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MAKING SENSE OF TRADITIONAL CHINESE MEDICINE:

A COGNITIVE SEMANTIC APPROACH

by

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SUMMARY

Cognitive linguists posit that language as a system of meaning is closely related to cognition and to the associated perceptual and physiological structures of the body. From the cognitive semantic viewpoint, cognitive processes underpin and motivate linguistic phenomena such as categorisation, polysemy, metaphor, metonymy and image schemas. The pedagogical implication of the cognitive semantic perspective is that understanding these cognitive motivations facilitates language learning.

This dissertation uses an applied cognitive semantic approach to ‘make sense’ of a traditional knowledge system, Traditional Chinese Medicine (TCM). TCM views human physiology as a holistic and dynamic system that exemplifies the same principles as the cosmos-environment. TCM models result in a categorisation of physiological phenomena based on a complex system of experiential and cosmological correspondences. I suggest that the holistic epistemology of cognitive linguistics is well suited to an understanding of these holistic models. From a pedagogical viewpoint, I argue that an analysis of the cognitive motivations which underpin TCM categorisations and the polysemy of some key TCM terms can help the student make sense of TCM as a meaningful system of thought and practice.

Both the theoretical and applied approaches explored in this dissertation should have relevance to other traditional knowledge systems, particularly traditional medical systems.

Key terms:

Applied linguistics, Cognitive linguistics; Cognitive semantics; Polysemy; Metaphor; Metonymy, Semantic chaining; Epistemology; Terminology; Traditional Chinese Medicine; Traditional medicine; Integrative medicine; Holistic medicine; Holism

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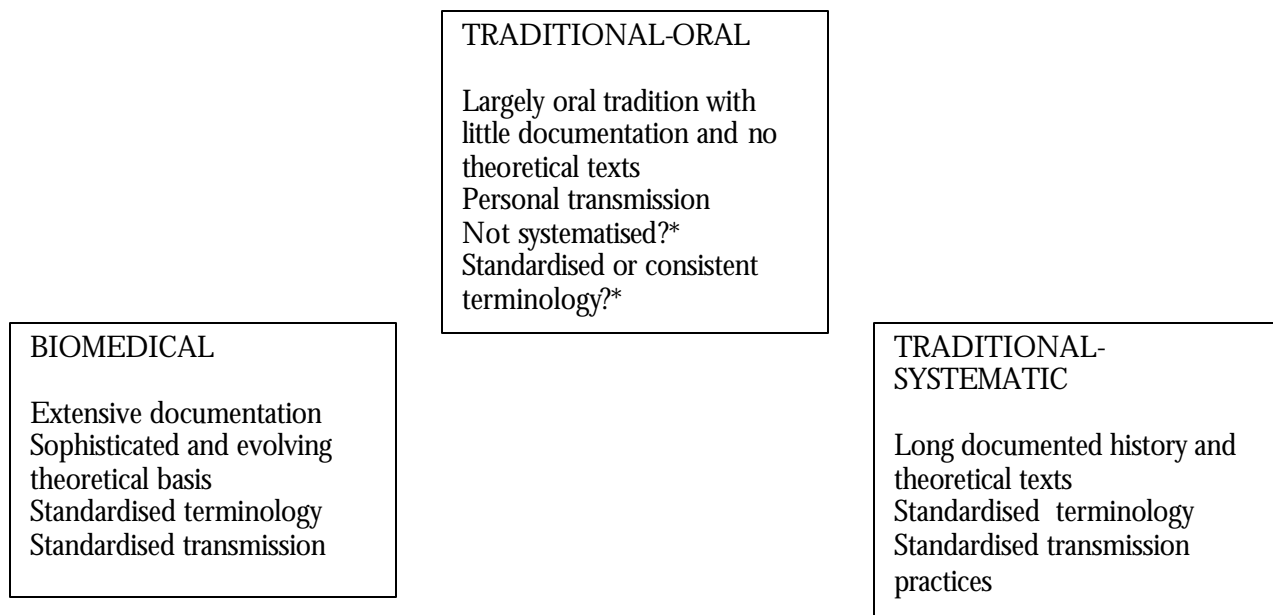
Chapter 1: INTRODUCTION

In this chapter I outline the general and specific research problems involved in 'making sense' of Traditional Chinese Medicine (TCM). I argue that these problems can be considered as applied linguistic problems in which the student needs to acquire knowledge of an additional conceptual and linguistic system. Because of the considerable differences between traditional and modern knowledge systems and terminology, I suggest a well defined theoretical approach to meaning and context is required. I recommend a cognitive semantic approach which emphasises the experiential basis of cognition and the cognitive basis of language.

1.1 The general context of the research problem

This dissertation arises from a practical problem which entails a number of theoretical issues. In its most general interpretation this practical problem is ***how to 'make sense' of different knowledge systems***. This problem is especially pertinent in a diverse or multicultural society. Where there is diversity there is always the danger of dominance in which one point of view is subsumed by the other, or misunderstood to its detriment. Understanding each knowledge system on its own terms without distorting the original intent and coherence is important not only for the sake of knowledge but for the sake of maintaining diversity and mutual respect.

The particular context in which I address the problem of 'making sense' of a different knowledge system is a South African university medical school introducing the study of traditional medical systems. To clarify some of the issues that need to be addressed in this context, I have drawn a distinction between three types of medical systems: the modern biomedical, the largely oral traditional and the theoretically systematic traditional medical systems. These systems are characterised in Figure 1 below.



* Further research would be needed to determine if traditional orally transmitted medical systems are theoretically systematic and to what extent terminology is consistent among practitioners.

Figure 1 Different types of medical knowledge systems

The modern biomedical system is the dominant paradigm at the university currently. Both its theoretical and applied approaches can be viewed as consistent with other programmes in the sciences. The various traditional systems are only just beginning to be introduced into the medical school curriculum. What I have called the ‘oral traditional systems’ include many of the South African traditional medical practices which are very influential in South African society. What I have labelled the ‘systematic traditional systems’ include the Ayurvedic (Indian), Unani-Tibb (Greco-Arabic), Sowa Rigpa (Tibetan) and Traditional Chinese medical systems (see Bates 1995b) which are less well-represented in South African society but more accessible in terms of their extensive documentation and often standardised transmission practices.

The distinction between these three types of medical systems has been made for the purpose of underscoring factors which need to be considered when proposing new educational approaches. In reality, such distinctions may be blurred as each type influences the other. For instance, it appears that most systematised traditional medical systems have evolved from and are still to varying extents informed by oral traditions (Unschuld 1985) while biomedical and scientific research on traditional *materia medica* and therapies has influenced both traditional and biomedical systems (Hillier and Jewell 1963). In any case, theoretical systematisation and standardisation of transmission practice does not preclude a diversity of approaches flourishing beyond the institutional borders. Nevertheless, acknowledging differences in

the world views, theories, models and in the terminology used by these different types of medical systems may be critical to 'making sense' of them.

1.2 The specific research problem

In this dissertation, I focus on 'making sense' of one of the systematic traditional systems, the ancient and well-documented traditional Chinese medical system. However, I believe that the approaches investigated here should be relevant to the other traditional medical systems and, to some extent, to indigenous knowledge systems in general. The specific research question addressed in this dissertation can be defined as ***how to make sense of TCM in the context of a modern medical school in an English medium educational institution***. The phrase 'make sense' is used to highlight the fact that learning about a different knowledge system entails some kind of bridging between what is familiar and what is unfamiliar. The learner is constructing new knowledge and a new perspective, not merely adopting unfamiliar concepts and terminology or imposing the known on the unknown.

Traditional Chinese Medicine (TCM), like other traditional knowledge systems, is characterised by unique ways of thinking, concepts and terminology. These stem from ontological and epistemological perspectives which appear to be far removed from the modern secular and scientific paradigm – a paradigm that prevails at most institutions of higher learning particularly in the highly empirical and 'objectivist' biomedical disciplines. These fundamental differences in perspective make it difficult for students, particularly those with no background in the Chinese language, to 'make sense' of TCM conceptualisations of health, disease, diagnosis and treatment and to understand the models and terminology used – the 'language' of TCM.

1.3 An applied linguistic approach to the research problem

In this dissertation, I suggest that the research problem can firstly be approached as an applied linguistic problem. On the one hand, TCM can be considered as a Foreign Language (FL) because it is largely expressed in classical and modern Mandarin and on the other hand as a Language for Specific Purposes (LSP) because it involves discipline specific terminology. Because it is not essential to understand the Mandarin language (FL) as a whole but rather those concepts and terms essential to the theory and practice of TCM, I argue that learning TCM can be considered as learning an 'additional medical language'. In this sense, the term 'language' indicates a way of thinking and speaking which is both culturally and technically specific. It may require only a minimal understanding of the Mandarin language but requires a thorough understanding of the cultural context and conceptual structure of TCM, as well as its terminology (see Figure 2 below). In Chapter 4, I analyse a number of these key concepts and terms

which have no equivalents in English. These terms are best learned in the original Mandarin but require extensive explication so that their meaning and the semantic environment in which they make sense is fully understood.

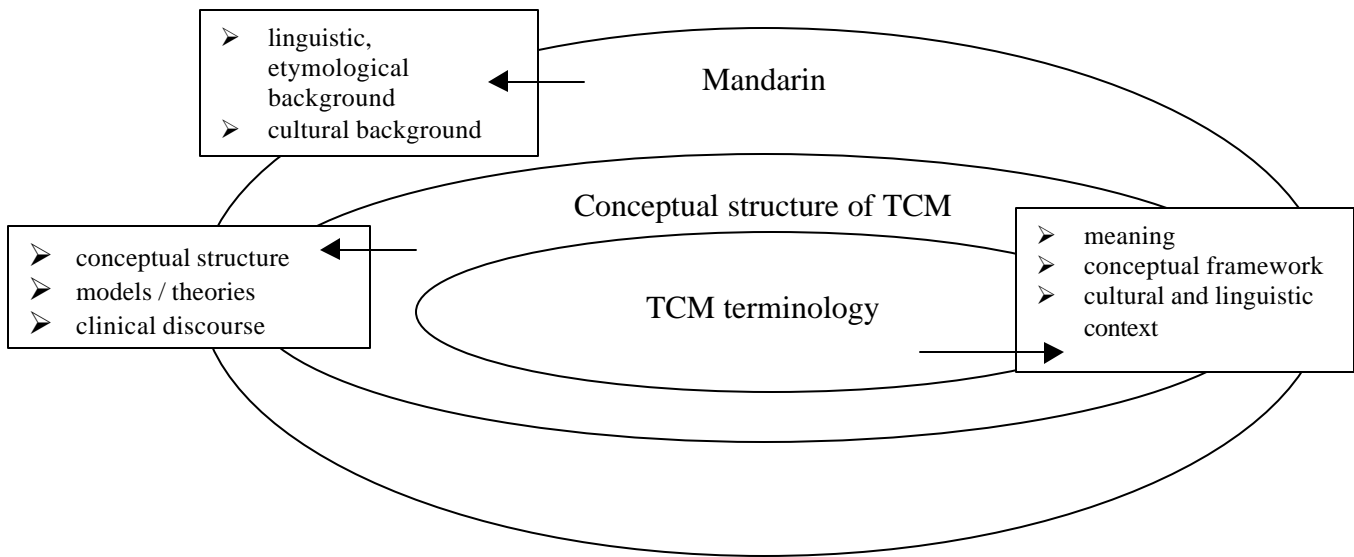


Figure 2 Important factors in learning the ‘language of TCM’

In keeping with the notion that TCM is an ‘additional language’, I recommend an ‘additive bilingual’ approach to TCM. An additive bilingual approach contrasts with a subtractive bilingual approach in which the second language is considered superior or dominant and detracts from the linguistic and cultural status of the first language (Hudson 1980:223). In the modern period, biomedicine is generally the dominant approach or language and is often considered superior by virtue of being more scientific. This can easily lead to a situation of ‘subtractive bilingualism’ where biomedical terms, theories and approaches dominate the cultural and linguistic integrity of TCM. Although this dissertation is concerned with learners who will be acquiring TCM as an additional language and whose first language, biomedicine, is generally accorded a high status, I believe the distinction between additive and subtractive approaches is still relevant. An additive bilingual approach would recommend that learners consider biomedicine and traditional medicine as independently intelligent and potentially mutually intelligible languages in a manner which respects the integrity and unique characteristics of both and which does not lead to either displacing or dominating the other.

To sum up the preceding discussion, this dissertation aims to demonstrate that ***an applied linguistic approach could help the student in a modern English medium educational context make sense***

of TCM as an additional medical language. The applied linguistic approach entails a focus on TCM as a linguistic system with its own kind of disciplinary discourses and key terminology. The additive bilingual approach further recommends that the English speaking scientifically oriented student develop an understanding of the cultural and epistemological underpinnings of the additional medical language. The dissertation does not include a quantitative assessment of the 'additive bilingual' approach but rather tackles the qualitative question of how such an approach could be developed. If the approach outlined in this dissertation appears to have theoretical merit, quantitative research would need to be conducted to ascertain its impact on learning outcomes and attitudes.

1.4 A cognitive semantic approach to an applied linguistic challenge

The question of how best to approach TCM as an additional language is particularly challenging. Not only is Mandarin very different from English, but TCM is also a very different 'medical language' from biomedicine. If the student comes from a background in which English is the medium of instruction and the concepts and language of science and biomedicine are the norm, TCM is likely to represent not only a linguistic but also a cognitive challenge.

The chief focus of this dissertation is on approaches to understanding some key terminology in TCM. In the biomedical and modern scientific context, terms are presumed to have precise definitions and many make reference to identifiable physical structures or processes. TCM terms, by contrast, are hard to define or delimit and may have no precise physical reference. I argue that translating and learning TCM terms one by one will not result in an understanding of either the terms or the TCM system and that this terminology can only be understood in the context or models in which it makes sense. TCM models, in turn, are contextualised by the world view and language system in which they are expressed. I therefore encourage a 'virtuous circle' (as opposed to a vicious circle) emphasising, on the one hand, an understanding of the traditional Chinese world views and TCM models as the context in which TCM terms have meaning and, on the other hand, an analysis of TCM terms which provides insight into these models and world view. This requires a linguistic approach that places strong emphasis on conceptual coherence.

Understanding its key concepts and terms is clearly crucial to the transmission of any knowledge system and ignoring the linguistic and cultural background of this knowledge system entails a risk of misunderstanding the particular reference of key terms and discourse. However, complete fluency in the original language of this knowledge system need not be a requirement for making sense of the system. The distinction between learning a foreign language and a Language for Special Purposes (LSP) is worth

re-emphasising. Fluency in Mandarin as an FL is a goal beyond the scope of most medically oriented educational programmes but a thorough understanding of TCM terminology and discourse is an achievable and important outcome.

The cognitive semantic approach recommends itself on several fronts. Situated in the broader discipline of cognitive linguistics, the cognitive semantic approach offers a unique epistemological orientation and theoretical tools for an understanding of TCM and an analysis of its terminology. The cognitive semantic approach can be characterised as an experiential, holistic and synthetic approach in which human physiology, perception and cognitive capacity constrain and enable linguistic form and function. The “body in the mind” (Johnson 1987) proposed by the cognitive semanticist corresponds well with the integrated conception of the ‘body-mind’ (also sometimes referred to as the “mind/body” (Moyers 1973:xii) that characterises TCM models.

While cognitive semanticists generally emphasise the contextualisation of language in environment and culture, they are also interested in those aspects of language which are ‘universal’ by virtue of common conceptual or cognitive structuring. On the one hand, the cognitive semantic approach will help to identify the ways in which TCM represents a very different conceptualisation of medicine to that of modern biomedicine, one which enjoys considerable cultural and linguistic specificity. On the other hand, the cognitive semantic approach should enable the identification of cognitive structures and content which are familiar and accessible to the modern day English speaker.

1.5 Overview of the dissertation

This dissertation is an initial exploration of the application of a cognitive semantic approach to TCM. It is both broad and incomplete, but I hope that it will show the territory deserves to be mapped in greater detail. If the techniques suggested here are helpful in understanding TCM they are also likely to have wider application in understanding and developing pedagogical approaches to other traditional medical and, more generally, indigenous knowledge systems. Many societies are faced with the challenges of integrating modern and traditional perspectives, a problem that is particularly critical in regard to medical systems. Any tool that can help us illuminate the points of divergence and commonality will help us communicate and educate more intelligently.

