Chapter 6 Findings Part 1: Overview of Main Findings

6.1 Introduction

In this chapter I present the first section of my findings from the data analysis. The main themes in the data are introduced, together with a model (the “iceberg” model) that synthesises them into a whole. The model is followed by a vignette which describes a typical (fictional but realistic) incident in the multidisciplinary clinic where the study took place. The vignette brings together and illustrates all the themes identified in the data in a manner very similar to the way that many of the participants experienced them. Excerpts from the data substantiating the analysis are presented and discussed in more detail in the next two chapters.

Adopting a Gadamerian hermeneutic stance towards the transcripts and field notes required an intense dialogue with the texts. Exercising a sensitivity to the aspects of language use in clinical decision making, I read all the transcripts and field notes several times closely to gain a sense of the whole. Then I read the texts again several times in order to articulate the meanings in the texts, making a conscious effort to be aware of my prejudgments and biases, so as to be fully open to what the texts might be saying in response to the research questions. Some readings were done with a conscious effort to set aside the research questions and ask “What is the text saying in and of itself?” Giorgi’s (1997) principles for phenomenological research were also influential. A number of themes were drawn from the data and then synthesised into a theoretical model for language use in clinical decision making, as experienced in the collective settings of PBL tutorials and a multidisciplinary clinic.

6.2 Themes

6.2.1 Words and Categories

Clinical decision making is a complex phenomenon that depends on the integration of different aspects of language use. At the foundation are the very words and utterances that form the building blocks of language itself. Without knowledge of the correct jargon (terms, concepts, acronyms, etc. used by the group concerned) and knowledge of where and when to
use it correctly, it is difficult, if not impossible, to appreciate what the clinical problems are that need to be solved, let alone how someone might go about solving them. The jargon is, in turn, used as a foundation for the various category systems that health professionals need in order to conceptualise clinical problems and their solutions, so making them manageable. The medical students quickly learned to coordinate different category systems, such as the physiological with the pathological. A systems review would be coordinated with a “surgical sieve” (to sift/sort the relevant clinical data). Modern Western health care is founded upon the basic medical sciences of anatomy, biochemistry and physiology. However, some of the medical students who had learned a great deal of this medical science, immediately prior to starting their medical course, found that this knowledge had to be radically reorganised (recategorised) and case-based in order to be useful when assessing patients. In Wittgenstein’s (1958) terms these students had entered a new form of life with a new language game. The community of practice that constitutes medical practitioners is different from the community of practice made up of medical scientists, and knowledge that overlapped the two communities had to be reorganised and extended in ways that were more useful in the new community.

6.2.2 Metaphors

Metaphors can be thought of as a continuation of the categorisation process, as more abstract categories can be conceptualised with ideas borrowed from more concrete and more easily understood categories. An instance is the metaphor, THE BODY IS A MACHINE, that seems to underlie the biomedical model. Metaphors, in turn, suggest ways for us to see the relationships between categories, and therefore how we might go about adjusting them if this is deemed necessary. For example, when a patient presents with toothache, the metaphor THE BODY IS A MACHINE suggests to Western dentists that toothache is an effect of something directly irritating the dental pulp, and when the cause is found its removal will cure the pain. A metaphor based upon the ancient Galenic notion of humoural balance would prompt a health professional to look for the humoural imbalance that could be leading to pain.
This is similar in many ways to the energetic imbalance metaphor that a traditional Chinese medicine practitioner uses. The treatment and end-result could possibly be identical across the various conceptual systems, but the conceptualisation and clinical reasoning are radically different. In Gadamerian terms there are different health care traditions, based upon different metaphors, prompting different dialogues, with different questions and different answers.

6.2.3 Heuristics/Mnemonics

Heuristics and mnemonics are language tools that enable health professionals to manage an enormously complex and growing body of knowledge in ways that lend themselves to the clinical reasoning required when dealing with patients in the real world. The students in this study who made maximum use of mnemonic and heuristic tools found that assessing complex cases became relatively straightforward. All the health professionals in the clinic reported that they needed to use similar devices in order to do their jobs. In Vygotsky’s terms, heuristics can be seen as artefacts that are constructed as cognitive tools to make a task easier to perform.

