, which is more consistent with the biopsychosocial model of practice advocated
by the clinic. However, this could not be forced upon patients. The patients had to make
this choice and so a great deal of effort was devoted to persuading patients to collaborate
with the program and willingly change their narratives.

7.7.1 Commentary

The insights discussed above concerning the narrative aspects and roles of clinical
decision making support the existing literature on the topic. The medical students were
well aware that they needed to construct a story about each patient that would have
enough detail and insight to pave the way for future interventions to restore health. Health
professionals in the pain clinic were aware that they could change the narrative trajectory
of patients and become a part of the patient narrative, as Verghese (2001) suggested, also
becoming the spokesperson of the disease. By expressing the patient's problems from

within the language of the health profession the narrative can become meaningful and socially acceptable, and have a coherence it lacked before (Charon, 2001).

Of particular interest is the extent to which the pain clinic chose to deal with patients who are remarkably like the "Hilda Thomson" (a difficult patient with many problems) described in such vivid detail by Marinker (1998). Many, if not most of the chronic pain patients have a similar list of varied problems, in which there is a complex interaction between medical, social and more existential issues. Most health professionals find such patients difficult to cope with as they have a bewildering list of problems, many of which are beyond their expertise to deal with. The intense three hour multidisciplinary assessments gave many patients the sense that they had been properly heard for the first time. There was time for Kleinman's (1988) empathic witnessing, which many patients found therapeutic in itself. The long assessments also provided opportunity for the collection and integration of the variety of detailed secondary texts as described by Greenhalgh (1999) into one coherent primary narrative. There is now a growing awareness of the importance of narrative in pain management (Carr *et al*., 2005) and chronic conditions in general (Frank, 1995). It is only to be hoped that this will continue and lead to more attention to this aspect of health care and a consequent improvement in practice.

The rehabilitation program in the pain clinic can be seen as an example of Hunter's (1996) claim that patient narratives are always open to comparison and reinterpretation. The patients went through the program as a cohort and so were able to compare stories. Despite the cognitive behavioural rhetoric of the clinic, it can be argued that the rehabilitation program is mostly about narrative reinterpretation. The intensive three week rehabilitation program gives plenty of time for reflection and scope for narrative reinterpretation, so that patients can find new meaning in their lives. It was Paul Ricouer who wrote, "A life examined, in the sense borrowed from Socrates, is a life narrated" (Ricouer, 1991, p. 435). Narrative is essential to our sense of self-understanding. The Hilda Thomsons of this world need help to come to a new self-understanding. A new narrative, and the new self-understanding built upon it, need to be both constructive and true to the patient, in the sense that they cannot be imposed by health professionals. They have be freely chosen by patients as a way forward that is acceptable, genuine, realistic, and achievable.

However, in general, the practice of health professionals is not primarily concerned with improving patients' self-understanding; the preoccupation is with health. According to Svenaeus (2000), narratives in most health care practice are constructed with a hermeneutics of attention and action, whereas narratives in more psychotherapeutic settings, such as the pain clinic's rehabiliatation program, are constructed with a hermeneutics of suspicion and revelation. I shall have more to say on this below. The staff of the rehabilitation program had to use some form of rhetoric to persuade patients to adopt the new metaphor of LIFE IS A JOURNEY and live out a new narrative based on this. Rhetoric is dealt with next.

7.8 Rhetoric

Rhetoric is a problematic term, as in recent decades it has been appropriated by postmodernism and has acquired overtones of deconstructionism. In deconstruction a critic attempts to demonstrate the incoherence of a philosophical position, using terms and concepts from within the philosophical position in question. However, in this thesis rhetoric is used in its older, original sense, which is the study of effective or persuasive speaking and writing (Perelman, 1982; Perelman & Olbrechts-Tyteca, 1969; Toulmin, 2003). In the collective clinical reasoning settings being studied, the verbal and written reports that are generated need to have a rhetorical force that can help persuade other health professionals and patients to accept their truth and authority. Some of these points have already been mentioned briefly, but in this section the underlying rhetoric will be highlighted.

The medical students were sensitive to this issue of rhetoric, although they did not use the term. Again, as in many aspects of clinical reasoning, this awareness is probably because it is something they are still learning, and therefore they have to pay attention to it. David spoke of being able to persuade senior doctors to come and see a patient:

> "It's just being able to say what you find, and be able to say that … this person is in very dire straits. It's not making up stuff, but it's being able to present it in a convincing and competent manner that they [senior doctors] can say 'All right, this requires my attention'".

He gave a concrete example of a recent occasion in which he had answered the phone for a surgical team who were in theatre, and in which the calling intern failed to persuade him that the case he was referring was urgent enough to interrupt the theatre team.

"I wasn't convinced from his presentation that this person [patient] was urgent enough for me to interrupt the theatre … and the way he presented it to me was 'This person came in with some abdominal pain. I think it's lower right quadrant'.[7] And you have to be sure about these things, you know what I mean? Like if you come off sounding like you're not confident, and you're not sure of what's going on then what's the point? It just doesn't make it seem like a priority".