The dissertation also represents an initial exploration of the value of the cognitive semantic approach in a theoretical analysis of a traditional medical system. The cognitive semantic approach has been successfully used in the analysis of languages in traditional cultures (cf. Lakoff's (1987) analysis of Dyrirbal) and could be useful in investigations of traditional knowledge systems precisely because it emphasises the

semantic structures and relations which lead to conceptual integrity. At the same time, traditional medical systems are a rich arena for research on traditional conceptualisations of the body and therefore of particular interest to cognitive linguists who posit that language is experientially based.

This work begins in Chapter 2 with an overview of the cognitive linguistic and, more specifically, cognitive semantic approach, I will be using to analyse TCM models and terminology. The cognitive semantic approach is distinguished from classical linguistic approaches by its insistence that meaning is motivated (see Taylor 1991 for an excellent overview and also Section 2.2). Language is not considered as a separate 'module' in the mind but as an integral aspect of cognitive function which is itself embedded in our nature as biological beings in an environmental context. Experience in the broadest sense - including its perceptual, cognitive and socio cultural aspects - is the arena in which humans make sense of and are able to talk about the world. This experiential basis is revealed in both semantic and syntactic structures.

One approach to analysing these linguistic structures is as lexical and functional categories (see Section 2.3) which help to organise and structure experience. From a cognitive semantic viewpoint, a category constitutes a network of related and motivated meanings rather than a discrete set defined by features. This understanding of categorisation entails a high level of polysemy (see Section 2.4) because any linguistic unit, whether semantic or syntactic, is considered to have a complex semantic structure. These complex structures are often referred to as 'radial categories' and one aim of cognitive semantics is to uncover the cognitive mechanisms which result in the many meanings included in such networks or 'radial categories'. Image schemas (see Section 2.6), metaphor and metonymy (see Section 2.7) are considered to play important roles in the development of radial or polycentric categories and semantic chaining (see Section 2.8).

The emphasis on the experiential basis of cognition and language in the cognitive semantic approach means that contextual factors, from the environment to physiology to culture, are considered to have an important influence on the processes of meaning making and interpretation. Of particular relevance to the student of TCM is the influence of ancient Chinese culture and beliefs. For this reason, Chapter 3 includes a brief history of TCM from its shamanic roots to the modern period with an emphasis on the historical development of a number of key concepts and terms. I also look at transmission practices and ask how 'ways of learning' shape 'ways of knowing', an issue which is particularly relevant to the applied linguistic aims of this dissertation. The discussion in Chapter 3 demonstrates that TCM, like many other traditional medical systems, was originally an aspect of a larger integrated world view which encompassed cosmology, social and cultural customs as well as medicine.

In Chapter 4, I look more closely at the ways in which the cosmology and epistemology of the ancient Chinese informed TCM as a theoretical system and the implications of this for understanding TCM terminology. I argue that TCM as a system is both holistic and synthetic, explaining the high level of systemic self reference that characterises TCM terminology. I contrast this with the largely analytic approach of western biomedicine and its highly specific terminology with ‘objective’ definitions and referents. Finally, I examine the ontological and epistemological orientation of the cognitive semantic approach and argue that this orientation makes it particularly appropriate for an analysis of TCM.

This discussion sets the groundwork for the application of the cognitive semantic approaches to TCM. Chapter 4 is the most complex of the chapters as it involves a presentation of key TCM models and terms as well as interpretations of these using the cognitive semantic approach introduced in Chapter 2. The cognitive semantic understanding of polysemy rests on the notion of ‘motivated’ as contrasted with either ‘arbitrary’ or ‘predictable’ extensions of meaning. I suggest that once the systemic relations of the TCM system are understood, it is much easier to ‘make sense’ of the extraordinary polysemy of key concepts and terms. I begin by examining the polysemy of a single term, *qi*, and argue that the polysemy of this term can be attributed in large part to the FORCE and related image schemas which underpin its conceptual structure. I also argue that TCM conceptualisations of physiology and the ‘patterns’ of disease are dynamic and structured by a dynamic CYCLE schema. This leads on to a discussion of the *yin yang* model which I suggest is the most pervasive model for these dynamic transformations. The *yin yang* model also provides the central parameter used in categorising TCM phenomena. I then move on to look at the *wu xing* model which further develops some of the categorisation structures provided by the *yin yang* model but offers an alternative system of classification and interpretation. I suggest that TCM functions more like a language in which various ‘models’ structure understanding than as a science requiring theoretical consistency.

The cognitive semantic approach has been used with the aim of elucidating the underlying conceptual structure of TCM terms and models. I end each discussion with comments on the pedagogical value and application of this approach. Throughout the discussion of terms and models, I have included examples from TCM discourse and texts as well as diagrams of the relevant image schemas and semantic analyses. These are intended to have pedagogical as well as explanatory value. Overall, these analyses suggest that cognitive semantic approaches emphasising the underlying motivations for polysemy may prove very useful to the western-oriented student who is trying to ‘make sense’ of TCM.

While the focus of this dissertation is ultimately an applied one, I look briefly at some theoretical issues particularly the role of metaphor and metonymy in TCM semantic networks. I argue that TCM models

result in a complex system of categories that intersect with various domains, for instance, the domains of emotion, body parts and colours, resulting in a dense network of correlations. This results in a rich semantic network in which most elements are semantically related in a number of ways to other elements. More specifically, I suggest that what appears, on the one hand, to be a metaphorical relationship across domains can also be construed as a metonymical relationship within a single TCM category or model. The extent of semantic relationship between terms is increased by the dynamic cycles of transformation discussed above. This helps to explain the high degree of polysemy and systemic polysemy in the TCM system. It also lends support to the argument that terminology in a holistic and synthetic system is very different from terminology in an analytic system. In the holistic system, the high level of polysemy results in a high level of conceptual integrity and coherence at the expense of referential terminological specificity.

The theoretical discussion also gives some indication that traditional medical systems are a rich source of data for cognitive semantic study. Because cognitive semanticists are particularly concerned with the 'body in the mind' or the experiential basis of cognitive linguistic structure, traditional conceptualisations of the body-mind are particularly relevant. In fact, TCM physiology appears to have much in common not only with other traditional medical conceptualisations but also with at least some English conceptualisations of the body as evidenced by common English metaphors. I also suggest that although the concept of *yin yang* is foreign to English language and culture, at least some of the conceptual associations made possible by the *yin yang* model are evidenced in common English usages. I suggest that this may be because these correlations are not arbitrary but rooted in our experiential-perceptual nature and ask if a study of TCM (and by implication other traditional medical systems) can contribute to our understanding of the 'subjective' realities which underpin more 'universal' conceptualisations of the world despite linguistic variations.

I end Chapter 4 with a discussion of the general pedagogical value of the additive bilingual applied linguistic approach and more particularly the cognitive semantic approach. I consider how these approaches would help to solve some of the problems faced by an educational institution offering a TCM curriculum in English. I conclude that the additive bilingual approach would be especially appropriate if the aim is integrative medicine (in which both the traditional and biomedical approaches are used). The cognitive semantic approach will help students understand underlying epistemologies and conceptualisations and give insight into the complex semantic environment of key terms.

In Chapter 5, I summarise the discussions and conclude that the cognitive semantic approach can make a contribution both to the theoretical analysis of TCM and to new pedagogical approaches. This

dissertation represents an initial exploration from the cognitive semantic viewpoint of an extensive and complex topic. Many aspects of this exploratory work deserve further attention. In addition to further research on TCM models and terminology, there is the interesting question of comparative work with other documented and oral traditional medical systems. On the applied linguistic front, this dissertation suggests some key questions to consider in designing curricula and materials for traditional and especially integrative medical programmes; a quantitative analysis of the value of the pedagogical approach would require systematic testing of such materials.

Chapter 2: THE COGNITIVE SEMANTIC APPROACH

In this chapter, I take a closer look at the cognitive linguistic and, more specifically, cognitive semantic approach focusing on those aspects that will be useful for the analysis of some specific TCM terms and models in Chapter 4.

2.1 Introduction

Cognitive linguists contend that language is an integral component of cognitive function and cognitive function is directly related to our experience as organisms in an environment. Grady (1997:287) states that as opposed to classical linguistic systems, which “treat the relationship between symbols and their referents as essentially arbitrary”, cognitive linguistics requires “principled motivation from the facts of human experience”. The concept of motivation is crucial to this approach. As Johnson (1987:209) writes, “there is no aspect of our understanding that is independent of the nature of the human organism”.

Johnson (1987:207) elaborates:

It is a mistake... to think of an organism and its environment as two entirely independent and unrelated entities; the organism does not exist as an organism apart from its environment... The environment as a whole is as much a part of the identity of the organism as anything ‘internal’ to the organism... our structured experience is an organism-environment interaction in which both poles are altered and transformed through an ongoing historical process.

It is in this matrix of the dynamic interaction between organism and environment, what Krzeszowski (1993:309) calls “pre-conceptual experience”, that cognitive processes and meaning evolve. This implies that meaning is no longer exclusively located in linguistic structure or in the relation of linguistic structure to an objective reality. As Kreitzer (1997:291) writes, “meaning is hypothesised to exist only through reference to a conceptualization of the world. The cognitive processes of conceptualization therefore play an important role in any cognitive linguistic analysis.”

This indicates that, from a cognitive linguistic perspective, on the one hand, all languages are similarly motivated and constrained by our experiential-perceptual and cognitive nature as human beings. On the other hand, there is considerable flexibility in the way different languages conceptualise and categorise their environments. The influence not only of the natural but also of the historical, social and cultural environments on the conceptualisations of any particular language must be considered. These conceptualisations and their interrelationships are codified in linguistic form, that is, both in lexical and syntactic structures. In Fauconnier's (1999) words, language is "the tip of a spectacular cognitive iceberg". Linguistic structures, both formal and functional (or syntactic and semantic) are the observable effects of underlying cognitive processes or, to continue the metaphor, they provide the topography of the cognitive iceberg. The study of language therefore reveals the different ways in which different language speakers analyse and synthesise, or categorise, their experience.

The conceptualisations and linguistic structures which result from the process of analysing and synthesising experience can be referred to as conceptual and linguistic categories. The notion of a category suggests a discrete container filled with objects, but is perhaps better understood as a dynamic process of distinction and relation which is constantly being expanded and refined. This process of categorisation or what might be better termed 'organisation' begins from an early age, and reflects the nature of cognition and language as experiential interaction with the environment. One of the most obvious forms of categorisation is through words. A lexeme is considered a meaningful linguistic unit including those below the level of a word such as an affix as well as those above the level of a word such as collocations. There appears to be good evidence that the earliest word categories to be acquired by children, and the simplest phonetically, are those that refer to particularly salient aspects of our environment (see Taylor 1991:253). Apparently, man's interaction with his environment predisposes him to make certain distinctions and to recognise and name certain 'objects' or 'groups of objects'. These particularly salient categories are termed basic level categories. Examples of basic level concepts and the related language terms in English would be *tree*, *dog*, *man* and so on. Basic level categories are distinguished from subordinate categories such as *mahogany*, *dachshund* or *Hungarian* and from superordinate categories such as *flora* or *animal* (see Lakoff 1987:48).

A particularly interesting aspect of categorisation is the fact that a single category or word such as *dog* may refer not only to a potentially infinite number of instantiations of the category (e.g. all possible dogs) but may have multiple senses. The word *dog* usually refers to a member of the canine family, but it can also refer to a scurrilous person. The word *tree* usually refers to a variety of tree such as an acacia or oak, but can also refer to things which are structurally similar to trees such as family trees, tree diagrams, and so on

– things which in other respects are very different to trees. The phenomenon of a single term having multiple related senses is referred to as polysemy.

Cognitive semanticists consider that the various senses of a polysemous word are not ‘arbitrarily’ related by sound (homophones) or orthography (homographs) but also cognitively related by virtue of sharing various aspects of meaning. The polysemous word can be considered ‘the tip of the iceberg’ which indicates the underlying cognitive processes that motivate the polysemy. For example, there are assumed to be cognitive processes which enable a person to relate the spatial sense of ‘down’ to the emotional sense of ‘down’ or to easily distinguish when the word *cup* is a word which refers to the object and when it refers to the contents of that object, for instance, to *coffee* in the expression *give me a cup*. In the first case, the word *down* refers to different domains of experience: the domains of emotion and space. Yet, the linguistic usage *down* reveals that these different domains of experience are related in a structured way. In the second case, the different senses of *cup* are made possible by the association of things and events in experience, that is, by the culturally defined experience of drinking coffee in cups. From the cognitive semantic perspective, polysemy both enables and evidences the complex ways in which we make sense of the world and achieve conceptual coherence.

It has been postulated that schemas (which, following Johnson (1987), I generally refer to in this dissertation as schemas) help us to structure and conceptualise our experience and underpin many linguistic forms. I interpret a schema in Johnson’s (1987:19) sense as an “embodied pattern of meaningfully organized experience”. In this view, the spatial and emotional *down* in the first example above are related by the UP-DOWN schema which structures both the spatial and emotional domains. In the second example above, the word *cup* can stand for *coffee* because of the schema relating a CONTAINER to its CONTENT.

The two examples above also illustrate the processes of metaphor and metonymy understood in the broad sense intended by Jakobson (see Dirven 2002:41) who contends that “the metaphoric process is based upon substitution and similarity, the metonymic upon predication, contiguity and contiguity”. In the first example, the UP-DOWN schema structures both our spatial and emotional experiences, constituting a metaphorical relationship of similarity across different domains. In the second example, physical objects and actions are related by their contiguity in a culturally familiar context. This metonymical relationship, while also structured by a schema, relies on the fact that our experiences occur in complex contexts. We do not experience dogs or tables in isolation but as components in frames. Frames are complex representations which include numerous components, for example, the frame of a *home* may include family, friends, furniture and an address. Also relevant here are scripts in which various

components are functionally or temporally related. For example, *breathing* includes a number of functionally related components such as inhaling and exhaling air while a *race* refers to a chain of events with a starting point, a course and a finishing line. Of course, frames and scripts are themselves closely related. Lakoff (1987) has further proposed the notion of an Idealized Cognitive Model (ICM), a complex cognitive and socio-cultural representation in which language terms are contextualised and have meaning. As various ICMs are evoked, we are able to interpret the specific use of a term correctly. The contextual notions of frames, scripts and ICMs suggest that terms are not only polysemous by virtue of having various senses but are polysemous in usage, as they refer to various domains or are interpreted with reference to a specific ICM.

Cognitive linguistic notions such as metaphor, metonymy, image schemas, frames and scripts result in what are termed semantic chains or radial networks (in which one word meaning is related to another which is related to another and so on). These semantic chains may create categories above the level of the word which may include any number of 'objects' related in complex and often culturally specific ways. Examples of categories underpinned by semantic chains include noun classes and noun classifiers. Some scholars have attributed the semantic relations in noun classes to prototypical categorisations based on various notions including spatial schemas (Hendrikse 1997) and others have seen noun classes as involving semantic chains or networks arising from culturally situated scenarios (see the discussion in Palmer and Woodman 2000). Again it is likely that semantic networks represent another level of polysemy in which 'one form many meanings' refers not only to individual words but to other linguistic categories such as noun classes, syntactic forms and so on.

Macro categories such as noun classes are also sometimes cited as evidence of 'systemic polysemy' in which linguistic categories themselves have significance which contributes to the sense of words. Systemic polysemy again reveals the close interrelationship between syntax and semantics in the process of meaning making from the cognitive semantic perspective. Both the syntactic and semantic aspects of language reveal underlying conceptual organisation.

While the cognitive semantic approach stresses the interrelationship of syntax and semantics in making meaning, it also highlights the interplay between these aspects of language. Talmy (2000:22) has suggested that the grammatical (syntactic) aspect of language – what he calls 'closed-class semantics' – "may have the fundamental role of acting as an organizing structure for further conceptual material". In this view, there are two distinct processes of categorisation: the grammatical and lexical (or closed-class and open-class). The distinction between these two aspects has relevance for the language learner who has to acquire both new grammatical and new lexical forms. I argue in this dissertation that the

distinction between grammatical and lexical or syntactic and semantic forms can be helpful in understanding different knowledge systems such as TCM. Understood more generally as a distinction between structure and content, it helps to alert the student to the structuring categories which provide overall conceptual cohesion in the system and to the content-related categories which reveal the way in which the world is ‘carved up and synthesised’ or ‘distinguished and related’ in the target system.