6.2.4 Rituals

Ritual plays a part in at least two important aspects of clinical decision making. All participants described following set protocols for gathering information. Following a ritual allows the process of gathering relevant information, using the various heuristics and mnemonic devices, to become habitual and routine. The health professional can then concentrate on diagnosing the patient’s problem and planning treatment without having to be distracted with thoughts about what should be asked for next. In hermeneutic terms, the health professional acquires a tradition that provides the questions to be asked and even the approximate order in which to ask them, as well as the expectations and standards about what will be considered as an appropriate response. This tradition is provided by the community of practice that is the health profession, and into which a health professional is socialised.

Ritual use of language also has a performative role. When a health professional makes a statement such as “My diagnosis is that the patient has cancer”, it is a moral and social event with serious consequences, in much the same way as ritual statements in other contexts, such
as “We, the jury, find the defendant not guilty” or “I hereby pronounce you husband and wife”. Performative statements change social relationships and have serious moral implications (Austin, 1975; Wittgenstein, 1958). Such performative and ritual use of language carries a powerful rhetorical force, that is, the presentation of a powerfully persuasive argument.

6.2.5 Narrative

All the language aspects mentioned above contribute to the construction of narratives about patients. The data in this study offers strong support for the notion that clinical reasoning is, for the most part, an exercise in narrative construction. This study lends support to the growing body of literature (e.g. Bruner, 1992; Carr et al., 2005; Charon & Montello, 2002; Greenhalgh, 1998) that contends that humans naturally think in narrative terms. Accepting the centrality of narrative to human nature has major implications. For example, narrative permits reason and emotion to be easily integrated. Vygotsky saw this integration as important when he claimed that without such integration it would be impossible to ever understand cognition. Vygotsky argued that when we consider cognition, “the first question that arises is that of intellect and affect” without which “the door is closed on the issue of the causation of origin of our thoughts” (Vygotsky, 1986, p. 10).

Narrative has now been incorporated into ethical debates that can be of direct relevance to clinical decision making. Narrative ethics attempts to integrate narrative with the basic ethical principles of autonomy, beneficence, nonmaleficence and justice and, through this integration, narrative humanises ethical debates. The absence of narrative restricts such debates to abstract discussions that are limited to weighing up the principles against each other in a semi-quantitative manner. Users of a narrative approach to ethical discussion attempt to see these principles in the context of the individual and particular human stories where ethical quandaries arise and need to be settled (Charon & Montello, 2002).
6.2.6 Rhetoric and Hermeneutics

Rhetoric and hermeneutics depend upon all the aforementioned aspects of language being used in concert. Aristotle saw rhetoric as being the converse of dialectic. In Aristotle’s time, dialectic meant simply logical reasoning, with rhetoric as the study of how that reasoning could be communicated persuasively to others. In modern times the notion of dialectics has evolved into a particular way of conceptualising and reconciling contrasting ideas. However, as discussed in Chapter 4, the notion of dialogue as espoused by Bakhtin and Gadamer can be seen as a richer and more dynamic way of comparing and contrasting ideas. Dialectics can be seen as a subset of dialogicality. Gadamer’s philosophical hermeneutics is strongly dialogical, and I propose that philosophical hermeneutics, which incorporates dialectics, be considered as the converse of rhetoric, rather than dialectics *per se*.

Rhetoric and hermeneutics are both needed when communicating clinical decision making to other people. The other people are usually the patient and his/her family. However, in a world of increasingly complex health care the audience of a clinical report includes, more and more often, other health professionals. It appears that some of the feedback that a few of the medical students received after presenting their long cases amounted to encouragement to be more persuasive in their delivery of such reports to senior doctors, in other words to be more rhetorical. This rhetorical power can be seen as coming from a combination of all the various components of the iceberg model (below), with all the different aspects of language use being coordinated.