On further probing it seemed that the calling intern had panicked and failed to gather enough information to construct a rhetorically convincing narrative. As David continued,

"it's just that it doesn't sound very professional. In the sense that you haven't done a thorough enough examination on this man for you to communicate to me that it requires my attention".

When prompted to reflect on this David said,

"medicine is about learning the language and just being able to come off in such a manner that people can trust you".

George described how his long case presentation was designed, not only to demonstrate his knowledge, but also to strengthen his rhetorical position with respect to the examiners:

"you try and pre-empt any of the questions that the examiners might ask by putting everything in your management".

Jim gave details about the rhetorical power of a good presentation for a long case examination. Jim had realised that by planning the things he wanted to say, and the manner in which he said them, he could exert some influence on how the examiners would then question him:

"when I was presenting back to the doctors I would say 'I looked for signs of renal failure' … because I knew that if I didn't say that they'd ask me 'What are the complications of chronic renal failure?' … I was predicting what questions they would have … and basically covering those in my talk … so that when they came at the end … they were like, 'We can't ask him about chronic renal failure because

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[7] The implication is that the patient had acute appendicitis which required urgent attention.

he's presented that. He's presented the typical eye findings in diabetics'. Because I said 'While I had difficulties doing fundoscopy I was expecting to find blah, blah, blah', and so they'd think 'We can't ask him about that' and so they got to the end and they said 'That was good', and they asked me about smoking or something".

Jim also realised that a good presentation had a certain (rhetorical) flow about it:

"I think the difference between good presenters and poor are the ones that could make it look like it flowed nice and smoothly".

A quotation used in the discussion on narrative and metaphor is also relevant here. At one point Jim talked about the feedback the students of his year were getting from the long case examiners when they said,

"you've got to get to the point now where you can lead us to where you want to go".

This implies that the examiners accepted that a verbal case summary is not only a story with a definite narrative trajectory about a patient, but must also have a rhetorical force to persuade the listeners that the narrative trajectory has been established with thoroughness, and is therefore legitimate, plausible, and persuasive.

It is clear that in order to have any rhetorical power at all, health professionals must first have background knowledge before they can plan how to frame a case in such a way as to maximise the rhetorical power. This came through in the interview with the medical student, Joshua, who generally appeared very knowledgeable and self-confident. He was once asked to see a patient with a complex history but was unable to make sense of his findings:

"I had no idea what was going on with this fellow, and he just had stuff going on that I'd never seen before … and they just said 'What do you think? What could it be'? and I said 'I don't feel comfortable talking about this right now. I need to go home and read 'cause there is stuff going on that I've never seen before'".

Without knowledge of the patient's narrative Joshua had no rhetorical power and therefore refused to commit himself.

In the clinic the staff had various insights into the rhetoric of their reports for each other. Reports had to gain the interest of the audience. Carl (doctor) said,

"if they [the staff] don't present well and summarise the points then it's boring and … then you're not interested, and when you're not interested you're not doing

anything useful. So I try and summarise it to the punchy stuff because that keeps people's attention".

Carl said that this was more than a matter of merely keeping people interested:

"a meeting is to make decisions" [and there was therefore a need to] "present the information that either allows you or the people to make decisions for that patient".

Carl was adamant that presentations needed to be summaries that allowed decisions to be made:

"the trainees [junior doctors] need to learn that [they have to] cut down the amount of information to a manageable summary for your colleagues … and for yourself because … at the end of the day … you have to be able to isolate them [important findings] and make a decision on them".

Decisions needed to be made based on information that was both interesting and important. The interest and the importance are both powerful rhetorical aspects of the reports.

Where possible, participants used objective evidence to support their claims and substantiate the reliability. Bridget (physiotherapist) gave a recent example:

"the psychologist ... couldn't work out whether what he [the patient] was saying was true about his condition, and I said 'Well, you know there were objective signs that he did have this condition. He had bumps on his legs and he had deformed arms', and there were quite a few things that indicated to me that it was true".

Bridget also spoke of the delicacy of negotiation in the clinical meetings. Sometimes the health professionals had contrasting findings. Rather than take a confrontational stance the meetings adopted a collaborative attitude to resolving these:

"I might have found that there was some restriction [in movement] and it's different to what the doctor has described. I'll say 'Look, that wasn't my experience. This is what ... I noticed'".

This rhetoric usually led into what can best be described as a mutual educational discussion, with the underlying attitude being to learn from each other rather than compete. Tara (physiotherapist) gave a concrete example:

"just in the meeting today, the physio student was concerned there might have been a hip component. [The doctor] thought there was more a facet component and so, yes, we got the X-ray to clarify and the hip [component] was there. So that was something that he hadn't picked up on, but then he was double-checking [and asked] did the physio still think there was a facet component and so a discussion went on".

Margaret (physiotherapist) discussed the collaborative attempts to construct a joint narrative and was well aware that the participants needed to avoid doing so confrontationally:

"patients will report different things to each professional, and that needs to be highlighted. Like I remember saying 'That's not how I found the patient. I found the patient to be quite motivated to do this and this'. So I don't think it's like 'you're right and I'm wrong'. It's like 'how can we resolve this?'".