As this dissertation postulates that the learning of TCM can be considered as an applied linguistic problem, a final consideration is the contribution of the cognitive linguistic approach to pedagogy. Generally, by emphasising personal insight into the motivations underpinning the target language structures, the cognitive linguistic approach enables each learner to construct his own understanding or ‘make sense’ of rather than simply memorise difficult structures in the additional language (Pütz, Niemeier and Dirven 2001b).

The distinction made by Kecskes (2003) between lexical and conceptual semantics is relevant here. Kecskes (2003:24) has noted that in the initial stages a second language learner (or what I have called an ‘additional language’ learner) associates new second language (L2) words with first language (L1) concepts and only later acquires the direct association between the L2 word and L2 concept – a process he refers to as “reconceptualization”. The further the distance between languages both typologically and culturally, the more difficult it is to acquire the new language and the greater the need for explicit explanations.

The distinction between lexical and conceptual semantics helps to explain 1) the semasiological issue (‘one form many meanings’) typical of polysemy in which a single word represents a number of concepts, and 2) the onomasiological issue (‘one meaning many names’) in which one concept enjoys a number of names. As will become evident in Chapters 3 and 4, one of the chief difficulties in making sense of TCM is that the same concept may be indicated by different terms while a single term may have many related meanings. Additionally, many of these concepts and terms have no English equivalents. Understanding how TCM lexical and conceptual polysemy is motivated by underlying cognitive structuring should be of considerable benefit to the student.

Below I look more closely at some of the central cognitive semantic concepts outlined above, focusing on those aspects that will be useful for the analysis of some specific TCM terms and models in Chapter 4.

2.2 Motivation

Above, I quoted Grady’s (1997:287) statement that cognitive linguistics requires “principled motivation from the facts of human experience”. The notion of motivation sharply distinguishes the cognitive

semantic from other linguistic approaches which take language to be an independent symbolic and logically coherent system. Meaning results from the fact that this symbolic system has reference to 'things in the world'. In this view, there is an objective reality which can be accurately represented – or misrepresented – symbolically. Utterances have meaning by virtue of their truth-value with reference to the world they represent.

The concept of motivation, by contrast, implies that meaning results from the way in which humans evolve in, participate in and make sense of the world. The nature of the human is not separate from the nature of the 'reality' he makes sense of or talks about. Man's perceptual, cognitive and linguistic abilities evolve in that reality and are distinct but interrelated components which allow him to make sense of it.

If meaning is motivated, language as a system represents and reveals much about the way we conceptualise the world. However, this representation is of a complex nature. While human perceptual, cognitive and linguistic systems are interrelated, it is not a case of simple correspondence between them. An example of the interrelated yet distinct nature of these systems is provided by the well-researched use of colour terms (for a discussion see Taylor 1991:). All humans have the perceptual ability to distinguish colours on the visible colour spectrum and all languages have colour terms. Yet, the range of colour specified by a term in one language may differ from the range specified by a term in another language. Colour terms in different languages may specify different areas of the colour spectrum; nevertheless, colour terms are not arbitrarily designated. Firstly, any given colour term will specify a continuous range on the colour spectrum (in other words, there will not be a colour term including both red and blue which are at opposite ends of the spectrum). Secondly, while the range of specific colour terms in different languages varies considerably, the most representative shade of any particular colour range is consistent across languages. If a language has a term for red, despite variations in the range of colours designated by red, its reddest red will be similar to the reddest red of other languages. The reddest red or the most typical variant of any colour range is termed the focal colour. The existence of focal colours appears to demonstrate that colour terms are constrained by the physiology of perception - and are therefore not at all arbitrary. Yet, languages differ in the way they 'carve up' colours along the colour spectrum. These differences are motivated - perhaps by environmental, cultural or historical factors. As these factors are variable, the boundaries of specific colour terms along the colour spectrum are not predictable.

That there is a link between physiological, perceptual, cognitive and linguistic systems in the phenomena of colour categorisation is relatively clear. It can be argued that the relationship between the experiential (physiology and perception), conceptual and linguistic systems is more generally a very close one. If so,

cross-linguistic studies should reveal (a) common conceptual structuring reflecting the constraints of human physiology and perception, and (b) differences in particular conceptual linguistic systems due to variations in the motivations provided by distinct natural and cultural environments (see Kövecses, Palmer and Dirven 2002). For instance, all humans experience various emotions, and it is possible that there are a number of ‘focal’ emotions shared by all cultural and linguistic groups. However, it is also likely that the boundaries of any emotion labelled by a particular language group may vary due to cultural factors and that in different cultures certain emotions will be associated with different cultural frames or scripts.

2.3 Categorisation

The notion of motivation is central to the cognitive semantic notion of a category. In the classical linguistic view, a word category references a set of discrete objects in the real world (see Taylor 1991 and Lakoff 1987 for a discussion). An object can only be referred to by a word, if it shares the ‘essential features’ which establish membership in that word category. In other words, each word category has reference to a discrete set of objects or what could be termed a ‘real world category’. Any object either can or cannot be referred to by a word is or is not a member of a category by virtue of its essential features. Thus determining whether or not an object exhibits these essential features determines the accuracy or ‘truth’ of reference. For example, an object which can be referenced by the term *food* might be expected to exhibit the features [MATERIAL] [EDIBLE] [NUTRITIOUS]. One problem with this postulate is that the ‘essential features’ are also referenced by word categories entailing a *reductio ad absurdum*. Another problem with the classical definition of a category is that it makes no allowance for grey areas – any linguistic item is either in or out of the category.

By contrast, from a cognitive semantic viewpoint the key relationship in linguistic reference is not between words and objects in the ‘real’ world but between words and conceptualisations of human experience. This experience itself subject to cognitive processing and is both variable and dynamic. The notion of *food* only makes sense in terms of the (possibly evolving) cultural framework and situations in which it is used and is considerably more constrained than the features system might suggest: flying ants are considered to be ‘food’ by in some cultures but considered to be ‘pests’ by others. At the same time, the term *food* can refer to ‘objects’ which share none of the classical ‘essential features’, as exemplified by the notion of an ‘idea’ as *food for thought*.

The examples I have provided are somewhat controversial. Cultural and situational variations in what can be considered to belong to the semantic category *food* can be explained as further restrictions on the basic

notion of *food* while the expression *food for thought* is generally considered a metaphor. However, the verb *feed* which describes the act of providing food shows an even wider range of usages. We can *feed a baby* (providing only certain appropriate food stuffs), *feed the world* (this might entail agricultural development or socio-economic programmes), *feed paper into the fax machine* (there is no question of nutrition just a similarity of action i.e. putting an object into an orifice), *feed the fire* (increasing its size and strength), and even metaphorically *feed a fire* (by adding to upset or commotion) and so on. Only the first of these usages is predictable from the essential features of *food/feed*, yet they are all common uses of the terms.

Some cognitive linguists have suggested that a category or term such as *food* or the related *feed* is based on a family resemblance structure or the process of meaning extension from 'central' to 'non-central' cases in a radial structure (Lakoff 1987; Taylor 1991). In this view, membership in a category is *motivated* rather than predictable and there is no set of features which will define every possible member of the category.

The notion of motivated categories implies that the number of meanings a term may have is only limited by the ways in which extension of meaning is motivated. This helps explain the continuously generative aspect of any linguistic system as evidenced by phenomena such as slang, technical jargon and language change generally. It also offers insight into polysemy. Polysemy can be described as 'one form, many related meanings' and occurs when a single lexeme or word has more than one sense. If a word is considered to represent a category and categories are considered to have radial structure, polysemy is a consequence of the motivated extension of categories. The polysemy of the words *food* and *feed* is motivated by meaning extension through associations with the central meaning(s) of *food* and *feed*.

From an applied linguistic perspective, understanding the nature of categories and the resulting polysemy of words is important to the additional language learner who must make sense of words or categories with different boundaries from those of his L1. If polysemy is motivated, understanding the underlying motivations can be a key tool in language learning. The next section looks at the phenomenon of polysemy in more detail.

2.4 Polysemy and systemic polysemy

Polysemy has traditionally been associated with lexical categories such as nouns, verbs and prepositions. Since membership or exclusion from a category was definite, the various senses of any particular lexical category were considered discrete. However, the cognitive semantic view of polysemy as resulting from radial categories with related and motivated extensions, has led to a broader understanding of polysemy. If meaning arises from our understanding of the world rather than from a set of truth-values, every factor which affects that understanding is meaningful. Taylor (1991) and others have noted that linguistic

features such as syntax, intonation, mood, gender or class also carry meaning. These varied linguistic categories whose members demonstrate a cluster of related meanings or 'family resemblances' are now considered by many cognitive linguists as examples of polysemy. One could say the 'one form' referred to in the original definition 'one form, many meanings' no longer applies only to specific lexical items but may extend to any linguistic category or construction.

Hendrikse (1997:188) has described how this results in polysemy not only of related 'senses' but also of related 'significances', with the former including lexical meanings and the latter grammatical meanings. Hendrikse (1997) has demonstrated that very large categories such as noun classes can be understood as 'systemic polysemy'. Furthermore, Hendrikse (1997) has suggested that an entire set of noun classes may exhibit polysemy. For instance, in Southern Bantu languages the noun classes can be related along a continuum from 'nouniness' (human beings as prototypical nouns) to abstractness. In his view, the entire set of noun classes is thus 'profiled' against the domain of three-dimensional space. Since not only noun classes, but other grammatical and linguistic categories are considered to exhibit polysemy, the cognitive semantic perspective on polysemy results in a view of language where numerous intersecting categories or webs of meaning are both encoded and interpreted by language users. Once again, the traditional distinction between content and structure or semantics and syntax is shown to be a useful heuristic rather than a strict dichotomy.

2.5 Domains

A further consequence of this more elaborated understanding of polysemy is that any linguistic structure admits of numerous interpretations. However, in practice there are restrictions placed on the interpretation of any linguistic structure. Contextual clues such as the domain of reference and the way in which a word is profiled within that domain help to define the particular meaning of polysemous words.

The concept of a domain is complex. Taylor (1991:83) defines a domain as a cognitive structure that provides the background context that enables us to understand the meaning of any term. There appear, however, to be at least two distinct senses of the term 'domain'. In the first, 'domain' refers to distinctly different areas of human experience such as space, colour, emotion, temperature and so on. The spatial domain could be considered the most primary of these experiential domains. It is postulated that the structure of the spatial domain is projected onto many other more 'abstract' domains, for instance, the domain of time, allowing us to make sense of intangibles. In fact, Lakoff (1987:281) explains the notion of conceptual domains itself as a metaphorical mapping of physical space onto conceptual space creating

'mental spaces' in the sense of Fauconnier as "a medium for conceptualisation and thought". He believes that these mental spaces are then structured by one or more Idealized Cognitive Models (ICMs).

In the second sense, the term 'domain' refers to the background knowledge - sometimes called encyclopaedic knowledge - we already have about a variety of specific areas in our experience. For instance, the domain of education is likely to include information on the roles of teachers and learners, curriculum and outcomes, grades and examinations. In this sense, a domain may be a very specific, culturally defined area of experience similar to a scenario, frame or script. The first sense of domain is universal while the second refers to more culturally specific conceptualisations.

Despite these differences in interpretation, the notion of a domain is important to the understanding of polysemy. A word may have different meanings when profiled against different domains. For instance, the term *low* has different meanings in the phrases *a low area*, *a low temperature* and *to feel low* because it is profiled against the different domains of physical space, temperature and emotion. The phrasal verb *to kick out* has different meanings when profiled against the domains of rented apartments or soccer fields. While domains provide the background context against which terms are understood, the extension of meaning appears to depend on other cognitive processes. Some of the processes hypothesised by cognitive linguists are examined in the following sections.

2.6 Schemas

In this dissertation, I have interpreted the notion of a schema along the lines suggested by Johnson (1987:19), who says a schema is an "embodied pattern of meaningfully organized experience". As a 'pattern', a schema is not a 'rich image', a detailed picture in the mind (such as we might have of a familiar garden or woman) because schemas lack both 1) rich detail and 2) "transcend any specific sense modality, though they involve operations that are analogous to spatial manipulation, orientation, and movement" (Johnson 1987:25). However, schemas are hypothesised to underpin our ability to make sense of perceptual input and to form rich images; they are a basic structural component of our conceptual ability rooted in our experiential capacities. While it is tempting to consider the process of schematisation as one of abstraction from experience, it is probable that there would be no 'experience' as we know it without the cognitive ability to schematise. Schemas derive from our nature as upright, front facing, mobile, intentional organisms located in a dimensional world dominated by gravity.

The term 'schema' is sometimes used in a different sense to indicate the larger semantic context of a term. In some cases, such definitions blur with the definitions of a 'frame' or a 'script', a cluster or sequence of elements and events commonly encountered together. Nevertheless, for the purposes of this discussion I

will stick to Johnson’s (1987:24) understanding of schemas as “structures that organise our mental representations at a level more general and abstract than that at which we form particular mental images” - remembering that the term ‘abstract’ here does not imply disembodied. Table 1 shows some prevalent schemas proposed by Johnson with some literal and metaphorical examples provided:

Schema	English examples
FORCE	<i>The car hit the table with great force; through sheer force of personality</i>
CONTAINER	<i>The glass is full of water; all his wisdom is in that book;</i>
BLOCKAGE	<i>The tree is blocking the road; I can’t get through to him</i>
ENABLEMENT	<i>He lifted the table; she gave him a head start with his education</i>
PATH	<i>She went across the street; he took the road less travelled</i>
CYCLE	<i>Water cycles through the mill; a cycle of emotional dependence</i>
PART-WHOLE	<i>He took the clock apart; he is a part of our family</i>
FULL-EMPTY	<i>The river is full; without love we lead empty lives</i>

Table 1 Some common schemas and examples of English usages exemplifying these schemas

Johnson’s (1987:126) list also includes: “iteration; surface; balance; counterforce; attraction; link; near-far; merging; matching; contact; object; compulsion; restraint removal; mass-count; center-periphery; scale; splitting; superimposition; process; collection”.

An interesting aspect of these schemas is that they reveal certain common features. Firstly, spatial location and/or orientation are relevant to most if not all of them. As noted above, space appears to play a primary role in conceptualisation and, as Regier (1995:63) has noted, “space has a privileged position as a foundation ontological category in language”. This is hardly surprising given the view that language is based in experience and experience takes place in three-dimensional space. Considering the examples

above, it can be seen that a CONTAINER has a particular spatial configuration with internal and external aspects, ATTRACTION exists between OBJECTS located in space, a PATH is a movement through space from one POINT to another, and a COLLECTION is defined by the common location of OBJECTS. A number of common orientational parameters should perhaps be included in this list of schemas, for instance, UP-DOWN, FRONT-BACK, RIGHT-LEFT, INSIDE-OUTSIDE, ABOVE-BELOW and so on (see Krzeszowski 1997:320). (Because schemas focus on structural relations between persons and things, locatives and prepositional or 'closed-class' forms such as *over* (a type of path) or *by* (enablement or agency) also appear to have schematic nature.)

Secondly, force dynamics are a central feature of many of these schemas. ENABLEMENT and COMPULSION entail a FORCE acting on another force or object. BLOCKAGE and RESTRAINT REMOVAL relate to the interplay between a instigating FORCE and an inhibiting FORCE. A PATH is made possible by movement of something (or someone) through space.

Thirdly, many of these schemas are relational, representing polar opposites or continua. Some are listed as such, for example PART-WHOLE, CENTRE-PERIPHERY, NEAR-FAR, whereas others can be inferred. For instance, counterforce implies a force, a surface implies an interior region, balance stands in relation to imbalance, etc. (In some cases, schemas can be related in a number of ways as, for instance, SPLITTING and MERGING and SPLITTING and LINKING.) Important locational and orientational parameters not mentioned in Johnson's (1987:126) list include the UP-DOWN and IN-OUT polar schemas.