When presenting “long cases”, the medical students needed to use the correct jargon in the correct manner. They needed to describe and discuss their findings within a number of categories, which in turn would demonstrate thorough assessment of the patient. They needed to show that they had followed reliable protocols. They needed to present all their findings in one coherent narrative, in a ritualised manner, and to present this narrative in a way that would easily persuade a senior doctor that their assessment had been legitimate, thorough and professional, and could be relied on as a basis for making decisions for future action. For example, much of the persuasive power of a clinical report amounts to a series of rhetorical arguments based on the structure of reality, such as the notion of cause and effect. The
clinical report says in effect, “These are the cause and effect relationships existing in this case”. In rhetorical terms this is called a liaison of succession (Perelman, 1982).

In this study there were examples of another rhetorical feature, often described as the argument from authority. In the PBL tutorials the group nearly always deferred to the students and tutors who claimed to have prior experience and knowledge of an issue under consideration. This was also observed in the clinic, where health professionals were accepted as authorities in their own field, and when discussing issues within their own field were rarely challenged by colleagues. Discussion tended to occur where there was overlap in knowledge and expertise.

Whoever they might be, patient or fellow professional, the audience of a clinical report needs to be persuaded that the clinical decision making process is intelligible, legitimate and trustworthy. Health professionals need to develop and master rhetorical skills in order to communicate a clinical report, and hermeneutic skills in order to receive one. Health professionals need high level and specialised hermeneutic skills to integrate all the findings that emerge during assessment, constantly moving back and forth from part to whole to emerge with a coherent narrative of a patient. Assessment of patients and clinical decision making can be seen as a hermeneutic dialogue between the health professional and the patient. In Gadamerian terms the patient is a text-analogue. The narrative constructed about the patient can be seen as the evidence of a dialogue that leads to the merging of horizons between health professional and patient.

The verbal and written reports commonly used in clinical practice are the visible and audible results of clinical decision making. However, most of an iceberg is hidden below the surface of the ocean, and in a similar way clinical reports are built upon and supported by the various aspects of language, not normally noticed. These are the language conditions that permit clinical decision making to occur.
6.3 The Iceberg Model of Language in Clinical Decision Making

The themes are synthesised into the following model (Figure 6.1).

Figure 6.1 The clinical decision making “Iceberg” model.

Verbal and written reports are publicly available, but are supported by, and founded upon, a complex interaction of underlying language phenomena, largely unnoticed by practitioners. The iceberg model for organising ideas came from Fish and Coles (1998, p. 306).
Clinical decision making depends on these aspects of language which are in turn interdependent upon, and presuppose, each other. Words and utterances form the foundation for categories and category systems. Categories allow us to have metaphors to understand abstract categories in terms of more concrete categories. Mnemonics and heuristics allow the metaphors and category systems to be both manageable and sophisticated, while ritual permits them to become easily embodied. These all form the foundation for narratives, which in turn are converted into verbal and written reports. The process of formulating these reports must also confer upon them a certain rhetorical force, so that the recipients of the reports can easily interpret them and be persuaded to accept them as intelligible, legitimate and authoritative. This does not preclude the (often preparatory) stages of reporting unanswered questions and referral of the patient for consultation by other specialists/professionals. Here the rhetoric and persuasion can be in the form of convincing knowledge/narrative of what is known and within one’s professional expertise, alongside recognition of unanswered questions.

For Vygotsky, language was the tool of tools. All these various aspects of language use are cognitive tools, and need to be mastered by those who would be competent at clinical decision making. As with any tool, an expert can do routine tasks quickly and almost without conscious thought. In conditions of uncertainty even an expert will need to pay conscious attention to the tools used, and use judgment, based on experience and background knowledge, as to which tools are needed, and the subtleties of using them in order to successfully complete the task at hand.