Rhetoric played a part in the clinic staff's relationships with the patients. The doctors were the people who went back to the patients after the clinical meetings and reported to the patients what the multidisciplinary team had found. This usually involved some negotiation with the patients about the best options for management. Carl (doctor) discussed this issue, and believed that while patients should be given options these should be presented to them in ways that helped the patients to make a decision but made it clear which options the team preferred and why:

"I am happy to say to them ... 'Well we could do this, but I think it has a low chance of working. Or we could do this, or this, ... it's up to you'. But when you go into endless amounts of detail that can be counterproductive, especially in the initial consult when you're trying to build up a relationship with them. I think you have to be fairly decisive on what is, and is not, reasonable, and then offer them the choices of the reasonable things and explain yourself ... once you get used to doing that you tend to be a bit more cut and dried about what information you process".

Simon (doctor) said much the same:

> "So I try and explain what the options are, what are the benefits and advantages ...
> as a rule I try and leave it up to them, unless I feel strongly that they should be
> steered in a certain direction. If I feel strongly that that's what would be good for
> them, and depending on the personality of the person I may be a bit more coercive".

The staff who were involved in the rehabilitation program were using a form of rhetoric
when they spoke of constantly reinforcing the cognitive behavioural therapy approach
and ensuring that all staff members were delivering the same message. As Bridget
(physiotherapist) said:

> "when you talk to them [patients] you're reinforcing the strategies all the time. So
> you're using CBT all the time with your dealings with the patients. So you need to
> be sure you're not saying for example, 'Oh it's fine, you know, have a hot pack if
> you've got a bit of pain.' You don't want to be doing that, because you're
> undermining everything that they're learning in the program".

The rhetoric began before the patients arrived for the program, as the staff would see
them for preliminary appointments some time beforehand, where it was made quite clear
what would be happening and what would be expected of patients' participation.
Penelope (psychologist) said:

> "we have preview appointments that we do with the psychologist and the nurse ... if
> someone [a patient] seems to be having difficulty accepting the concepts, because
> we sort of explain to them, 'These are the things we expect will happen in the
> program' ... we might organise individual sessions with someone that we think is
> really, you know, going to have difficulty shifting".

Victor (dentist) found that his 600 item questionnaires had rhetorical force in medicolegal
cases:

> "the case has been won where the pain questionnaire has come to court because the
> other party's expert had traditionally given like a half hour clinical assessment, with
> no prior pen and paper information. So the amount of information ... [available to]
> the judge ... is that on one side there is an expert who's assessed the person for an
> hour, but can come up with a 30 page detailed report ... compared to the other, and

judges ... like to decide on facts. If they've got 20 pages of facts versus one page of facts, the one with 20 pages usually wins".

Victor was aware of the degree to which his reports and questionnaires had rhetorical power.

7.8.1 Commentary

The notion of rhetoric is relatively new to health care, and there is little in the literature concerning the connection between the two. There are exceptions, such as Atkinson (1995) who drew attention to the extent to which rhetoric played a role in the construction of medical narrative. Atkinson claimed that rhetorical forms establish authority and attitudes to knowledge and uncertainty, and this claim is borne out by the data in this study. However, even though rhetoric may be largely absent from health care literature, its importance is something that has been debated for centuries. Around 400 B.C., Aristotle (trans. 1999) claimed that different fields of knowledge require different methods and different means of proof, arguing that mathematical proofs normally have no place in a speech and vice versa. Aristotle was convinced of the importance of rhetoric in its rightful place. Descartes (trans. 1999) rejected Aristotle's view in favour of an approach that insisted on mathematical standards and mathematical rigour in all fields of knowledge, especially those that pretend to scientific respectability. Descartes's assumption was that mathematical axioms lead to self-evident truths and precise knowledge. Rhetoric, the art of persuasion, was therefore rejected as unreliable and prone to bias.

However, Wittgenstein (1958) has shown that mathematical axioms are not self-evident; they are conventions of language. Since Descartes's time, health care professions have generally adopted scientific discourse and its foundation upon mathematical certainty. The most recent manifestation of this is the evidence-based practice (EBP) movement. There is a clear preference for thinking in terms of theses that are true, or at least of hypotheses that have yet to be proven. The "mere" opinions of different scholars are generally frowned upon. The higher levels of evidence in EBP are those that can claim a higher degree of (scientific) self-evidence. This ignores the fact that any scientific (or clinical) theory is only a human hypothesis, and validated by a community of practice. Therefore there is not, nor can there be, an absolute standard of validity. Knowledge is

not infallible. The data in this study shows that health care professionals are intuitively aware of this when it comes to making decisions about real world patients. Each new clinical case has to be judged on its merits.

Toulmin (2003) distinguished between theoretical arguments based on Cartesianism, that mathematically and logically apply abstract, universal principles which never change, and practical arguments that pay close attention to the circumstances of particular real-world cases, based on Aristotle's notion of phronesis (practical know-how). Toulmin argued that many issues that face human beings should be resolved more often by practical arguments and that this requires rhetoric backed up with credible evidence. Clinical decision making frequently fulfils the conditions that Toulmin argued were best settled by rhetorical arguments. In constructing a clinical report, a health professional is justifying a claim about a patient. The justification is supported by arguments that depend on the context of that patient, and that will stand up to reasonable criticism. There is frequently uncertainty in clinical decision making, and when there is uncertainty judgments must be made in light of all the information available for that case. This is not done mathematically or statistically but persuasively and argumentatively. This is the essence of rhetoric and of pragmatism.