Johnson (1987:126) did not suggest that his short list was exhaustive or fixed or that an exhaustive list was necessary or even possible. However, he did claim that schemas are ubiquitous to cognition: "image schemas provide structure and coherence to the continuous multimodal experience of scenes and movements" (in Kreitzer 1997:293). Some schemas are more complex, involving several components, for example, the SOURCE-PATH-GOAL schema (see Lakoff 1987:275). The 'mapping' of this schema is prolific: from physical space to time, to plans and even to the concept of 'mapping' or the concept of metaphor itself.

Schemas also appear in combination and such combinations can interact in a static or dynamic manner. For instance, the combination of the concept of OUTER applied to an OBJECT may supply the concept of SURFACE. There can also be iterations. For instance, in a PART-WHOLE relationship, the PART is also a WHOLE that can be further divided into parts as in the schema for SPLITTING. Cognitive semanticists have identified the CONDUIT (Taylor *et al.* 2003b) as a schema underlying many metaphors for 'language action' or communication. A CONDUIT is a PATH that also acts as a CONTAINER.

It should be noted that cross-linguistic studies suggest that these locational-relational schematic terms behave like prototypes which vary with language and culture rather than as discrete and universal categories (see Kreitzer 1997). For instance, in the Miztec languages the meanings of *siki* and *sini* are not identical to the meanings of the English preposition 'over' (Regier 1995:65).

Noting that "image schemas are bipolar", Krzeszowski (1993) has further suggested that "preconceptual image schemas" are not neutral but value-laden with each 'pole' enjoying a positive or negative value. He calls this the 'axiological parameter' and claims that it influences our understanding of all the schematic polarities. For instance in the PART-WHOLE schema, WHOLE is the more positive aspect of the polarity representing integrity, completion and health while PART represents lack of these positive qualities. In the CENTRE-PERIPHERY schema, CENTRE is the more positive aspect of the polarity, representing centrality, salience and privilege; the further the distance from the centre towards the PERIPHERY the greater the loss of these qualities. Even orientational schemas are subject to the axiological parameter as evidenced by the generally positive value of UP in the UP-DOWN schema, of RIGHT in the RIGHT-LEFT schema and of FRONT in the FRONT-BACK schema.

Schemas structure our experience, conceptualisations and language. They are key to the processes of polysemy and semantic chaining because they provide the common or relational structures which link diverse things and concepts. In a sense, schemas provide the grammar of the conceptual world, linking, integrating and distinguishing. Schemas are also key to understanding two further processes which cognitive semanticists consider to be important to meaning making generally and polysemy in particular – metaphor and metonymy. I have devoted quite a long section to these processes because I believe the data from TCM is not only illuminated by but also illuminates the debate on metaphor and metonymy and the relationship between these two cognitive processes.

2.7 Metaphor and metonymy

The Webster's New World Dictionary (Neufeldt 1988) defines metaphor as "a figure of speech containing an implied comparison, in which a word or phrase ordinarily and primarily used of one thing is applied to another". The example given is *the curtain of night* which is attributed to the metaphor THE WORLD IS A STAGE. The same dictionary defines metonymy as "a figure of speech in which the name of one thing is used in place of that of another associated with or suggested by it". The example given is the use of *the White House* to indicate 'the president'.

However, from the cognitive semantic viewpoint, metaphor and metonymy are not simply 'linguistic devices' or 'figures of speech' but, like other linguistic phenomena, must have a cognitive basis. Even in

the largely traditional Webster definitions reference is made to *comparison* on the one hand and to *association* on the other - both of which are clearly cognitive processes. In the 1950s, Roman Jakobson concluded that “the metaphorical and metonymic poles [are] the two basic modes or ways of thought reflected in general human behaviour and in language. Jakobson’s conclusion was practically based on his work with aphasic patients who had lost capacity for one or the other of these mental processes and therefore appears to indicate a neuropsychological basis. This broad interpretation of metaphor and metonymy would help explain their pervasive use in language, a use which Kövecses and Radden (1998:39), discussing metonymy, suggest is “not parasitic on literal language, but is often a more natural use of language”.

A good deal of effort has been made to clarify the distinction (and overlap) between metaphor and metonymy. Lakoff has said that in metonymy the contiguous elements are “within a single conceptual domain” (1987:288) whereas in metaphor they relate a structure from one domain (the source domain) to another domain (the target domain). Croft (2002:177) refines this analysis saying, “a metonymic mapping occurs within a single domain matrix, not across domains (or domain matrices) [...whereas] metaphor is a mapping between two domains that are not part of the same matrix”. A domain matrix may include an unlimited number of domains which possess “a unity that is created by experience” (Croft 2002:177).

Croft (in Dirven 2002:14) explains that metaphor entails the conceptualisation of one domain in terms of the structure of another independent domain where the two domains do not form a domain matrix for the concept involved. He concludes that, “whereas metaphor is domain mapping, metonymy is domain highlighting” (in Dirven 2002:14). In fact, Croft (2002:182) suggests that we are able to ‘move around’ in a domain and this ‘domain shift’ (within the domain matrix) and the change in perspective it entails can be elicited by ‘domain highlighting’. For example, *fill up the car* highlights the petrol domain, *wash the car* highlights the (exterior) material surface domain, *drive the car* highlights the functional domain - and all of these involve shifts in the perspective from which we view the ‘car’. Taylor (1991:84) voices a similar view when he states, “within the cognitive linguistic approach it is generally assumed that the meaning of a linguistic form derives from its ‘profiling’ or highlighting a particular region or configuration in a relevant domain. Profiling entails the structuring of a domain by a ‘schema, or set of schemas’”.

Warren (2002:128) has complained that “the theory of domains is difficult to apply since domain boundaries are not observable, nor intuitively self-evident and therefore [...the theory is] methodologically and theoretically problematic”. She offers an interesting interpretation of differences between metaphor and metonymy: Firstly, that “metaphor sees one thing in terms of some other thing and is thereby *hypothetical* (e.g. viewing life ‘as if it were a journey’), whereas metonymy is non-

hypothetical” (in Dirven 2002:9). Secondly, that metonymy operates at phrase level only, while metaphors may also operate at sentence level, or even beyond. Thirdly, that metaphor allows multiple mappings from the source to the target domain; metonymy never allows more than one relation. Finally, she notes (Warren 2002:126) that in metonymy we usually experience the source and target simultaneously whereas in metaphor this is not necessary.

Metonymy is a highly pervasive phenomenon including a large range of substitutions such as producer-for-product, container-for-contents and so on. So metonymical usages could range from *pass me the coffee* where ‘coffee’ stands metonymically for the ‘cup of coffee’ (contents-for-container) to the Indian English *I’ll click it* where the verb ‘click’ stands metonymically for sending an e-mail (a salient feature in a process is highlighted). They can even extend to *he kicked me out of the house* for ‘he forced me to leave’ although, in fact, no physical kicking took place (see Riemer 2002 for a discussion on why this can still be considered a metonymical rather than a metaphorical usage). Johnson (1987:209) writes that metonymy is used when we “need to understand a whole in terms of a part of that whole, or in terms of some related attribute” such as when we say ‘he had a long face’ to indicate the person’s emotional state. One way of understanding metonymy in this more pervasive sense is to consider that any part (or aspect) of an “integrated conceptual structure” (Taylor 2002:327) or an ICM (Lakoff 1987:288) can be used to represent any other - as long as this usage is motivated. The fact that such choices are motivated implies that the change of perspective entailed by metonymical selection is meaningful rather than arbitrary. Categorisation hierarchies can also play a part in metonymies as, for instance, when a superordinate stands for a basic level term as when *the animal* stands for *the dog*

Metaphor has received extensive attention from cognitive semanticists since Lakoff and Johnson’s (1980) seminal work on the subject. Metaphors involve ‘mappings’ from one domain to another and such mappings constitute an important way in which we make sense of our experiences. As noted above, the spatial domain is one of the most common source domains for mappings which help us make sense of less tangible domains, for instance, the non-physical domain of time. However, while the space-time source-to-target projection should perfectly exemplify the mapping between different domains that is supposed to characterise metaphor, there are also many possible experiential synchronicities or associations between space and time. As Johnson (1987:116) writes, “the metaphorical mapping is isomorphic with the experiential pairing”. For instance, if we travel somewhere we ‘move through’ both space and time. The close associations between these two important domains indicate possible metonymical relationships. In other words, space and time, despite being very different ‘domains’ on an intellectual level, are often inseparable in our experience (and in quantum physics the space-time distinction appears to collapse).

2.8 Semantic chaining

Semantic chaining has been noted in many languages which have systematic macro categorisation systems such as noun classes. Cognitive linguists generally consider these to be polycentric categories with multiple centres or central members (Lakoff 1987; Palmer and Woodman 2000). While semantic chaining is a process considered to underpin macro linguistic categories such as noun classes, it can also be considered as a process underpinning polysemy in general. The notion of semantic chaining relies on the concept of motivation. It assumes that the members of a grammatical class are conceptually related. The notion of a chain is important because while any particular member may enjoy a direct and clear link with another member, it may also be related only indirectly through many intervening, and perhaps diversely motivated, links. Therefore, categories which result from semantic chaining often appear to include disparate notions as, for instance, the Dyirbal nominal category *balan* which includes 'women, fire and dangerous things' (Lakoff 1987). A key factor in understanding semantic chains seems to be the cultural contexts and models in which they arise. For instance, various components of a ceremony (a script) may be included in a class or one member may be associated with another through myth. In Dyirbal myth, crickets are considered 'old ladies' and so categorised with women in Class II (Lakoff 1987). Some researchers such as Selvik (1997) have postulated that noun classes can be motivated by abstract schemas such as 'objects affected by action'. The resulting mappings of conceptual space are quite complex. In particular, it is notable that domains in both senses (see Section 2.5) - as discrete areas of experience (spatial, emotional, animate) and as background information or scenarios - provide a wealth of linkages. At the same time, schemas appear to play a role either in structuring the category itself or by virtue of being 'extracted' from central members and projected onto other potential members. Hendrikse (1997) has noted that classes can also assume 'secondary significances' demonstrating the multidimensional function of categorisation patterns. While the focus is on the cognitive or conceptual links, lexical relationships may also play a role.

Cultural and historical factors are influential in the development of semantic chaining. The importance of their influence is evidenced in language death. Class categories become simplified as the language degrades and the speakers' original world view and cultural heritage is lost (Lakoff 1987:97). Making sense of macro linguistic categorisation systems appears to require an understanding of the speakers' current and historical world views, cultural models and activities – as these are expressed in linguistic structures. From the applied linguistic perspective, learning the mappings or categorisation structures of an additional language will require linguistically oriented cultural and historical background. For example: What aspects of the world are most important in this culture? What kinds of knowing are emphasised? What are the contexts in which language helps to make sense and communicate about the world?

Because cultural models, epistemology and historical background are vital to understanding conceptual and linguistic categorisation, the following chapter details the history, cultural background and epistemology that underpin the TCM language, with particular focus on the diachronic development of some key TCM concepts and terms.

Chapter 3: TRADITIONAL CHINESE MEDICINE: A BRIEF OVERVIEW

In keeping with the view that a language is best understood given some knowledge of its cultural, epistemological and historical context, this chapter provides a very brief overview of the history of Traditional Chinese Medicine (TCM) and the world view of the ancient Chinese with whom this tradition originated. TCM has an enormously complex and well-documented history but here I look only at the central influences relevant to this discussion. In particular, I give attention to the development of some key concepts and terms whose meaning has evolved through the millennia. I also discuss transmission practices – the ways in which TCM knowledge has been communicated and handed down over the millennia. The delicate link between ‘what it means to know’ and how ‘knowing’ is transmitted is critical to the challenge of understanding traditional medical or knowledge systems.

3.1 Ancient times

TCM is widely practised today in China, through much of Asia and increasingly in other parts of the world. The term ‘Traditional Chinese Medicine’ is somewhat controversial as the practise extends to many other Asian countries such as Vietnam, Korea and Japan. However, as many of these other traditions are based on the Chinese literature and traditions, the present study is confined to the already extensive Chinese medical, historical and linguistic developments; the terms ‘Oriental Medicine’ or ‘Asian Medicine’ would necessitate a broader research platform. From its prehistoric roots up until the modern period, TCM has weathered wars and revolutions, drastic economic, social and religious change and even the advent of modern science and medicine.

TCM has its roots in the traditions of the agricultural Shang. According to Unschuld (1985:17), the Shang Empire dates back as far as the 18th or 16th centuries BCE and continued until the 11th century BCE. Hiep (1987:168) gives the dates as 1766-1122 BCE. Most of the evidence from this period is archaeological although the Shang already had a written script and some of the characters inscribed on divination bones and tortoise shells from the Shang period are still used in modern Mandarin. The Shang believed that the harmonious procession of the natural and social orders depended on the goodwill of the ancestors. Rituals honouring personal ancestors and the procession of the calendrical cycles ensured ongoing health and prosperity. Divination was used to determine the cause of disease and other social

crises such as drought or famine as well as the correct propitiation rites. In most cases, the 'cause' of such disruptions in the harmony of the natural and social order was an ancestor who had been offended.

During the early Shang period, the physicians of the day were the *wu*, influential leaders and shamans. They were equally responsible for bringing rain, good crops and good health. The original character for *wu* shows a dancing man, as rain dancing was a primary activity of the *wu*. Rain and winds, considered to be natural forces from the modern scientific perspective, were believed to be expressions of the cosmic order, an order in which the spirits of the ancestors, the living and nature were intertwined. Oracle bones from this period commonly refer to (beneficial) *feng* ('winds/climates') and *xie* ('evil/heterodox') *feng*. It seems that a strict distinction between supernatural and natural or even between animate and inanimate forces was never drawn. The view that natural forces such as wind, rain, thunder, or ocean waves can 'speak' for the ancestors is still found in shamanic traditions practised today [based on my discussions with traditional healers].

Feng continued to be an important concept in TCM long after the shamanic traditions gave way to other descriptions of the natural order. The famous TCM text, the *Huang di nei jing* ('Yellow Emperors Inner classic') (in Unschuld 1985:263) gives a lengthy description of the *jiu gong ba feng* ('nine palaces eight winds') a correlation of the various 'palaces' occupied by *Tai yi* (the 'great one') with the eight directions and their winds (or climates). If winds came from the direction of the palace in which *Tai yi* resided during the *ba cheng* days (the first day of each season and the solstices) health and good fortune would result, if not various types of disease and affliction could be expected. According to Ho (2003), *Tai yi* (or *Tai-I*) is actually the name of a star near the North Pole. In ancient times he states, *Tai yi* represented the Earth's rotation axis and thus the centre of the universe based on a geocentric model. This star was also known as the 'heavenly first one' because the polar axis was seen to generate the calendrical cycles, days, nights and seasons, and thus was considered by some to be god-like. The close relationship established between climate, cosmos and spirit is still evident in TCM conceptualisations.

Feng continues to be an important concept in TCM today – both external and internal *feng* can play a part in the aetiology of disease. However, most modern TCM texts downplay the spiritual or cosmological significance of *feng* and the importance of both the spatial (directional) and temporal aspects of the calendar cycles. Nevertheless, there are still TCM practitioners as well as adepts in the martial arts and Daoism who continue to observe one or more aspects of the ancient tradition.

3.2 The Chou and “warring states” period

The relative peace of the Shang era ended with the strife and turbulence of the Chou and “warring states” periods. The Chou period is considered to have started around 1100 BCE (Unschuld 1985:29) while the so-called “warring states” period in which many small states competed for power lasted from 475-221 BCE (Hiep 1987:168). No longer was it possible to negotiate with the ancestors, to maintain harmonious relations between the living and dead. The spirit world was largely a source of threats and attacks by unknown and malicious *gui* (‘restless spirits, ghosts, demons’) who were perhaps victims of the widespread violence rather than a realm of personal ancestors concerned with the well being of the family or community. Medicine was thus largely concerned with exorcisms and protection against the ill will of the dead or living using incantations, potions and ritual displays of weaponry. Some scholars even speculate that *acumoxa* may have its origins in the belief that these *gui* could be driven out of the body by ritual spearing (needling) of vulnerable points. [While ‘acupuncture’ is the term more generally used for point treatment, I have preferred the term ‘*acumoxa*’ in this dissertation as *moxabustion* (the burning of special herbs on the *acumoxa* points) is an integral part of point treatment practices.] In the 5th century, BCE Sun Ssu Miao listed thirteen *xue* (‘caves, holes, *acumoxa* points’) with names such as ‘demon bed’ and ‘demon path’ (Unschuld 1985:45). The modern character for a physician, *yi*, may have developed during this time: the lower half shows the dancing *wu* and the upper half shows a quiver with an arrow on the left and a lance on the right (Unschuld 1985:37). The nine needles unearthed at a burial site dating back to 113 BCE show the close resemblance of ancient needle design to weaponry (Bai 2001:19).