6.4 The Social Nature of Clinical Decision Making

Despite the hidden nature of the various aspects of language and their use, my thesis in this research project is that clinical decision making is a “languaged” phenomenon and is essentially a social act, even when performed alone. This centrality of social construction follows the ideas of Wittgenstein, Bakhtin and Vygotsky, as articulated by scholars such as Gergen (1999), Shotter (1993a, 1993b) and Toulmin (1979, 1999). For example, Toulmin (1979) pointed out that the inwardness of our mental lives is not nearly so private and interior as we often think it to be. Inwardness is frequently an acquired aspect of our experience. In
many ways our mental lives become inner because we make them so, and we do so for very
good reasons. For example, when the people of the fourth century first saw St Ambrose of
Milan reading silently to himself he was taken for a magician. It seems that nobody had done
that before, and what seemed magical was that he could do this strange act of silent reading
far more quickly than people could read aloud. It would seem that reading silently is a
cultural invention. The public practice of reading aloud has become internalised. This applies
to many other internal activities such as doing arithmetic and, it can be argued, also applies to
thinking and clinical decision making. Vygotsky (1986, 1978) Bakhtin (1986) and
Wittgenstein (1958), have all argued that thinking is the internalisation of talk we have with
others, and that in learning to think we learn to have dialogue with ourselves. Vygotsky
argued that inner speech learned as a child then forms the scaffolding for more abstract
learning. How do we know if inward activity is correct? Wittgenstein (1958) showed that we
must use exactly the same criteria as for public performances of the same activity. We have
to use exactly the same tests to establish the correctness of mental arithmetic and arithmetic
done with paper and pencil. There are no private criteria of correctness, there are only public
ones. This also applies to clinical decision making.

The inwardness of thought and clinical decision making is not synonymous with activity in
the central nervous system. Toulmin (1979, p. 8) summarises the situation thus:

The internalization of skills may be associated with interior neurological changes;
but it is by no means to be equated with those changes. What makes reading or
doing sums, thinking or talking to ourselves elements in our inner lives is, precisely,
the fact that we can contrast the internalized versions of those activities with their
alternative, overt, and public versions: reading audibly and figuring on paper,
thinking aloud and talking with other people. In the required sense, therefore, not all
our mental experiences are inner ones: they are properly inward only to the extent
that they have been internalized – only, that is, to the extent that we have had reason
to internalize them.
There are many good (social) reasons for learning to do things inwardly. Reading silently is much faster than reading aloud. Keeping one’s opinions to oneself rather than speaking them out loud can be prudent behaviour. It is both expedient and discreet for health professionals to make clinical decisions in silence. However, placed in situations where clinical decision making is part of a team effort means that such decisions have to be articulated for other health professionals, and possibly justified, with the final decision being the result of negotiation and compromise. Health professionals engaged in collective clinical decision making have to be aware of their reasoning in a way that solo practitioners are not.

6.5 Vignette

In keeping with the hermeneutic phenomenological approach of providing rich text description of the phenomena being investigated I present here a vignette to provide a description of collective clinical decision making in practice.

Setting: a multidisciplinary pain clinic – physiotherapy department and later the conference room

Janet’s last patient of the morning had been late, which immediately put pressure on the whole team to complete adequate assessments in time for the midday meeting. In addition there were students to supervise. The referral letter for the patient from the general practitioner was brief but to the point and fairly typical. The patient had been suffering from chronic back pain for some years and had sought relief from an impressive number of different health care practitioners including chiropractors, naturopaths, other physiotherapists and a surgeon. Janet reminded the student, who was to do the assessment, of all the main topics to be covered and to watch the time. She encouraged the student to not be embarrassed about referring to the checklist that had been provided to the students when they first came.