If we accept the Bakhtinian dialogical position then, even when working alone, health care professionals will consider all the information and persuade themselves of the best decision. This consideration is done as an internal dialogue with oneself, which occurs at the same time as the dialogue with the patient. The internal dialogue will utilise all the aspects we have considered so far. Rituals and heuristics will be used in gathering and sifting information into categories. This permits the construction of a narrative that is expressed in the terminology of the health profession. Possible narratives are weighed against each other not mathematically but argumentatively.

In collective settings this self-persuasion needs to be articulated in order to persuade others. In observing the PBL sessions and the pain clinic meetings it was clear that consensus was achieved through rhetoric, not mathematical calculation. As Perelman argued, "As soon as a communication tries to influence one or more persons, to orient thinking … to guide their actions, it belongs to the realm of rhetoric" (Perelman, 1982, p. 162). Therefore, rhetoric, conceived as the theory of persuasive communication, is a

crucial aspect of clinical decision making. This is clear from the data in this study. For example, we can recall the unfortunate intern who lacked the rhetoric to persuade a medical student to interrupt the work of a surgical team in theatre. Rhetoric is an aspect of clinical decision making which merits much deeper investigation in further research.

7.9 Hermeneutics

It can be argued that hermeneutics is the converse of rhetoric. When producing a verbal or written report most participants realised in some way the importance of persuading others to accept their reports as authoritative and trustworthy. This can be seen as the rhetoric of clinical reasoning. However, it also emerged from the data that people needed the ability to interpret the verbal and written reports of others, both patients and other health professionals, and this is the hermeneutics of clinical reasoning.

In this thesis I presume, following Heidegger (1996), Schön (1983) and especially Gadamer (1989), with his emphasis on dialogue, that epistemology depends upon ontology, and that different ways of knowing arise out of different ways of being-in-the-world (Shotter, 1993). The difference between an epistemological and an ontological position is the difference between "knowing an object and coming to an understanding with an interlocutor" (Taylor, 2002, p. 127). The first is unilateral and the second bilateral. In an epistemological approach health professionals simply come to possess information about a patient. In an ontological approach health professionals use their embodied skills, the specialised knowledge of their profession, combined with their ordinary everyday knowledge of the world, to construct a narrative together with the patient (or other health professionals). In this thesis I take the position that clinical decision making is a bilateral (or multilateral) dialogue. Therefore in this section findings relating to the ontology of being a health professional are also included, as they are seen as being intimately bound up with hermeneutic skills. Like rhetoric, the issue of hermeneutic skills was something that the medical students thought about, as they were still learning them, even though they did not express them in these terms. They intuitively realised that some basic skills had been mastered and were concerned to master the higher level skills they needed to be competent doctors.

We have already seen how an intern lacked the rhetorical skill to persuade the medical student, David, of the urgency of a case that might have needed a surgical team to be disturbed while in the operating theatre. In order to make such a judgment David needed, for his part in the dialogue, to interpret the verbal report he was being given and make a judgment on it. David was required to make a judgment about the whole, the urgency of the case, based on the parts, the information given. David also had to judge how the report in its current form would be received by the surgeons in the operating theatre. The ability to make such judgments is a hermeneutic skill, which can be seen as one aspect of the basic hermeneutic skill of the health professional, to be understanding towards patients (Svenaeus 2000).

Other hermeneutic skills were revealed in the data. For instance, Jim spoke of what can best be described as the hermeneutic appeal of clinical reasoning in medicine, and its emphasis on part/whole relationships, when he said,

> "I wanted to know the complete patient, and tying all the bits and pieces in, and I guess that was the appeal".

Jim also had a hermeneutic/dialogical style of learning, using a question and answer approach based on index cards:

> "I have questions on one side and answers on the other and I put them in groups. I group them all in a big shoebox and then I just pull them out and flick through my cards, because it feels almost as if you're answering a question".

An aspect of Gadamerian and Heideggerian philosophical hermeneutics is their emphasis on ontology. In health care practice this means that interpretive skills become a part of one's being. Jim spoke in ontological terms when he realised that the ability to assess patients, using the PBL approach, was becoming a part of him:

> "the funny thing is you don't think about it [PBL approach] ... You do all these things without actually thinking about it, because this is three years now I've done it, and so I don't actually think about what it was like and how I apply it I guess ... it's such a habit now".

Mary too spoke of assessing a patient who had "glaring cardiac signs", implying that she had now reached a level of expertise where it was simply not possible to miss things like

this. Mary already had some embodied skills as she had previously been a physiotherapist, and realised that

> "physio has helped me more with the history and physical examination side of things … just because it tends to be a little more second nature".

She also seemed to have embodied the PBL process, and said of the third year PBL tutorials that

> "after a while you kind of know what to expect. It seems a bit silly to sit there and ask the same questions that we know that we're all going to ask. We'd rather get to the chunkier end of the PBL and work over that, because they're the things that we don't know so much yet".