The ‘demonic medicine’ that characterised this period has also never entirely disappeared. It is certainly evident in discussions from the Ming (1368-1644) and Ching (1644-1911) dynasties where potions to expel *gui qi* (‘demonic influences’) are included in medical volumes (Unschuld 1985:217). Even today, similar beliefs are evidenced by shamanic rituals involving self-immolation with spears by Daoist adepts in a trance (Schipper 1993). With the rise of demonic medicine during the turbulent Chou period, the *wu* who had lost much of their status were reduced to restraining and expelling *xie gui* (‘evil spirits’) who harassed man. Exorcists prepared official-looking edicts (sometimes even bearing the ‘signature’ of famous leaders or sages) that ‘commanded’ the departure of the *gui* that plagued the patient, perhaps settling in his body and causing illness or pain.

The medical language of the late Chou or “warring states” period increasingly reflected the dominant military paradigm. This was accompanied by a shift in emphasis from the exorcism of supernatural forces to logical discussion of defence strategies. There were *ying* (‘army camps’) which circulated throughout the body while the *wei* (‘guards’) located on the surface of the body defended against invasions by *xie* (‘evil, heterodox’) forces, forces which were only *zheng* (‘upright, righteous’) when confined to their own

territories. The term *xie* had come to refer in the abstract to any 'attack' on well-being rather than possession by a *xie gui* ('evil spirit'). Some of the terminology originating during this period has persisted to the present day while losing its strictly military connotations. In modern TCM textbooks, the *ying* ('constructive/nutritive fluids') (Hsu 1999:257) are considered to accompany the *qi* ('influence') through the *jing* ('channels') and the *wei qi*, ('defensive *qi*') is still considered responsible for protecting the body's exterior from invasions by 'pathogenic factors'. (See Section 4.7 for a discussion of *qi*.)

On the one hand, there appears to be a diachronic conceptual development from the complex concept of *feng* ('wind') during the early Shang period to the concept of *qi* ('influence'), a concept which is still central to TCM in the modern period. Unschuld (1985:68) suggests that the concept of *feng* ('wind') marked a conceptual transition between the concept of *gui* ('ghosts, demons') and that of *qi*. The term *gui qi* ('ghost/demon influence') appeared in literature from the 1st century CE onwards in addition or as a substitute for *xie gui*, 'evil spirits' (Unschuld 1985:36). Finally, the term *xie qi* ('evil influence') became commonplace, demonstrating the gradual progression from the concept of demonic possession to that of more abstract negative 'influences'. (While this discussion emphasises the negative influences of *feng*, *gui* and *qi*, they were also considered to exert beneficial influences.) On the other hand, the persistence of the belief in all of these related concepts until the modern period in China. The existence of similarly related concepts in other traditional and shamanic medical systems, suggests that there is a close synchronic semantic relationship between these terms, all of which refer to unseen forces of an animate, human, cosmological or natural origin (also see Section 4.7.5 and Figure 6).

3.3 Philosophical Influences: Daoism, Confucianism, Buddhism

As a unified China emerged from the chaos of the warring states period under the Emperor Chin in the 2nd century BCE, an unprecedented wealth of philosophical, religious, social and medical approaches flourished. The centralist government was able to implement large scale transportation, storage and irrigation systems in addition to developing a large hierarchical political system. The shamanic and largely undocumented traditions of the Shang were rejected, adapted or absorbed as new doctrines based on often highly literate traditions were adopted by the state. Daoism, Confucianism and Buddhism all influenced the thinking and the medicine of the newly unified country.

Apart from, or perhaps related to, the shamanism of the Shang period, Daoism may be the oldest and most 'Chinese' of the philosophical traditions in China. *Dao* literally translates as 'road, way, path, line, method' (Manser 1999). Apart from these common meanings, it can also be used to discuss the way in which something is done. For instance, *zhen dao* ('needling *dao*') refers to acupuncture technique. Finally,

dao has come to signify for 'the way' of the natural world or universe. The *dao* is the unknowable "underlying the change and transformation of all beings, the spontaneous process regulating the natural cycle of the universe" writes Schipper (1993:4), a Dutch Sinologist who was ordained as a Daoist priest in Taiwan in the 1960s. Numerous Daoist classics have survived although the origins of Daoism are as difficult to pin down as its teachings. The well-known *Yi jing* ('Changes classic'), better known in the west under the Chinese name *I Ching* or the English name 'Book of Changes', was developed as early as 1000 BCE (Bai 2001). However, as Schipper notes, its Daoist origins were obscured by Confucianist revisions. The *Dao de jing* (literally 'way-power classic') containing teachings purportedly given by the incomparable and perhaps mythical Daoist immortal Lao Zi to a mountain gate-keeper (Schipper 1993:4) is one of the earliest and best known works to survive. Schipper maintains that Daoism is the unifying thread in Chinese thought and has transformed the various religions and philosophical traditions that later came to China. He writes, "by definition, the Tao [Dao] is indefinable and can be apprehended only in its infinitely multiple aspects, a religion which considers itself to be the true bond among all beings without any doctrinal creed, profession of faith, or dogmatism" (Schipper 1993:3). Perhaps this fundamentally non-hierarchical, non-religious, all-embracing spirit explains the syncretistic tendency and underlying consistency through change that characterises Chinese thinking even in the medical domain.

Cong Fu Zi (Confucius) who lived from 551-479 BCE was undoubtedly influenced by Daoism although many of its central concepts were modified in his moral and social philosophy. His ideas, although initially rejected - no doubt in part because he believed that ability was more important than birth in determining rank - were further developed and promulgated by the philosopher Hsün Zi in the 3rd century BCE and eventually had an enormous influence on the state as well as scholastic transmissions. Confucian doctrine emphasised *zheng ming* ('rectification of names'), the vital importance of harmonious and appropriate social conduct and the responsibility of the individual to develop *de*, which Confucians understood to mean 'moral virtue'. This was quite a transformation from the Daoist notion of *de* as in *dao de* ('the way's power'). According to Porkert and Ulman (1982:38), *zheng ming* also reflected the Confucian belief that "every idea (name) be made to correspond to a strictly empirical reality". This is very different from the Daoist exhortation that "Tao is beyond words and beyond understanding" and that we must "dispense with names, with concepts" (Walker 1995:1).

The Daoist tenet of *wu wen*, 'no active-intervention' or 'no intention' (just following nature), and its rejection of bureaucracy and social formalities would appear almost diametrically opposed to the Confucian doctrine of deliberate self-development, self-restraint and social adherence. Yet the two philosophies "accommodated and influenced" each other (Schipper 1993:13) and, much later, during the Sung dynasty (960-1279 CE) adherents of both traditions took a stand together against Buddhism which

was deemed to be too politically and financially powerful. We find aspects of both the more naturalistic Daoist and the more formalistic Confucian philosophies informing concepts and models central to current TCM theory.

Buddhism was first documented in China in 65 CE (Unschuld 1985:40). In Buddhist theory, ill health was just one facet of the suffering caused by ignorance in the form of confusion, desire (or 'attachment') and delusion. A Buddhist interpretation of traditional medical theory reflecting elements from both Ayurveda and TCM persists in Sowa-Rigpa (Tibetan) medicine today (Men-Tsee-Khang 2001). Both the Buddhist emphasis on detachment and its elaborate monastic hierarchy must have initially distinguished it from the natural 'way' of Daoist tradition. Yet, they shared an emphasis on inner development and under the influence of Daoism, Buddhism took on a uniquely Chinese flavour. The Ch'an Buddhist school (better known in the west by the name of its Japanese derivative 'Zen Buddhism') with its emphasis on 'spontaneity' is an example of Daoist influence on Buddhist thought. Over the following millennia, there was considerable interaction between these two approaches. Yet, perhaps in part due to its emphasis on hierarchy and structure, Buddhism became a powerful political force and the monasteries had enormous influence not only as religious but also as social and financial institutions.

Buddhism was not the only influential teaching to have origins outside China. There appears to have been a great deal of cultural interchange during this prolific period in the history of ideas (Unschuld 1985). Along with the Sanskrit Buddhist texts which reached China around 203 CE came much of the Ayurvedic theory based on the elements and influences of soil, water, fire and wind and space. Curiously, neither the Ayurvedic *tridosha* (three humour) theory nor the advanced Indian surgical techniques dating back to 250 BCE appear to have made a lasting impression on TCM practice or theory. Unschuld (1985:54) also suggests that the "doctrine of systematic correspondence", which came to embrace the quintessentially Chinese medical doctrines of *yin yang* and *wu xing* ('five phases') (see Chapter 5) may have been partly inspired by influences beyond China. There are some extraordinary parallels with developments in Greek thought and medicine which suggest there may have been a common origin for the more systematic, naturalistic classification of phenomena in science and medicine which appeared throughout Asia at this time (also see the discussion on *qi* in Section 4.7).

Despite the obvious philosophical differences between and even within these major systems of thought, Daoism, Confucianism and Buddhism continued to play important roles in all aspects of Chinese culture throughout the following millennia. While their adherents often vied for official influence, there was also a good deal of philosophical overlap and convergence. Many of the concepts central to TCM reflect these varied influences, differences which in the main were accommodated rather than resolved.

Unschuld (1985) has written at some length on the 'syncretic' tendency of Chinese thought; its unique ability to incorporate divergent, even conflicting theories in a somehow practicable formula. Wiseman (1995) comments:

It has always been a characteristic of the pragmatic Chinese mind to be able to use theories like tools to perform different tasks. The Chinese do not regard theory, as we do in the West, as needing to be forever rewritten to achieve the highest degree of approximation to a coherent 'Law of Nature'. They did not perceive theory as an exclusive means of reaching a one and only 'Universal Truth'.

In this way, many of the concepts central to TCM were adapted to fit the differing epistemological perspectives of various doctrines and therefore meant different things despite apparent terminological consistency.

3.4 The medicine of 'systematic correspondence'

This convergence of beliefs and diversity of interpretations is already evident in what is perhaps the single most famous TCM text, the *Huang di nei jing* ('The Yellow Emperor's Internal Classic'). There is some debate over the age of this text with some scholars believing it was compiled between the 2nd and 7th centuries CE (Unschuld 1985), and others believing that portions date back to the 1st century BCE (Bai 2001) or even to the Eastern Chou period from 770-256 BCE (Hiep 1987:168). The *Huang di nei jing* was compiled from a variety of sources and represents a number of schools of thought. It consists of 81 chapters, comprising the *Su wen* ('Simple questions') and the *Ling shu* ('Spiritual pivot') (largely concerned with acupuncta) and represents the earliest presentation of the "doctrine of systematic correspondence". The terms 'systematic correspondence' and 'systematic medicine' have been adopted to describe the elaborate theoretical systematisation of medical phenomena according to the *wu xing* ('five phases/elements') and *yin yang* theory which evolved during this period and is most commonly associated with TCM today (for a more detailed discussion see Chapter 4).

From the late Chou through the Qin (221-207 BCE) and Han (206 BCE to 220 AD) dynasties numerous volumes were written (Hiep 1987: 168). The *Nan jing* ('Difficult questions'), a later compilation also comprising 81 chapters, often referred to as a 'commentary' on the *Huang di nei jing* was considerably more systematic and well integrated than its honoured predecessor. Written around 220 CE, the *Nan jing* was hugely influential and many later publications were explorations of the principles espoused in this volume or explicit commentaries. The *Nan jing* largely overshadowed the *Huang di nei jing* until the neo-classical Sung era (960-1279 CE) when a major effort was made to revive and refer to the works of furthest antiquity, an enterprise facilitated by the development of printing (Hiep 1987:170). The tradition

of referring to classics in later expositions was and is characteristic of “systematic medicine” generally and has contributed to the apparent consistency of espoused theory.

The substantial TCM pharmacology, chiefly developed by the naturalistic Daoists, grew without much reference to these systematic principles. The earliest treatise on herbal medicines, *Shen nung ben cao jing* (‘Shen nung’s classic on drugs’), was apparently written around the 2nd century BCE. However, although many references to this work were made by later scholars, the original text was lost. The first authentic herbal compilation still extant is from Dao Hung Jing in the 5th century CE (Unschuld 1985:114). From that time onward, the documented TCM pharmacopoeia grew steadily without excessive regard for the theoretical discussions or the doctrine of systematic correspondence espoused in the TCM classics. However, the Sung (960-1279 CE) renaissance of classical literature revived interest in the medical classics, in particular the *Huang di nei jing*. The scholars of the Jin (1115-1234 CE) and Yuan (1271-1368 CE) periods brought attention to the remaining fragments of writings from Chang Chi (142-220 CE) who had reportedly tried to apply the theory of *systematic medicine* to the categorisation of *yao* (‘*materia medica*’) in the second century CE. Chang’s systematisation of *yao* had been largely ignored by practitioners for a millennium but filled the perceived need of the neo-classical Sung scholars for an overall systematic theoretical medical approach encompassing both the general theoretical and acumoxa texts and the herbal traditions. From this time forward, *yao* were not only listed according to their specific effects but also categorised by reference to the doctrine of *systematic correspondence*.

By the end of the Qing dynasty (1644-1911), there were more than 3000 (Hiep 1987:172) medical titles representing a diversity of schools and specialties. Wiseman (1995) estimates that today more than 12,000 texts on TCM are available. It is this rich textual tradition which makes it possible to trace the history and development of TCM concepts and terminology. However, it is important to remember that this extensive textual legacy in no way fully accounts for the varied and vibrant diversity of practices that fall under the TCM umbrella and excludes those divinatory, ritual and other practises which also form part of the larger web of health related activities. Many of these practices are not passed on through formal or systematic teachings but through apprenticeships, within families or in small schools characterised by ‘secret’ knowledge or interpretations of the classics given only to initiates. Sivin (1995:196) proposes that there are two types of TCM texts. Firstly, the ‘canonical writings’ which presented the basic principles which he calls the *dao* (‘the way’) and secondly, the formularies and handbooks which he describes as the ‘tools’. Hsu (1999:124) has suggested that even the theoretical teachings function more like a doctrine which, on the one hand, provides the maxims for practice and, on the other hand, only becomes meaningful with constant personal application. Tenzin Namdul, a Tibetan doctor studying within the Sowa Rigpa system which closely follows these ancient traditions, has described his training similarly

(personal communication): the entire canon must first be memorised so that the physician can mentally refer to it for guidance during practice. According to Sivin (1995), the separation of theory and practice which has characterised the western sciences since the 6th century was unknown in China until the modern era. The later change in China may well be due to the influence of modern science, standardisation in educational and clinical practice and a centralised secular government.

3.5 The modern period

Despite its vibrant and millennia old history, TCM suffered a decline in the nineteenth and early twentieth centuries brought about by increased factionalism and de-professionalism amongst its ranks. Further decline was precipitated by the spectacular success of vaccination and other western medical interventions and the rise of western scientific approaches in the nineteenth century. In 1929, only widespread public protests by clinics and herbal practitioners prevented the National Board of Health in Nan Jing from adopting a proposal “for the suppression of indigenous curative practices” (Porkert and Ulman 1988: 236), an action intended to purge China of any remnants of its ‘superstitious and feudalistic’ past (East Asian Medical Studies Society 1985:xxxiii).

However, the tides turned again in 1954, as Mao Ze Dong made the strategic decision to support a renaissance of China’s medical heritage. According to Kaptchuk (East Asian Medical Studies Society 1955:xxxiii), four colleges of official traditional medicine and the Academy of Traditional Medicine had already been established as well as 144 traditional medical hospitals. This turnabout is best summed up in Mao’s famous dictum of 1958: “Chinese medicine is a great treasure-house! We must make all efforts to uncover it and raise its standards!” (in Unschuld 1985:251). Mao’s decision was in part a practical one based on the realisation that western medical resources were hopelessly insufficient to cope with the health crisis in China, particularly in the rural areas where traditional practices were still widespread. However, it also reflected an epistemological rejection of some aspects of the western scientific paradigm in the light of Marxist thinking. In the words of Mao himself (in Unschuld 1985:248):

The metaphysical [bourgeois, non-Marxist]...world outlook sees things as isolated, static and one-sided. It regards all things in the universe, their forms and their species, as eternally isolated from one another and immutable. Such change as there is can only be an increase or decrease in quantity or change of place. [In contrast,] dialectical materialism... holds that external causes are the condition of change and internal causes are the basis of change, and that external causes become operative through internal causes.