When the patient came in Janet watched carefully and noted her stooped gait as well as the way her husband fussed over her to make her comfortable. After the introductions the student began taking a history and this went well to start with. However, it wasn’t long before Janet had to step in and gently redirect the process.
The patient had started giving minute details of the various things that other physiotherapists had done, such as exactly how often heat packs had been administered, and for how long, and the exact duration of the partial but temporary relief achieved each time. “Thank you for that, Mrs. X. Can you tell us about your daily routine? What time do you get up most days?” It was already clear that the other physiotherapists had applied passive treatments, and, as was usual in these cases, relief was short-lived. They didn’t need more details about that, but the activities of daily living were much more relevant, which was why Janet now guided the interview in that direction. The rest of the interview proceeded well, although it was obvious to Janet that the student had to work hard to keep things under control, even with the checklist to refer to. The answer to every question in every category seemed to be yes, which meant that every answer seemed to open yet another avenue of questions that needed to be asked. However, with no more interruptions from Janet a comprehensive history covering the relevant categories was taken in a reasonable amount of time.

They then moved on to the physical examination. Janet noted the degree of assistance the husband provided when he helped his wife cope with dressing and positioning herself on the examination couch. The student was well trained and performed a thorough musculoskeletal examination with no intervention from Janet, smoothly working through the assessment in a well-practised routine that already seemed to be second nature. As soon as the patient left, Janet asked the student’s opinion of the patient’s problems and what should go into their report for the midday meeting, reminding her that because of the delays due to the patient’s lateness there wasn’t much time left. The student had observed several assessments in the clinic by now and had started to learn what the other physiotherapists put in their reports, together with what the other team members at the meetings wanted to hear from the physiotherapists.

“It seems like a straightforward case of failed back surgery. Five years ago the patient developed chronic low back pain of non-specific origin, after lifting a box at
home. She had surgery two years ago for a ‘slipped disc’ which provided temporary relief. She’s not coping with the pain and has let it completely dominate her life. She’s stopped working and the husband doesn’t help. He thinks he does, but his actions have encouraged her to become an invalid, and she’s developed a number of secondary problems due to physical deconditioning”. The student started to give a lot of detail about the degree of tightness in various muscle groups and Janet interrupted to remind the student that the other team members didn’t need to hear that level of detail, and the report would need to be limited to key findings. The student went on, “She spends most of her time lying around in an attempt to gain pain relief. Her sleep pattern is all over the place. The medication doesn’t provide pain relief but she gets all the side effects. She’s also started to drink in an attempt to get some relief”.

“Good” said Janet, “and what do you think can be done to help her here?”

“Well”, said the student, “her goal is to be able to do more around the house and get out more. She doesn’t want to go back to work. She hated her job, and she doesn’t need to work. I don’t see ‘return to work’ as a viable goal. The cognitive behavioural therapy program here should help her, especially as it includes the kind of active physiotherapy that will encourage her to get moving again. She would benefit from learning some better coping skills instead of resorting to rest, analgesics and alcohol, and she needs to re-establish a more normal daily routine”.

“Well done”, said Janet. “I’ve also made some notes, but you’ve summarised well what I think you should say”. Janet realised time was short, and so they grabbed their sandwiches and went into the conference room where the other team members were already gathering.

The meeting soon started. Janet’s last patient was discussed in the middle of the meeting. The doctor who had seen the patient spoke first. As the doctor spoke Janet listened and checked her notes for the patient. The doctor spoke authoritatively and with the confidence that came from several years experience of assessing and
managing similar patients. The doctor mentioned the patient’s poor response to analgesic medication and at this point Janet crossed off an identical item in her report. The point had been made and repeating it would be mere repetition. She knew from her early experience working in the clinic that pointless repetition annoyed the other team members. There was never much time and they wanted to hear things that mattered, things they could do something about. The doctor also mentioned the over-solicitous spouse who had helped the patient when she prepared for a neurological exam. Janet underlined a similar item in her notes. The physiotherapists had made the same observation but she wanted to briefly emphasise it when the physiotherapist’s report was given, as she believed this was important and would affect any treatment they offered. The husband would need some degree of education if he was to be of real help to his wife and not undo their work in the clinic.