Mary, and other students, wanted to devote more time and attention to management, as they felt this was what they needed, rather than revising the basics of assessment with which they all felt more comfortable. Christopher also felt that assessment was becoming second nature:

> "Everyone knows what questions have to be asked … It seems we almost know now what investigations to order".

My research data showed that basic assessment skills were becoming embodied and that their application was coming more naturally to the students. However, they realised that they still lacked expertise in areas such as management, especially when there was co-morbidity present, which could seriously complicate management. Making complex decisions about management required higher level interpretive skills than the students possessed at the time. They realised this and were enthusiastic about devoting time and energy to developing such skills.

George realised that having the assessment process embodied could stand him in good stead even when confronted with pathology that was entirely unfamiliar:

> "The system is quite well ingrained in me by this point. So I know how to run through the process. Again, going all the way back to PBL, that's what has been instilled in us since day one. Even if I don't know what's wrong with this person I know how to work them up. I know how to find anything that is abnormal even if I don't know why it's abnormal".

George gave an example of this from some time spent in an inner city hospital in America:

> "I had a gentleman that I saw in the emergency department in the U.S. who came in with seizures and lots of neuro signs. So I went through the history, and he's a young guy – would've been about 18 and so I was thinking epilepsy, brain tumour. Ran through everything quite well, obviously ordered a CT scan and it came back cystercicosis[8]. … now I would never have thought of that diagnosis in a million years. I'd never heard of it, but I was able to work through the process and do the appropriate investigations".

When prompted to reflect on this experience George said

> "I think that as far as clinical reasoning goes that illustrates that even if you don't know what the pathology actually is, even if it doesn't hang together as anything in particular, if you're running through the system that we've been given, at this stage you're able to at least find out what's going on, and think about what could be going on and direct your investigations appropriately".

Christopher spoke of clinical reasoning in what can be described as dialogical and hermeneutic terms, strongly reminiscent of Gadamer:

> "That was my big revelation of this year, was realising that it's about asking questions. So it's about asking yourself questions and asking yourself the right questions", and elsewhere, "you learn your structure and you flow through it and you ask yourself the questions".

It seems that the growing knowledge and experience of the students becomes embodied within them, providing them with a set of prejudgments which in turn allow particular kinds of questions to be asked. Gadamer's hermeneutic horizon of understanding can be seen as a kind of space in which people orient themselves, and particular kinds of questions can be intelligibly asked and intelligible answers given. It seems the students are aware of this, even if they do not use hermeneutic terminology.

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[8] Cystercicosis is an infection by Taenia solium, the pork tapeworm, acquired by eating raw or undercooked pork containing the larval form of the worm. The larvae can migrate to the brain and cause epilepsy. George's patient was an immigrant from Mexico where he had presumably contracted the disease.

Christopher gave an example in which a particular question briefly confused him:

> "they asked me 'What is going to kill him [the patient]'? I had a mental blank at that stage … and then I eventually realised that it's the bone marrow infiltration … if they'd asked me 'What are the complications of lymphoma'? I may have gone straight to bone marrow failure, rather than thinking 'Why is he going to die?' It is the same question, but I just wasn't thinking about it in that way".

In other words Christopher had adopted a particular orientation within his horizon of understanding, and when a question came from a different orientation he needed to re-orient himself. This re-orientation allowed him to understand the question and answer it.

The clinic staff had further understandings of the hermeneutics or interpretive nature of clinical reasoning. Margaret (physiotherapist) had some insights into the interpretive skills needed in her profession and the kind of questions that needed to be asked:

> "it's the way you ask the questions and the way you interact with the patients. So if you say something like 'Do you do your housework?' If they want to please you they'll say 'Yes'".

However, Margaret knew that rephrasing the question from a slightly different perspective could elicit a different answer. So if she asked the same patient,

> "Well can you put the washing on the line?"

She would be more likely to receive an answer that gave a more accurate picture of the disability. Margaret realised that patients need to interpret the questions put to them and that their responses are constructed in response to many factors, such as the manner in which they relate to the health professional. This is a clear example of the way in which clinical decision making is bilateral and dialogical.

John (psychologist) spoke of gathering pieces of background information in an attempt to understand the patient as a whole:

> "it's not information I can do anything much with, other than understand them a bit better".

Earlier in the chapter we saw how John admitted that the allegedly objective psychometric questionnaires needed to be interpreted in the light of a clinical assessment:

"you've just met with them, and spoken to them, and had an hour's discussion with them where they stayed on track, and yet, according to this questionnaire they should be lying in a vegetative state, catatonic. So it's expressions of need for help that come out of these things".

Penelope (psychologist) confirmed this need to interpret questionnaires:
"usually they're only useful if they're an extreme scorer".
However, at the same time, Penelope was prepared to interpret questionnaires as objective evidence:
"I've had a case where I thought they were quite depressed and the doctor seeing them didn't … I thought they had all of these criteria, and I also had the questionnaire … it's good in that context because it's further objective evidence".