The Daoist language of change and transformation is hard to miss in this expression of modern Marxist doctrine.

In language that echoes the language of systematic correspondence, the Committee of the Department of Hygiene wrote in 1972 (Unschuld 1985:255):

The course of illness in the human body is in reality a two-sided struggle between the forces opposing illness, that is, the correct influences, the internal causes, on the one hand, and the elements that bring forth illness, namely the evil influences, the external causes on the other hand. [...] Thus clinical work requires complete concentration on the inner causes, a recognition of the counter effects of this so-called soul, the full activation of the body's own potential energy, and the precise arrangement of the dialectical relationships between correct and evil [influences].

Above we referred to the syncretistic nature of Chinese thought, its extraordinary ability to hold divergent, even opposing views simultaneously. Despite virulent and sometimes bloody refutations of various doctrines through its history, the old is often blended with rather than replaced by the new. From the ancient Daoist notion of the complementary principles of *yin yang* (see Section 4.8) to modern dialectical materialism was not too far a stretch.

TCM continued to be afforded equal status, at least officially, to its biomedical counterpart. Nevertheless, it was no longer known as *yi* or *yi xue* ('medicine') but rather as *zhong yi* ('Chinese medicine'). The public perception that western medicine was more scientific was only one of the new challenges facing TCM under Mao Ze Dong. Others were the severe shortage of well-trained practitioners after centuries of professional neglect, the lack of a modern standardised theoretical approach and curriculum and the inaccessibility of traditional texts written in classical Mandarin. Porkert and Ulman (1982:262) have even suggested that the challenge of understanding the classical Chinese of TCM is nearly as difficult for the modern Chinese as for their western counterparts.

Although the Chinese interpretation of the Marxist dialectic may have drawn on the ancient concepts of change and transformation ensconced in the principles of *yin yang* the exigencies of centralisation, uniform educational, medical and clinical standards as well as the Marxist disavowal of 'religious, superstitious and imperialist' thinking led to a reformulation of TCM. This new literature presented the ancient theories stripped of their rich correlations with cosmological and pre-communist socio-political systems and emphasised systematic 'scientific' presentation and consistency over authenticity.

While the communist suppression of 'spiritual' or 'superstitious' beliefs may be waning in the 21st century, attempts to bring Chinese medicine in line with modern medical science still often result in the neglect of traditional explanations and adoption of modern ones. Disease categories and even aetiologies as well as pharmacological actions are often explained in biomedical rather than traditional terms. While a modern

scientific approach can lead to new discoveries and therapies, this should not preclude a fuller investigation of the original TCM practices on their own terms.

3.6 Transmission practices in China

Historically, TCM transmission in China occurred within families, between teachers and disciples or in small schools through oral and secret transmission. Within families, medical knowledge often represented the family livelihood so that secret formulae and therapeutics were jealously guarded. However, the TCM master may also have chosen a disciple or several disciples initiating each at the appropriate moment to what he was prepared to understand. Texts were not to be read by anyone at any time but given to the worthy disciple to copy when the master felt he was ready. There were strict injunctions against letting these essential textual transmissions pass into the hands of the unworthy. Various rituals accompanied the acts of transmission and in some cases blood oaths affirmed the lineage from master to disciple. The emphasis here was on gaining insight rather than on acquiring information. The act of transcribing personalised the textual transmission which is why Farquahar's teacher (Hsu 1999) looked askance when Farquahar asked if she could simply photocopy his manuscripts. Transcribing of texts was only the beginning. Next, the disciple would memorise and internalise the teachings with the help of explanations from the master. Only then could the TCM physician be successful in practice. As Sivin (1995:201) concludes quoting a popular adage: "those who study it are as the hairs on an ox; those who succeed are as the horn of a unicorn. This is purely a matter of whether one has received the transmission".

Having decided to revive the 'vast treasure trove' of TCM in the 1950s, the centralist government of China proceeded to standardise and institutionalise its practice and transmission. The break with traditional transmission patterns and the influence of western educational and epistemological models meant the emphasis on insight and personal knowledge was replaced by an emphasis on acquiring information, standardised examinations and centralised healthcare delivery systems. The new textbooks were written in line with this orientation. Kaptchuk (1985:xxxiv) writes, "the parameters of development of these texts depended on the political line of the central government [...] traditional CHM [Chinese Medicine] was to be a neat and rational set of theories and practices". Unschuld (1985:243) also emphasises that at the beginning of the 20th century, "the term science was synonymous with 'modern civilization'" – with the consequence that a 'scientific' approach was sought in all spheres of life from the political to the medical. Classical texts had to be translated not only into the modern Mandarin idiom but also into an acceptable modern educational format where apparent consistency and conformity with prevailing norms were sometimes as important as authenticity or respect for the original intent. Standardisation of texts and educational transmission was not without historic precedent. As far back as

the Sun dynasty (581-618 CE), a TCM curriculum was developed by the Imperial Medical College, an impressive institution which was also responsible for producing the *Zhu bing yan hou lun* ('Notes on the origins and courses of all diseases'), a volume detailing diagnosis and treatment of 1,720 disorders. In the late imperial China of the 16th century, the advent of printing made textbooks on TCM more readily available outside the ranks of initiates and aristocrats.

However, beyond the reach of official policy and documentation, traditional transmission patterns survived into the modern era. In her ethnography of current TCM transmission practices, Hsu (1999:227) has distinguished between three distinct modes which she calls 'secret', 'personal' and 'standardised' knowing. In her study, the secret mode of transmission was exemplified by a *qi gong* practitioner who could only pass his knowledge and power on to a qualified disciple. (Literally *qi gong* means 'qi practice/exercise'; *qi gong* broadly refers to an ancient tradition of physical, mental and spiritual exercises for the cultivation, development and circulation of *qi*.) The disciple went through extensive training, monitored by his personal progress as evidenced by visions and spiritual initiations. The personal mode of transmission was exemplified by a *lao zhong yi*, literally an 'old Chinese doctor', the term for an 'experienced' (i.e. well-respected) and scholarly TCM doctor. The *lao zhong yi* taught a small group of disciples, emphasising interpretation of the classic texts. He sought the 'deeper' meaning of various passages while cloaking references to spiritual aspects of the theory in Marxist language. The standardised mode of transmission was epitomised by the curriculum and the training methods at a modern college of TCM. Rote learning of texts was a strong component of the teaching methodology but *xi tong hua* ('theoretical consistency') (Hsu 1999:231) rather than insight was emphasised. The role of the *shen* and other 'spiritual' aspects of TCM tradition were minimised in keeping with the secularism of both modern science and the communist ideology of the time. Graduates were expected to fit into the state operated system of healthcare delivery.

3.7 Understanding TCM in the modern context

Influenced by Daoist, Confucian and Buddhist philosophies and practices and expressed in the poetic language of antiquity, TCM originated and developed under very different social, political and religious conditions from those prevailing in China, or the rest of the developed world, today. While contributing to a measure of coherence, the language of the great classic texts of TCM certainly admits a variety of interpretations and this also facilitated the development of a multiplicity of theoretical approaches, practices and prescriptions. As Unschuld (1985:58) writes:

One of the basic difficulties in interpreting traditional Chinese medical terms and concepts today in a Western language results directly from this syncretistic trait of Chinese medical history.

Identical terms were often employed to denote very different concepts, and at no time was a standardization attempted which might have led to a dominating or stringent interpretation of even the core concepts by a majority of dogmatists and practitioners.

The 'variety of interpretations' of TCM theory has led some researchers such as Farquahar (1982) to conclude that TCM is not so much a science characterised by theoretical consistency as a practice based on precedent and its application, much like law. Farquahar's (1982) position makes a great deal of sense in relation to the practice of TCM, in which practitioners have reference to two millennia of reported case histories and their interpretation by generations of scholars. However, it does not seem sufficient to encompass the large corpus of more esoteric yet closely related Daoist (and Buddhist) theories and practices which are closely related to medical practice. It is certainly important to remember that TCM, like most medical practices, is based largely on accumulated experience. Nevertheless, to reduce or eliminate the theoretical component does not do justice to the complex beliefs and conceptualisations which inform practice. TCM not only represents a millennia-old tradition which is rich in medical data, it also provides insight into the ontological and epistemological approach of an earlier era. At the very least, TCM 'theory' offers insight into alternative conceptualisations of the universe and our psychophysical experience as humans. It is a view that seems to share many features with other traditional systems around the world suggesting that TCM is hardly an historical anachronism but rather offers an articulate representation of a fundamental world view.

However, gaining insight into this system requires not only exposure but also a well-formulated approach. Considering that Wiseman (1995) estimates that only 200 of the available 12,000 Chinese volumes on TCM were available in English in 1995, the difficulties for the English student of TCM are considerable. The Chinese have largely selected TCM texts for translation on the basis of their Western (biomedical) bias and their systematic and simplified presentation with the result that authentic classical material is scarce. The problem of scant reference materials is exacerbated by the fact that TCM terminology is often translated in widely different ways, with little explanation as to either the etymology of terms or their conceptual underpinnings. The Western student is likely to lose not only the sense of the original terms but the integrity of conceptual models as key terms are translated differently in different texts and even sometimes within a single text. Since TCM is characterised by a holistic and synthetic approach with a high degree of conceptual unity, the importance of key terminology in textual coherence cannot be underestimated.

Many western approaches to TCM have been characterised by efforts to reconcile it with biomedical theories and epistemologies. Some have been characterised by the opposite tendency – to turn it into an 'alternative' approach with a predominantly 'spiritual' bias. While either approach may have its merits,

TCM also deserves to be understood on its own terms through its own terminology. Scholars such as Wiseman, Unschuld and Sivin have called for the assistance of scholars who can investigate the cultural and conceptual underpinnings of TCM and complement the emphasis on its medical applications. Methodological tools from a number of fields – for instance, history, anthropology, and linguistics – have relevance in this regard. It is in this context that the conceptual analysis of key terms in TCM using a cognitive semantic approach may be especially useful. In the next chapter, I analyse some key TCM concepts and terms using the cognitive semantic approach discussed in Chapter 2.

Chapter 4: MAKING SENSE OF TCM

In this chapter, I apply the cognitive semantic approach discussed in Chapter 2 to some of the central concepts and terms of TCM. In keeping with the cognitive linguistic view that language is both informed by and informs cultural models, I have given considerable attention to the cultural context of TCM. In the previous chapter, I gave a brief overview of TCM history and transmission practices. In this Chapter, I look more closely at the world view of the ancient Chinese and the epistemological orientation which results from that world view. I begin with a discussion of Chinese cosmology, the world view which underpins the TCM understanding of man and health. This helps put the subsequent discussion of TCM epistemology in perspective: to know and understand health and disease is to know and understand man as an integral part of the cosmological dynamic.

I go on to suggest that whereas biomedical concepts and terminology are based on an objectivist and analytic paradigm, TCM concepts and terminology are based on a holistic world view and synthetic epistemology. While biomedical terms are likely to have precise physical objective referents, TCM terms make sense as part of a self-referential system. In TCM, as in many other traditional medical knowledge systems, cosmology, man and health are inextricably linked. The nature of TCM terminology derives from the cultural models and epistemological orientation in which it makes sense.

My contention is not that the world view or epistemology of the ancient Chinese is monolithic – the previous chapter underscored its diversity – but that it reveals some essential differences from the modern biomedical view and these differences need to be made clear to the student who encounters TCM as an ‘additional medical language’.

The remainder of the chapter is dedicated to an analysis of some key TCM concepts and terms. For this analysis, I make use of the cognitive semantic approach detailed in Chapter 2. I begin by a discussion of a single but highly polysemous term, *qi*, and then proceed to look at two of the most important conceptual models used in TCM, the *yin yang* and *wu xing* models. While this research will only cover a small number of key TCM concepts and terms, the holistic nature of the TCM system means that any central concept provides insight into the system as a whole. In any case, the selected terms and models are so ubiquitous as to enable a basic understanding of the TCM system.

While I have emphasised the contextual factors which contribute to an understanding of TCM, clues to context are also embedded in linguistic usages. The power of the cognitive linguistic approach is its contention that language reveals conceptual structure – and that this structure is motivated by the way in which people make sense of the world. Just as the cultural context of TCM is critical to an understanding of its terminology, this terminology also provides clues to the TCM world view in which it ‘makes sense’.

to TCM 'ways of knowing' and 'ways of speaking'. A further postulate of this research is that students who can make sense of TCM terminology will be better enabled to make sense of and use the TCM system.

If, as cognitive linguists postulate, the locus of meaning is in embodied experience, cultural differences do not prevent mutual understanding but rather reveal different possible ways of making sense of our experience and environments. In this sense, the cognitive linguistic approach suggests that multilingualism is essentially additive. As Whorf has said (in Wolf and Bobda 2001:253): "Multilingual awareness also has the capacity to increase intercultural understanding by engendering respect for other logics and other pictures of the universe represented by different ways of speaking."

The notion of the 'embodied mind' embraced by cognitive linguists has much in common with the integrated notion of the 'body-mind' which underpins TCM (the notion of the body-mind is, however, an English concept since the body-mind distinction is not emphasised in TCM). Nevertheless, a key difference between cognitive linguistic and TCM epistemologies is that cognitive linguists have shown that linguistic categorisations reflect the nature of man and his cognitive perceptual experiences, while TCM further postulates that man and his cognitive perceptual experiences reflect, intersect with and allow him to understand and even influence the nature of the cosmos itself. In TCM 'ways of knowing' and 'ways of being' or epistemology and ontology are two aspects of the same pursuit.

4.1 Chinese cosmology

This dissertation is concerned with making sense of some key models, concepts and terms used in TCM. These models, concepts and terms enjoy a long history and many are not exclusively medical but inseparable from other aspects of Chinese thought and life. The same principles believed to govern the cosmos were considered to govern human health. In this section, I look briefly at the cosmology that underpins the world view of TCM.

In Daoism, creation is itself part of the *dao* ('way'), which is "unnameable, ineffable, yet present in all things" (Schipper 1993:3). "The Tao [*dao*] gave birth to the One, the One to the Two; the Two produced the Three and the Three the Ten Thousand Beings" says the *Dao de jing* (in Schipper 1993:4). *Dao* is the spontaneous process that underpins non-being and coming into being, the natural cycles of the universe. *dao* encompasses the chaos that precedes and follows creation. "The Tao [*dao*] may make whole but is not itself the Whole. It gives birth to the One, it can be the One, and then it can again split this unity into fragments, divide it" (Schipper 1993:4).

In his work on Daoism, Schipper (1993:34) explains that the primordial chaos which precedes creation is called *hun tu*, a term which he explains as a ‘verbal emblem’, an onomatopoeic expression for the “sphere or matrix that holds within itself the whole universe, but in a diffuse, undifferentiated and potential state”. *Xian tian* (‘before heaven’) is another term referring to this state which existed before existence itself. In the typically Chinese correspondence of macro and microcosm, *xian tian* can also refer to the period before the human has been conceived, the state before creation on an individual level.

The *hun tu* or primordial chaos contains the original *qi* (‘breaths’) before the moment of creation. At the moment of creation these *qi* escape: the “light, transparent ch’i [*qi*] rise and form heaven; the heavy, opaque ones sink, forming Earth. Thus having established the polarity of Heaven and Earth, the c’hi [*qi*] join and unite in the Center, which constitutes a third fundamental modality [the human]” (Schipper 1993:34).

This original primordial and undifferentiated state was also referred to as the *wu ji*. The Oxford Concise English-Chinese Chinese-English Dictionary (Manser 1999) translates *wu* as ‘nothing, nil’ and *ji* as ‘the utmost point, extreme, pole’. *Ji*, most importantly for the purposes of this dissertation, can also be translated as ‘polarity’. The *tai ji* (‘great polarity’) symbol thus represents creation as the emergence of the ‘polarities’ *yin* and *yang* their interdependence, interactions and transformations (see Figure 3). “Tai-Chi [*tai ji*] is generated from Wu-Chi [*wu ji*] or the ultimate nothingness,” writes Jou (1980:78).