The physiotherapy report was soon given, and Janet was pleased to see that the student spoke with confidence. With such a straightforward case the report took little more than a minute. The psychologist then gave a brief report. Janet couldn’t help but listen with a little caution, as this psychologist was relatively new, and newcomers sometimes took some time to understand the ethos of the clinic, and what the clinic could and could not do, together with the kinds of management that were preferred in many cases. However, the psychologist’s report concurred with Janet’s impression of the patient, and was delivered in a thoroughly professional and confident manner. The psychometric questionnaires had already been scored, and the psychologist used these scores to substantiate his report. The psychologist’s report revealed that although the patient had some degree of depression it seemed to be largely due to pain. The psychologist confirmed Janet’s finding that the patient was convinced that the ongoing pain meant continuing damage was occurring in her spine, and this belief made her anxious to avoid movement as much as possible. It also turned out that the patient’s parents had both died shortly before the original back pain began, implying that mourning and grief had become wrapped up with the pain experience as well. The case discussion was brief. The doctor was of the opinion that no sinister “red flag” conditions were present, and there was no treatable
pathology. The patient had been thoroughly investigated over the years and further scans, etc., would be of little use. There was some brief talk from one of the junior doctors of trying medications against neuropathic pain, but the patient’s descriptions of her pain were inconsistent with this diagnosis and this was quickly but gently dismissed. More invasive procedures were briefly discussed, but in the end the conclusion was that the patient would be best served by attending the CBT program. This would have a number of specific aims, such as completely reducing the use of medication (and alcohol) for analgesia, mobilising the patient in keeping with her goals of being more able-bodied and getting out more, together with improving sleep hygiene and teaching cognitive techniques for coping with pain and any flare-ups. The program would also include some education for both patient and husband that the pain was now permanent and could not be cured, and that therefore it was futile to continue looking for a cure. The education would also emphasise that this pain did not mean there was ongoing damage. There was nothing broken that needed repair. They would learn that there were ways of minimising the pain and that a relatively normal life could go on despite it. The team were content with the decision and moved on to the next patient.

This vignette illustrates many of the themes that are described and discussed in more detail in the following chapters. Using a vignette in this way is in keeping with a hermeneutic phenomenological approach with its emphasis on movement between parts and whole. The vignette and the model summarise the whole, and the themes are the parts. Both are based on the experiences of the participants and their interpretations of those experiences.

The characters in the vignette needed appropriate words in order to speak to the patient and each other. The assessment, and later discussion, of the patient was organised by the category systems that the health professionals employed. For example, the activities of daily living and the typical daily routine constituted categories of information that the physiotherapists routinely sought. Mnemonic devices were used to keep control of the assessment so that nothing was left out. The assessment included ascertaining the beliefs of the patient and their underlying metaphors so that these factors, along with clinical data collected, could be used
as input to the decision making process. The patient was convinced that ongoing pain meant continuing damage was occurring and was naturally reluctant to do any movements that exacerbated pain. The assessment, in being guided by mnemonics, was ritualistic in nature. A detailed history was taken followed by a physical examination, which all occurred in a set order that would vary only slightly from patient to patient.

The clinical meeting also followed a ritualistic format for presenting and discussing patients. The doctor presented his/her report first, followed by the physiotherapist and then the psychologist. The clinical team exercised considerable narrative skill in coordinating their reports about the patient to produce one report they could all agree on. Rhetoric was employed to persuade the other team members that each individual report was legitimate and authoritative. The rhetorical power came, in large part, from showing and implying that the assessment had been done professionally, and that all the other aspects of language had been used thoroughly. Hermeneutics would be employed throughout the incident. The assessment involved relating parts (the answers to specific questions) to the whole (the construction of a patient narrative and report). During the meeting, hermeneutic skills were employed in the coordination of the different reports in order to produce the final team report. For instance, the second and third presenters needed to understand how their prepared report needed to be modified to avoid duplication and time-wasting, and also to strengthen some arguments or points of dispute to highlight matters they thought were important for the group to consider.

6.6 Conclusion
Clinical decision making is a complex language phenomenon. The verbal and written reports presented in clinical practice depend on features of language such as ritual, narrative, rhetoric and hermeneutics. These are all key aspects of shared reasoning and the communication of reasoning and they intimately relate to each other. They are in turn founded upon words, categories, metaphors and heuristics.