John (psychologist) also discussed the skill of interpreting all the information gathered and deciding which parts were relevant for the rest of the team, so that decisions could be made about the whole:
"my overriding belief is unless you can do something with the information there has got to be a reason for asking it and a reason for collecting it. You have to be able to do something with it. It's got to be valuable … because often they are quite personal and difficult issues, and I don't see the point in distressing people unnecessarily … so I'll give that information [in the meeting] as it's relevant … otherwise I'll stick to the issues that we're actually going to deal with in terms of the [rehabilitation] program that we're running".

We have already seen that the staff needed rhetorical skills for the program to be effective. Conversely, the patients needed to exercise hermeneutic skills in order to make any progress in the rehabilitation program. The staff were aware of this and took measures to assess patients' interpretations and to encourage adoption of new interpretations within the program. John (psychologist) spoke of finding out
"how much insight they've got. What sort of ideas have been put to them, whether they understand those ideas … and try and get some sense of their belief in terms of their expectation of a cure".

Margaret (physiotherapist) understood that rather than treatment *per se* the program was more about teaching, and teaching patients to adopt new interpretations of their lifeworld. The program staff favoured what they described as a Socratic questioning approach, trying to get patients to collaborate actively with them. Margaret described a patient who apparently had acquired a habit of groaning loudly and ostentatiously when he stood up.

This was seen as an unhelpful pain behaviour. Margaret described it thus:

> "it's more a learning model, it's … saying 'Well you go home and think about ways in which you could address these issues of pain behaviours, and then come back to me tomorrow and we'll see what you've thought'. And so the patient went home and rang four people and said 'Well what do you think about this? This has been highlighted to me'. And then his girlfriend said, 'Yes. That's what you do and that's what gets me crappy', and then his mother said, 'God! You've been doing that for four years'. And I said to him, 'Does that [groaning] change your pain? Because if it changed your pain then maybe that's why [you do it]'. He said, 'Actually no. I think it does, but it doesn't'".

It is clear that a large part of the therapy of the program is dialogically based and attempts to fuse patients' horizons of understanding with those of the staff.

Penelope (psychologist) also realised the extent to which patients needed hermeneutic skills in the program when she said,

> "if it's going to work people have to understand that their condition is chronic, that they're going to be living with it and there really isn't a cure. So they have to understand that and accept that. If they don't accept that they're never going to take on board a self-management approach".

Penelope indicated that the patients needed to go beyond merely learning about the new pain management skills and needed, in effect, to embody them and make them their own:

> "this is sometimes part of the problem. They can recite the strategies 'we can pace and plan and prioritise, and do this'. And you have to explain to them 'it's not like going to school where you sit a test at the end, and you've got to have all these skills memorised. It's about actually doing them. It's not about knowing the name for it, it's about how you use it'. So it involves a lot of thinking on their part, and that's where it's difficult for people. Because people think it's this passive process

where we will come in and teach them all the things, and then they'll have it there, and somehow, miraculously, it will all fall into place. But it's the application, thinking about it and doing it that makes the difference".

It can be argued that the program has a strong ontological (being-in-the-world) orientation, encouraging patients to become new people, living out new narratives based on new metaphors. The new narratives and metaphors, once embodied, will in turn lead them to interpret the world around them (and within themselves) in new ways.

Ontology was an interesting issue for two participants in particular. These were the medical student, George, and the doctor, Simon. They had received lengthy training in both Western and Eastern forms of medicine. George had received education in traditional Chinese medicine (TCM) and Indian Ayurvedic medicine. Simon also had training in TCM, especially acupuncture. They both considered that it was possible to assess a patient from either perspective, but not simultaneously. Simon related how he, and other Western health professionals studying acupuncture with him, would attempt to relate the acupuncture concepts to what they knew of Western medicine from the perspective (interpretive horizon) of their previous Western education:

> "we would sometimes discuss these issues 'cause I guess we were coming from a similar background, and our constant frustration was trying to fit the traditional Chinese theory into a Western model. ... your automatic reaction ... was to try to transpose almost one diagnosis and try to work out what that was in a Western diagnosis. And I think, about the end of 12 months, we all came to the same conclusion, was that you just couldn't … do it. ... there is just no link between the two".

Simon discussed the issue of categorisation in diagnosis and how this differed dramatically between the two approaches. It can be argued that this indicates that diagnostic categories are human constructions rather than items found in nature. If our minds are merely mirrors reflecting and representing nature, as is often believed then it might be expected that different conceptual systems should have similar reflections and similar concepts with only minor differences, permitting mapping from one system across to another. This is clearly not the case. This thesis follows scholars such as Rorty (1979) who argued that language as representation is a secondary, derived function. Wittgenstein

(1958) argued that language is primarily expressive. As discussed earlier in the chapter, the view of the Bakhtin circle is more realistic, and it is better to conceive of the mind as a boundary phenomenon, a process that occurs where people interact with each other and the outside world.[9] Simon was prompted to reflect on the issue of categorisation in East and West, and said,

> "it wouldn't matter whether you called 'damp in the kidney' having 'ten elephants in your cranium'. In a sense the label that you give it is almost irrelevant. But people over the thousands of years have identified that these symptoms form a cluster and that this cluster responds to this cluster of treatment, so linking symptoms to treatment; and the diagnosis in the middle, in a sense, is almost irrelevant".