Figure 3 The *tai ji* or *yin yang* symbol

The two aspects of this polarity are *yin* and *yang* (represented in Figure 3 as the black and white areas respectively). The *yin yang* polarity is a fundamental and central concept in TCM, one that underpins nearly all the other major concepts. The enormous importance of *yin yang* in medical theory and practice is just one aspect of its all-pervasive epistemological significance in Chinese thought. While the term ‘polarity’ is used to describe the relationship of *yin* and *yang* it would be a mistake to think of these only as opposing forces, they are also complements and one cannot exist without the other. At its most intense *yin* becomes *yang* and *yang* becomes *yin*, creating a dynamic cyclic tension. In the words of the famous medical text the *Tai su* (in Unschuld 1985:283-284):

Yin and *yang* are the underlying principle of heaven and earth; they are the web that holds all ten thousand things secure; they are father and mother to all transformations and alterations [...]

Heaven arose out of the accumulation of *yang*; the earth arose out of the accumulation of *yin*.
Yin is tranquillity, *yang* is agitation; *yang* creates, *yin* stimulates development; *yang* kills, *yin* stores.
Yang transforms influences, *yin* completes form. When cold reaches its zenith, it creates heat; if
heat reaches a zenith, it creates cold.

Common to Chinese theories on the origins of the universe is the belief that *tian* ('heaven' which is *yang*), and *di* ('earth' which is *yin*) emerged from primordial chaos and *ren* ('man') is at the centre, an integral and integrating point of cosmology. The central position of man in this cosmological pattern helps determine his physiology and psychology as well as the importance of his careful observance and re-enactment of heavenly or cosmic cycles in ritual, daily life and medical practice.

4.2 TCM epistemology

In this section, I look at the epistemology which results from the world view briefly discussed above. Since the focus of this dissertation is pedagogical – a discussion of TCM as an 'additional medical language' – I emphasise points of epistemological difference with modern biomedicine.

In one sense, it should not be possible to speak of a single TCM epistemology since TCM has a long history and its terms and concepts have evolved and varied with the religious, philosophical, political and social orientations of the times. However, throughout these changes the epistemology of TCM has remained *holistic* in contrast to the more *analytic* paradigm of modern bioscience. The holistic cosmological perspective that gave rise to many of TCM's key concepts persists in the models still used today.

As noted in Chapter 3, the early Shang made little distinction between the 'physical' and 'spiritual', the living and dead, the well being of the community, the environment and individual health. This view, in which the cosmos is animate and the human is a part of the cosmic fabric is common to many traditional, particularly shamanic, medical systems. According to Schipper (1993), the belief in the enormous influence of the ancestors, the interlinking calendar cycles, and the whole net of relations between the cosmos and daily life, the dead and the living has persisted until today *via* an unbroken chain of transmission in Daoist practice. This practice was actively suppressed over the millennia by various official religions and government ideologies, most recently under the communists. It is certainly not the position espoused in modern TCM textbooks and standardised educational models which have attempted to rid TCM of its 'superstitious' past. Still, the adherence to a paradigm that allows for a holistic, synthetic perspective and the interdependent polarities of *yin yang* has survived the influence of modern politics, science and medicine. In 1972, the Committee of the Department of Hygiene wrote (in Unschuld 1985:256):

The parts and the whole together form a relationship, in which they oppose one another, but yet at the same time constitute a homogeneous entity. If there are no parts, there is also no whole, if there is no whole, there are also no parts... The correct approach is as follows: Proceed from a consideration of the whole; concentrate not only on the parts, but put an even greater emphasis on the entire situation, combine both aspects dialectically.

A holistic paradigm has certain consequences for both theory and terminology. From a theoretical perspective, each 'part' is informed by the 'whole' and *vice versa*. Furthermore, each 'part' relates to every other part via its relationship to the whole and the principles that make that 'whole' a coherent one. In fact, the word 'part' itself suggests a mechanical model where elements can be separated from the whole. The word 'aspect' might be a better choice as it suggests inseparability. It might seem that any theory is holistic in the sense that its principles should be pervasive and coherent – at least, within a particular domain of enquiry. However, in a holistic paradigm, coherence is inherent not only to our theories about reality, but intrinsic to that reality itself. Any domain of enquiry will refer to the same pervasive coherent principles expressed throughout the universe. In medicine, this means that the same principles that define cosmological-environmental processes will also characterise physiological responses and the psychological domain and *vice versa*.

In medicine this is evidenced by the fact that a TCM diagnosis may encompass what western science identifies as distinct emotional and physical symptomatology in a single *bian zheng* ('pattern of disease') (also see Section 4.8.4). In TCM, a pattern of disease is also affected by the relevant times of the day, year and other cosmic cycles and may be accompanied by emotions associated with the organs involved. For example, symptoms associated with the *tai yin fei jing* ('great yin lung channel') will worsen during the corresponding diurnal period from 3:00 – 5:00 AM, during the correlated 'metal' season (autumn) and the condition may be affected by or produce feelings of sadness (the correlated emotion).

A holistic theory also entails that the function or dysfunction of any 'aspect' of the system may affect or be affected by some other 'aspect'. This is evidenced in TCM by the fact that dysfunction of the nose may imply a lung disturbance which itself could indicate: (1) spleen *xu* ('vacuity') because the spleen is the mother of the lungs according to *wu xing* ('five phase') theory (see Section 4.9), (2) kidney *qi xu* (*qi* 'vacuity') because the kidneys 'grasp the *qi*', (3) lung *qi xu* (*qi* 'vacuity') because the lungs are unable to 'send down' the *qi*, or a number of other underlying patterns. It is usually the whole pattern, rather than the isolated 'sign' or 'symptom' that is treated although a particularly distressing symptom may merit specific attention.

A holistic system also implies a synthetic rather than an analytic approach. The distinction between a synthetic and an analytic approach is not intended to be cut and dried but is to be understood as a

continuum that will help to highlight the nature of theoretical systems and their terminology. In a synthetic system, cosmic principles are all pervasive rather than restricted to a particular domain of enquiry. The epistemological consequence of adhering to a holistic, synthetic paradigm is that the pursuit of knowledge consists of refining the understanding of the workings of the central principles rather than identifying new structures or positing new explanations as to their interactions. In TCM, the physician is more likely to deepen his understanding or discover new aspects of known principles than to discover new entities or kinds of interactions. The TCM student must learn to recognise ever more subtle manifestations and interactions of *yin* and *yang* and the *wu xing* ('five elements/phases') in the substances, processes and patterns of health and disease. This is not only true in TCM but also in related disciplines. In the martial arts, the principles of *yin* and *yang* govern all aspects of movement and interaction with an opponent. The same movements may be practised over any number of years, but the practitioner guided by the 'master' acquires a progressively deeper understanding of, for instance, the principles of *yin* and *yang* as manifested in breathing, weight distribution and direction of movement.

In an *analytic* system, it is assumed that it is meaningful to talk about 'parts' in isolation. These parts can be individually described both as entities and in terms of their behaviours and interactions. For example, specialists in microbiology, medical physiology or organic chemistry might describe a newly isolated molecule using terms for its discernable physical structures, polarities, etc. – this may be a continuously expanding area as new and finer structures are discovered and named – as well as terms which define the types of activities and interactions between these structures for instance, receptor sites, hormone interactions and proteins.

In sum, the synthetic system, a dynamic one of active principles, is essentially complete - it is the understanding or application of established principles which evolves. The analytic system is continuously being revised and evolving as new parts are discovered and new theories developed to explain their interactions. Of course, any system may integrate analytic and synthetic approaches; although essentially synthetic, TCM has continually been enriched by the discovery of new *materia medica*, formulae and techniques. The point here is simply that the nature of the terminology used in any system reflects its underlying theoretical commitments. Where these are primarily synthetic, we cannot expect the type of definitions found in analytic systems. For example, the Mandarin term *shen* is usually translated by the English term *kidney*. Yet, in TCM *shen* refers not merely to a physical structure (which can be isolated from the rest of the body) but to what Porkert and Ulman (1982:93) have called a "function circle" encompassing a wide number of functionalities from 'grasping the *qi*' to 'storing the essence' or 'controlling the bones'. To use some 'western' descriptions of disease, the *shen* may be treated where there is sexual dysfunction, memory loss or an inability to cope with stress. Just as importantly, *shen*

enjoys a complex relationship with the other 'function circles' relating to the other 'organs' of the body, as well as to cosmological and environmental influences.

The fact that biomedical terms have reference to specific physical structures and processes, helps to explain the enormous proliferation of terminology as new structures and processes are identified. This proliferation is accelerated by the extraordinary technological development which enables scientists to 'see' realms of nature far beyond our human perceptual capacity. Nevertheless, the proliferation of terminology is not only due to explorations beyond our natural perceptual frontiers, it also reflects a commitment to analysis over synthesis. The quest to differentiate new structures and processes, to subcategorise phenomena is by and large more pronounced than the quest to synthesise experience in larger, even multi-dimensional categories. By contrast, TCM theories or models attempt just such a synthesis - which perhaps explains why a relatively small number of TCM terms are sufficient to describe the complexities of human health.

Johnson (1987) has noted how pervasive the analytic approach is in modern biomedical sciences in his discussion of Hans Selye's work on stress. In Johnson's opinion, Selye's early research was subject to the BODY AS MACHINE metaphor prevalent in medical science. This metaphor entails the belief that "any injuries or diseases [are] accompanied by a *specific* or *unique* set of essential characteristics or symptoms... disease [is] understood and experienced as the breakdown of a specific part or as an invasion by a foreign object or substance" (Johnson 1987:131). However, Selye's discovery that the body exhibited a typical pattern of non-specific response to stress led him to reject this analytic BODY AS MACHINE metaphor in favour of a BODY AS HOMEOSTATIC ORGANISM metaphor, a synthetic view with which he could make sense of the body's holistic response to a wide variety of influences. In fact, the term *stress* bears far greater resemblance to a TCM term than most medical terms contextualised by the analytic viewpoint that Wiseman says, "has become so deeply entrenched in our day-to-day thought that it is an integral part of the Western mindset and indissociable from what we call 'reason'" (Wiseman 1995).

As I suggested above, epistemology underpins the nature of the terminology used in a given system. In general, terminology must help us to identify and discuss the relevant features in a given domain or discipline. Thus, if that system is an analytic one, the terminology can be expected to have precise 'referents' that can largely be specified in isolation from the whole. If that system is a synthetic one, there will be considerably more internal or systemic self-reference – any term will enjoy complex relations within the domain of enquiry and to other terms therein.

This complex web of semantic relations is precisely what we find in TCM terminology, which is rooted in the holistic cosmology and synthetic epistemology discussed above. The meaning of each term is highly

elaborated and each term stands in a complex set of relations to every other term in the system. For the most part, a term has reference to processes that make sense in terms of a number of central models rather than to physical structures that can be isolated from the whole.

4.3 Epistemology and linguistic approaches to word meaning

In this section, I suggest that the nature of the terminology being learned should influence the choice of linguistic approach to analysis of that terminology particularly with a view to successful pedagogical outcomes. The discussion of epistemology above suggests that an analysis of TCM terminology requires a linguistic orientation that allows for a synthetic perspective. Below I briefly look at various linguistic approaches to semantics and consider the applicability of the cognitive linguistic, or more specifically, the cognitive semantic approach.

Both the western biomedical and linguistic traditions have tended to be objectivist and analytic. Johnson (1987:xxix) states that “Objectivism provides the primary context in which our most popular theories of meaning and rationality are articulated”. In western linguistic theory, words have been considered as ‘arbitrary signs’ having ‘sense’ within the linguistic system and ‘reference’ to discrete ‘things in the world’. This position, largely based on a philosophical orientation in which statements should have ‘truth value’ in relation to the ‘Real World’, has had an enormous influence on how we look at reality and our attempts to know and describe that reality. As Johnson (1987:xxxii) notes, model theoretic semantics is “made possible by a set of metaphysical assumptions about the nature of reality: the world consists of entities [specified by an exact terminology – MA] that have properties and stand in definite relations to one another at any given instant; properties are placed in one-to-one correspondence with the set of entities having those properties”. A correlate of this view is the fact that such ‘properties’ (also specified by terminology) are assumed to be both constant and definable.

These expert views on epistemology and language are rooted in the folk theory that the aim of language is to correctly describe or ‘mirror’ reality, a reality nicely carved up into discrete parts. In other words, there is a system of one-to-one correspondence between precise words and discrete referents in the real world. Deviations from this precise expected relation are clearly indicated by linguistic strategies such as hedges (Taylor 1991:78).

This objectivist view has been challenged by modern linguists including discourse analysts, sociolinguists and cognitive linguists who argue that language is a more complex phenomena influenced by our perceptual faculties, cognition and socio-cultural requirements; a matter of communication concerning values and perspectives in a social framework. “Reference is by nature a collaborative process”, write

Geiger (1993:277) rather than a case of truth-values from an “Olympian” perspective (Geiger 1993:282). Historically, linguists have used distinctions such as ‘semantic/pragmatic’ and ‘denotative/connotative’ to distinguish between the linguistic structures ‘in the mind’ and those which relate to communicative needs, and other imaginative-creative uses of language such as poetry and drama. Cognitive linguists have also questioned the validity of making a sharp distinction between what is ‘in the mind’ and what is ‘in the world’ noting that the Cartesian dichotomy between mind and matter and the resulting rational or empirical epistemologies cannot be sustained.

Geeraerts (1993:59) has described the epistemology of cognitive semantics as ‘experiential’, one in which “thought is embodied”. From the cognitive linguistic perspective, the mind is formed by its evolution in response to the environment while our experience is structured by our perceptual and mental capacities. Thus, the cognitive semantic approach avoids both the objectivist position with its insistence that there is a real world which can be known outside of our subjective limitations and the idealist position in which reality is ultimately unknowable. It does so by emphasizing the importance of ‘meaning’. Things are meaningful by virtue of their relevance to us as perceiving, feeling and cognising beings. “Our being in the world as a living organism itself organizes our experience, and organizes it in a way that is existentially meaningful. Thus, for instance what we perceive as salient colours is determined by physiological characteristics of the eye” (Geeraerts 1993:61). As I discuss in Section 4.5, from the TCM point of view, it appears that colours are not only ‘meaningful’ because they play a role in vision but also because they convey emotional and other types of information.

Geeraerts (1993:73) further claims that: “cognitive semantics rehabilitates the epistemological role of the individual subject against that of the linguistic code”. With this increased focus on the human component in language, the intimate relationship between culture and language is highlighted.

Furthermore, Geeraerts (1993) suggests, cognitive semantics views the structure of knowledge as ‘paradigmatic’ in which: “New knowledge comes about through the interaction of experiences and existing conceptual systems, working as frameworks for the interpretation of those experiences” (Geeraerts 1993:60).

Finally, and because of the foregoing, cognitive semantics emphasises the synthetic nature of cognition in considering that meaning is ‘motivated’ by the nature of our perceptual-experiential orientation. In this view, both semantics and syntax in language are understood as a complex system of categorisation in which underlying cognitive principles may relate seemingly disparate phenomena in widely divergent domains of experience. These relations are not arbitrary but motivated and constrained by environmental, perceptual and cognitive factors.

The parallels between TCM and cognitive semantic epistemology are considerable. Firstly, both interpret human understanding as embedded in experience and in the environment. The 'mind-matter' or 'mind-body' split was never postulated in TCM and is de-emphasised in cognitive semantics as underscored by Johnson's expressive phrase 'the body in the mind'. Secondly, both TCM and cognitive semantic epistemologies are primarily concerned with our perception of dynamic events and our evaluation of these perceptions, with what things mean to us. Finally, both the TCM and cognitive semantic approaches entail a synthetic perspective in which terminology appears to reveal a complex system of categorisation and interaction.

A specific difference with cognitive semantics is that in TCM meaning is presumed to be generated or motivated by cosmological patterns rather than solely by our perceptual-experiential bias. In Chinese thinking, man is in a central cosmological position – his experience is itself modelled on or an integral expression of the *dao*, the nature of cosmological forces and interactions. He is able to discover the nature of reality or the *dao* precisely because of his cosmological-perceptual-experiential bias. In this view, reality is embedded in experience and *vice versa*. The ideal separate and dispassionate 'Olympian observer' could never approach the real; it is only through integration and participation that 'the truth' is grasped. This difference has consequences in terms of applying cognitive semantic analyses to TCM material. Where cognitive semantic theory may consider a particular linguistic category to reveal the way in which a particular language group categorises their experience, from the TCM viewpoint, that category is considered to reflect cosmic principles.