Simon appears to be an adherent of the representationalist view of language with a belief that words are simply labels. Simon's statement illustrates that diagnostic labels are constructions, useful within a particular social practice (a Wittgensteinian language game and form of life) such as TCM. However, practitioners cannot arbitrarily choose labels. The labels must be agreed upon by the community of practice. Western medicine is also a social practice and the insight applies just as much to Western medicine as it does to TCM. All diagnostic labels are constructions, which in turn serve the purpose of constructing patient narratives, and confer legitimacy and moral authority on interventions that re-direct the course of that narrative.

Different metaphors are at work within the two systems. Simon spoke of clusters of symptoms and clusters of treatment. George, reflecting on the comparisons between TCM and Western medicine, said,

> "[in Western medicine] I'd have to be ruling out a lot of things, as opposed to trying to rule in something which seems to be the goal in Chinese medicine ... [in TCM] you're looking to find something that fits a pattern as opposed to excluding pathologies".

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[9] "By its very existential nature, the subjective psyche is to be localized somewhere between the organism and the outside world, on the borderline separating these two spheres of reality" (Volosinov, 1973, p. 26).

Simon said,

> "what you're treating is not pathology, you're treating a constellation of
> symptoms".

The underlying metaphor of TCM seems to be based on ASSESSMENT IS FINDING COMPLEX
PATTERNS (OF ENERGETIC IMBALANCE).

Both Simon and George reported that they now used Western medicine first in an attempt
to exclude or treat acute pathology, but might resort to TCM to manage some chronic
conditions. In terms of Schön's (1983) naming and framing problems to be solved, it
would seem that one practitioner can embody and use more than one diagnostic system,
but sequentially and not simultaneously. George said,

> "I would probably use a Western approach to rule anything out that's serious,
> because I know how to deal with things acutely with Western medicine. With more
> chronic problems I could then go on and further elaborate on that reasoning with a
> Chinese approach".

However, although Simon used acupuncture infrequently, he now used it within a
Western model of medical thinking:

> "So, for example, somebody will come in with postherpetic neuralgia, and I will use
> certain [acupuncture needle] points that have nothing to do with pulse diagnosis or
> tongue diagnosis ... I use a Western, almost physiological approach to treating a
> Western condition. So I've completely switched models".

George revealed something of the part/whole aspect of the hermeneutics of TCM when he
described in detail his TCM assessment of headache:

> "the tongue plays a big part in diagnosis. If you're looking at ... the same diagnosis
> that we're thinking, you'd see perhaps a dryness, a redness of the tongue, ... and
> from there you're trying to fit it into a pattern of the overall energetic functioning of
> the person".

The ontological nature of clinical decision making was revealed in other comments made by George when he was asked to reflect on what he had learned about the nature of clinical reasoning.

"you could think like a physician, you could think like a surgeon, you could think like a psychiatrist".

When encouraged to enlarge on this, George admitted that although this statement was probably oversimplifying, the broad differences in thinking between physicians and surgeons were as follows:

"as a physician you're more attuned to the long-term consequences … whereas in surgery everything is much more immediate. So your thinking is probably more along the lines of … what's the pathology, how do we fix it, and how do we get this person home? … whereas psychiatrists are much more comfortable with ambiguity … most psychiatrists are aware of the fact that people don't really fit into those [diagnostic] boxes as nicely as we might like them to. So they're much more comfortable not having a clear diagnosis".

George gave an example of the difficulty and uncertainty of psychiatric diagnosis, especially when confronted with a patient from another culture, from his time in America. He described a patient suffering from Koro.

"he [the patient] was standing in the doorway of the room, clutching himself. The registrar thought he had to go to the toilet. So he indicated the toilet, and he [the patient] said 'No, no', and he's pointing and indicating, and we have no idea what's going on, absolutely no idea, and eventually got a Laotian interpreter and from there it became quite obvious. He said 'It's going to crawl back up inside me and I'm gonna die'. No matter what clinical reasoning skills that I had there I don't think I would've been prepared for it."

The language issue aside, most Western health professionals would have had difficulty categorising a problem such as Koro[10], beyond realising that there was a psychiatric disorder of some sort present. Koro is simply not within their horizon of understanding.

7.9.1 Commentary

My research data supports the findings of Svenaeus (2000), who adopted hermeneutic phenomenology to examine the nature of health and medical practice. Svenaeus's discussion can be extended to most health professions. The dialogue between health professionals and their patients, and among health professionals, is a central feature of clinical encounters. Svenaeus argued there is a strong case for using Gadamer's dialogical hermeneutics as a lens to deepen our understanding of these encounters.

This is in contrast to attempts such as Leder's (1990) to develop a hermeneutics of medicine based on text interpretation. Svenaeus's criticism of Leder was that text interpretation implies that patients are static texts, whereas Gadamer's dialogical hermeneutics is more dynamic and more true to the living clinical encounter. It can be argued that Gadamer's hermeneutics allows a better integration of hermeneutics and narrative. This is because a central part of the clinical encounter is the re-interpretation of the patient's narrative in professional terms, and this is done dialogically as a shared project between health professional and patient. This is especially true of the pain clinic in my study, where much of the therapy in the cognitive behavioural program depends on re-negotiating the meaning of a patient's pain. The negotiations in the pain clinic meetings and in the students' PBL sessions were also dialogical interpretations designed (knowingly or unknowingly) to construct a new patient narrative.

Svenaeus (2000) described Gadamer's hermeneutics as applicative, meaning that it can be applied to real world problems and is not only for abstract theorising. Svenaeus discussed

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[10] Koro is described in South East Asia, although cases have been reported in Africa. It is the morbid fear that one's genitals are retracting into one's body and will bring about a rapid death when they do so. Sufferers have been known to go to extreme lengths to prevent what they see as their imminent demise, such as impaling the offending member or cutting it off. George's patient was, apparently, seriously considering these options. Koro should not be confused with Kuru. Kuru is a neurodegenerative disorder, a form of Creutzfeldt-Jakob disease, and due to an infection by a prion. It was described in parts of Papua New Guinea in regions where endocannibalism was practised. It was contracted by eating the bodies of one's close relatives.

the "hermeneutics of suspicion peculiar to medicine" (p. 150), also described as the hermeneutics of attention and action. This simply means that there is an assumption that the patient's account of a problem is incomplete, needing a re-telling within the discourse of a health profession, together with therapeutic action to become more complete. However, there is also the hermeneutics of suspicion (and revelation), peculiar to the various forms of psychotherapy. Here the assumption is that the patient's account is systematically distorted. This latter was more obvious in the pain clinic data. For example, a large number of chronic pain patients clearly thought that ongoing pain meant ongoing physical damage. A large part of the therapeutic effort of the health professionals in the clinic was devoted to helping patients to re-interpret their pain and reveal its meaning within a narrative that the staff saw as less distorted and more conducive to a normal life.

If we follow Gadamer, there are other kinds of hermeneutics (Grondin, 2002). These were revealed in the data. The preoccupation of some of the medical students with asking the right questions can be seen as methodological hermeneutics. Here the focus is on the cognitive and epistemological concern of finding out what is wrong with a patient. Then there is a version of hermeneutics described as practical know-how, the understanding one needs to exercise a skill, with less emphasis on specific conceptual knowledge. This is based on Aristotle's notion of phronesis. According to Grondin, this form of hermeneutics is more ontological, more concerned with one's being-in-the-world. The medical students showed that they were beginning to acquire this form of hermeneutics. Many realised that asking the right questions arises out of a particular orientation, a way of thinking about practice in general. George's insight was that physicians, surgeons, and psychiatrists had slightly different ontologies, slightly different orientations to patients and the kind of questions they were likely to ask. The third kind of hermeneutics that Grondin attributed to Gadamer is a hermeneutics of agreement, which brings us back to dialogue. The intention in a dialogical hermeneutics of agreement is not to simply recover one party's meaning, but to negotiate a new meaning that is mutually acceptable to all the parties concerned. This occurs in most clinical encounters, and was particularly evident in the clinical meetings of the pain clinic. Here, negotiation among the team of health professionals brought about a new narrative understanding of patients' problems in a way that was unavailable to any one of them alone.

Knowledge is an aspect of our experience of the world, and according to Gadamer, experience and our understanding of that experience are always historical, linguistic, and dialogical. This view also fits with Schön's (1983) view that being a professional is a particular way of being-in-the-world. At least one medical student found that she did not need to explicitly ask some questions, as the patient had "glaring cardiac signs". In other words, these clinical signs were answers to questions she could not ignore even if she had tried to. The "naming and framing" described by Schön (1983) that allowed her to see the "glaring cardiac signs" were now a part of her being. Her experience of medical education and using the language of the profession had changed her. Woolfolk *et al.* (1988, p. 17) summarised this ontological aspect thus:

> Understanding, and especially understanding through language, is a primary form of being-in-the-world. Human beings not only come to know through the hermeneutic process, but are formed and constituted by it. This process of self-formation and self-understanding can never be final or complete.

This connects with the work of Vygotsky (1978, 1986) who also understood the degree to which the tools and artefacts that people use change those who use them, just as much as those tools change things in the environment.

This insight is also borne out by the two people with experience of working within both Eastern and Western health systems, who spoke in terms of assessing patients from within one system or the other but not both simultaneously. The two systems are not merely different category systems; they are different lifeworlds, two different ways of being-in-the-world. The two lifeworlds are essentially incompatible, and the informants had, in a sense, to step from one into the other and back again. There was a minimal fusion of horizons, because of the vast differences in category systems and underlying metaphors.

7.10 Conclusion

All the themes discussed above can be conceptualised as Vygotskian cognitive tools, and they are all part of the Wittgensteinian language game called clinical decision making. Underlying metaphors, discpline-specific and generic professional terminology, category systems, heuristics, and rituals are all learned and mastered to enable health professionals

to construct a narrative, a story about each patient. Hermeneutic skills are used to construct the narrative. The narrative is communicated to other people rhetorically, in such a manner that it can be interpreted as being legitimate, authoritative, and carrying moral power, and the narrative can be used as a basis to decide on management, which in turn will continue the patient's story.