It could be said that TCM is underpinned by a belief system whereas cognitive linguistics represents a scientific approach. However, the cognitive linguistic approach suggests that science itself has a cognitive-experiential basis and is never perspective-free. The objective 'observer' is replaced by the subjective and communicative participant. In regard to objectivity and the scientific approach, Johnson (1987:212) concludes "objectivity is a matter of fit with our experiential beliefs". These 'experiential beliefs' are not entirely fixed, they do not reflect a completely constant or static reality or neatly distinguished 'things in the world', but allow for conceptual, cultural and linguistic evolution.

In the Western tradition, the tension between objectivist and relativist positions is marked. However, the interdisciplinary nature of cognitive science involves an exploration of the frontier between objective and subjective experience. What happens at a neurological or biochemical level may also be cognised, experienced or 'felt' by the individual. Still, while 'subjective' introspection may occasionally be employed by the cognitive linguist as a tool to understanding language usage, it is not usually considered that such introspections will necessarily or directly reflect the 'objective' nature of mental representations in the brain. The TCM or Daoist adept, by contrast, is specifically trained to use introspection to determine the

nature of his own or a patient's inner reality. TCM introspections about the nature of the body-mind are of particular interest to the cognitive semanticist precisely because they are concerned with this frontier between 'what is' objectively and 'what is experienced' subjectively. The striking similarities between TCM conceptualisations and those of other traditional medical or traditional knowledge systems suggest that these systems can reveal much about common conceptualisations of the body-mind.

4.4 The challenges of TCM terminology

There are several unique challenges for an analysis of TCM terminology. Firstly, the astonishing diversity of meanings that can be expressed by a single term even within a single school of thought. To some extent, this diversity may reflect the fact that many TCM 'things' are identified not by reference to objective objects 'in the world' but through personal perceptions of subjective experiences (either of the doctor or the patient). In a discussion of the Daoist treatise, *Huang ting jing* ('Classic of the yellow court') (circa 200-300 CE), Schipper (1993:142) notes: "There is no lack of glosses on the *Book of the Yellow Court*, but unfortunately they rarely agree on the meaning of the names and terms and often even contradict each other [...] one gets the impression that any part or function of the body can be associated with *Yellow Court*." Again, discussing the term *dan tian* ('cinnabar field'), an important concept in both Daoist theory and TCM, Schipper (1993:142) cites modern Daoist adepts who assure him that "the Cinnabar Field does not correspond to any exact place in the body, but 'must be found by each for himself during meditation'". This apparent reliance on subjective experience does not mean that 'anything goes' but merely reflects the need for the practitioner to become attuned to the intricacies and subtleties of their experience, a goal usually reached with the help of considerable training and guidance. The more attuned the practitioner becomes to this experience, the more he is attuned to the underlying principles of nature and the cosmos.

As the Daoist adept must rely on his personal experience and perceptions, the TCM physician must rely on his own perceptual abilities for diagnosis. His sense of touch, sight and smell are the 'tools' he will use in order to determine a patient's state of health be it through the highly refined discipline of pulse diagnosis, or through his ability to 'see' the patient's *se* ('colour/visage') and *shen* ('spirit/vitality') (see Section 4.7.4 for a fuller discussion of *se* and also Kuriyama 1995). The role played by a panoply of increasingly sophisticated technological diagnostic tools in modern biomedicine is filled in TCM by the doctor's refined ability to 'feel' and perceive as well as accurately identify and categorise his feelings and perceptions. This means that TCM terms often refer to 'things' defined only by reference to personal experience such as a "wiry pulse" or a "greenish hue", perceptions which are not necessarily consistent between practitioners.

A second difficulty with TCM terminology is that although TCM includes a “synchronic plurality of differing opinions and ideas” (Unschuld 1985:2), this diversity was not always reflected in different models or terminologies. As Unschuld (1985:58) writes:

One of the basic difficulties in interpreting traditional Chinese medical terms and concepts today in a Western language results directly from this syncretistic trait of Chinese medical history. Identical terms were often employed to denote very different concepts, and at no time was a standardization attempted which might have led to a dominating or stringent interpretation of even the core concepts by a majority of dogmatists and practitioners.

In Unschuld’s (1985) view, the fact that “identical terms were often employed to denote very different concepts” contributes to an impression of consistency and disguises underlying differences. We have noted this tendency in the history of Chinese ideas, for example, in the transformation of the meaning of the important term *de* from the Daoist ‘(natural) power’ to the Confucian ‘(moral) virtue’. We even find the term *de* incorporated into the doctrine of systematic correspondence where the *wu de* (‘five *de*’) is another term used to talk about the *wu xing* (‘five phases/elements’) (for a discussion of the *wu xing* see Section 4.9).

A final problem for those who do not know Mandarin is that Mandarin generally, and TCM terms specifically, are exceptionally difficult to translate. Both the language and the medical system are ancient and the signification of a single character/term may have varied considerably in usage over the millennia. TCM also encompasses many diverse traditions so that the usage of a term may vary synchronically as well as diachronically. It would be difficult to find an English word which conveys this complex history and culture and the correspondingly diverse usage of a TCM term. In many cases, the fact that a single Mandarin term appears to mean ‘different things’ may also be a result of the complex web of correlations and connotations enjoyed by that term in the context of TCM models. There are also instances where a single and often important Mandarin term does not correspond to any English concept. In such cases, this single concept may be translated by a number of different English terms none of which completely captures the meaning intended. Since several English terms are used, the integrity and cohesion of the original text or discourse may be lost. In other cases, several English terms are used to translate a single Mandarin character which has a single highly specific reference. Without explicit explanation to this effect, the English-speaking student will assume each translation has a distinct reference. Ergil (1999) notes that in pulse diagnosis English translations sometimes refer to ‘thready’, ‘thin’, ‘small’ and ‘fine’ pulse qualities although all these words are used to translate the single term *xi* in Mandarin and refer to only one pulse quality. In yet other cases, important distinctions indicated by a number of different terms in the original TCM texts are lost as translators inappropriately ‘simplify’ for their English speaking audience. Along with the loss of vocabulary comes a loss of both theoretical complexity and good

practice. Finally, the above issues of translation are compounded by wide variation and inconsistency amongst translators. Wiseman (1995) insists that in modern practice “Chinese physicians possess a relatively standardized technical vocabulary for the discussion of medical problems, whether writing or speaking”. Yet, until recently English translators have not agreed that such consistency is necessary nor has there been substantial agreement as to the ideal English term to translate each TCM term. As a result, there has been a great deal of inconsistency between authors and even within texts. For instance, the terms *bu* and *xie* are extremely important in treatment but variously (and sometimes perhaps inappropriately) translated as ‘supplement’, ‘tonify’, ‘reinforce’, ‘replenish’ and ‘sedate’, ‘remove’, ‘reduce’, ‘drain’, ‘draw off or allow to flow’ (Ergil 1999). This is at the very least confusing and may even lead to a complete misunderstanding of descriptions of disease and treatment.

In sum, the questions raised above relate both to the meaning of concepts and to the meaning of terms which suggests that a clear understanding of the underlying conceptual organisation of TCM is vital to an understanding of TCM terminology. Again, the cognitive semantic approach appears particularly relevant. In cognitive semantics, it is assumed that language is closely related to, yet distinct from, conceptual organisation, and that both terms and concepts are motivated.

The remainder of this chapter applies the concepts discussed in Chapter 2 to some key terms, concepts and models in TCM. It begins with a discussion of motivation and its importance for understanding the categories and polysemy of TCM.

4.5 Motivation and meaning in TCM

From the cognitive semantic perspective, meaning is not arbitrary but motivated and constrained by environmental, perceptual, cognitive and cultural factors. This suggests that although linguistic diversity and variety is theoretically unlimited and unpredictable, whatever meaning relations emerge in a given linguistic system should be accessible to anyone who can unpack the contributing contextual factors. The cautionary lesson here is that any linguistic item in a given language will enjoy a great number of relations to other linguistic items and structures in that language so that an exact translation is highly unlikely. The encouraging lesson is that it should be possible to ‘make sense’ of a linguistic item and its relations given enough information on relevant contextual factors such as culture and environment. It is necessary to look for the unique features used to map out a largely familiar landscape.

For example, to understand Chinese colour terms it is necessary to understand how the colour spectrum is configured in Chinese. Two examples reveal some differences from English. The Mandarin term *huang* includes colours specified by both ‘yellow’ and ‘brown’ making the association of the colour *huang* with *tu*

(‘soil’) easily comprehensible to the Chinese (this is an important association as ‘soil’ or ‘earth’ is one of the ‘elements’ or ‘phases’ in the *wu xing* (‘five element’, ‘five phase’) model discussed in Section 4.9). Yet, the association of ‘yellow’ with ‘soil’ is baffling to an English speaker and an English TCM practitioner who looks for signs of ‘yellow’ in facial hue may be unable to diagnose his patient correctly. Similarly, the Mandarin term *qing* includes the English colours specified by both ‘blue’ and ‘green’. However, the important association that exists in Mandarin between *qing* and cyanosis, on the one hand, and between *qing* and *mu* (‘the tree/wood’) ‘elements’ or ‘phase’ on the other hand is entirely lost when the English words ‘blue’ and ‘green’ are used in translation (Wiseman 1995). The environmental, perceptual and cognitive factors necessary to understand the colours *huang* and *qing* are common to both Chinese and English speakers but to understand the configuration of the colour domain in Chinese, English speakers require more background information.

As I proceed, I look at some of the most basic terms in TCM and ask how they configure the cognitive linguistic landscape for the Chinese. In order to make this landscape accessible to the English thinker, I attempt to identify the schemas, metaphors and metonymies which underpin the elaboration of meaning in this system. Maciocia (1989) has insisted that the differences between Chinese and Western thinking should not be overemphasised; that, in large part, TCM is a successful system because of its simplicity and universality. Can the cognitive semantic approach help reveal that common ground? This is a question I will also be investigating in the sections that follow.

4.6 Polysemy and systemic polysemy in TCM

In the beginning of this chapter, I argued that epistemology underpins the nature of the terminology used in a given system to identify and discuss the relevant features. I suggested that a term in an analytic system is expected to have precise ‘referents’ that can be specified to a large extent in isolation from the whole, but that a term in a holistic system is likely to be meaningful rather by virtue of its relation to other terms and the models (or ICMs) in which they are contextualised. Both the synthetic and subjective nature of the TCM system helps explain its unusually high levels of both lexical (semasiological) and conceptual (onomasiological) polysemy. In general, important concepts and terms in TCM are ubiquitous – they are exemplified in every aspect of the system. In Section 4.7.2, I also suggest that the high level of schematicity in TCM conceptions of the body (and the cosmos) leads to considerable polysemy.

In Chapter 2, I discussed the notion of systemic polysemy which posits that linguistic systems may be governed by polysemous categories of both a semantic and syntactic nature. In this view of polysemy, the ‘single form’ referred to in the definition of polysemy as ‘single form, many related meanings’ no longer refers only to single lexemes but is also applied to syntactic categories. The notion of ‘significances’

(Hendrikse 1997) is a useful concept in relation to the pervasive models or conceptual systems which underpin TCM terminology. TCM terms, as lexical items, often have many 'senses'. In addition, they may have many 'significances' in terms of their positions in the central models which structure TCM conceptualisations of the body.

Below, I examine the polysemy of *qi*. This fundamental term/concept is ubiquitous to TCM conceptualisations and descriptions of physiology and to diagnosis and treatment. It is rare to find any passage in a TCM text or a clinical discussion which does not explicitly use the term *qi* or implicitly reference the concept.

4.7 The polysemy of *qi*

The Shanghai College of Traditional Medicine (1981:8) bluntly states that *qi* is an "untranslatable word". In their precise, but somewhat unwieldy manner, Porkert and Ulman (1982:84) translate *qi* as an "energy constellation". They insist that "Chinese medicine is primarily concerned with dynamics, with the flow of energy, and in this respect an individual human being is regarded as a *qi*, a particular 'constellation' of energy, rather than as a physical body that is inhabited by a soul or spirit" (Porkert and Ulman 1982:84). However, Unschuld (1985) and other sinologists refute the oft-used translation 'energy' noting that *qi* has a substantial nature.

Yu (1998), exploring the term in the modern context, uses the translation 'gas' which appropriately suggests a low-density physical substance with energetic properties but hardly has the same range of meanings as the term *qi* and does not explain the many compound nouns from *qi* in popular Mandarin usage. The Oxford Concise English-Chinese Chinese-English Dictionary (Manser 1999) translates *qi* as 'air', 'breeze', 'smell', 'fragrance', 'manner', 'spirit', 'anger' and lists a large number of bound forms (compound nouns) while the Nanjing Star online dictionary gives: 'gas'; 'air'; 'breath'; 'smell'; 'odour'; 'weather'; 'airs'; 'spirit'; 'morale'; 'make angry'; 'enrage'; 'get angry'; 'be enraged'; 'bully'; 'insult'; 'vital energy'; 'energy of life'.

The pictogram for *qi* consists of the character for 'rising vapour', 'steam', 'gas' above the character , *mi* for (uncooked) rice or millet (or a seed) which underscores both the physical nature and origins of *qi* and its vitalising effects on the body. Bai (2001:30) contends however that the original character for *qi* pictured clouds in the sky and that later (around the 11th-8th centuries BCE) the meaning of this term was extended to include 'the act of breathing and the substance that is inhaled or exhaled'. Liang (personal communication) has noted that there were originally three characters for *qi*: (1) , *qi* representing the vitality derived from nourishment (rice and millet being the staple foods), (2) *qi* (also the modern

character for *qi*) representing space, sky and spirit, and (3) a similar character which included four drops for water (or blood?) representing life. Unschuld (1985:72) reports literary usages of *qi* from the 2nd-3rd centuries BCE including meanings such as ‘breath’, ‘vapour’, ‘clouds’, ‘that which means life’, covering essentially the same concepts.

In his own work, Unschuld (1985:72) has chosen to translate *qi* as ‘finest matter influence’. This translation, although a bit cumbersome, is accurate in the sense that ‘finest’ suggests its subtle often unseen character, while ‘matter’ underscores its physical or substantial nature, and ‘influence’ alerts us to its functional aspect. These same notions are also captured by (1987:47) who more colloquially says, *qi* is “what makes things happen in stuff”, “stuff that makes things happen” or “stuff in which things happen”.

In Section 4.1, I mentioned the Daoist belief that *qi* existed ‘prior to existence’ in the *hun tun* chaotic state. These *qi* were the ‘breaths’ which emerged from chaos to create the ‘ten thousand things’. Other philosophers (see Maciocia 1989:37) have stated that *qi* condenses and takes *xing* (‘form’). *Qi* creates beings, but disperses at their death. “It is the substratum of mutations,” concludes Fung Yu Lan (in Maciocia 1989:36). From the cosmological perspective, it is tempting to consider *qi* as an ancient approximation for the ‘energy’ of modern physics where the energy-matter continuum is recognised. Certainly, the continuous transformation from seen (matter) to unseen (energy) and vice versa is characteristic of *qi*. However, the *qi* of ancient Chinese thinking sometimes appears to indicate a greater level of consciousness, intentionality or animacy than the scientific notion of ‘energy’.

Many writers insist that *qi* is a uniquely Chinese notion. Bai (2001:29) specifically notes that the Greeks had no concept similar to *qi* despite the other similarities in medical and philosophical thinking circa 300 BCE. However, other scholars point out that similar concepts have arisen in many ancient cultures. Unschuld (1985:72) has pointed out that Hippocratic medicine included the central concept of ‘vapours rising from food’ although he contends that these vapours, unlike *qi*, were largely considered a pathogenic source of disease. While his assertion may have historical validity, in Unani-Tibb (Bikha and Haq 2001), the medical legacy of the Hippocratic tradition still practised by Muslim communities on the Indian subcontinent today, the digestate is also considered to ‘give rise to’ the ‘humours’ which constitute the body. These humours are considered to be combinations of the four ‘qualities’ - cold, hot, dry and moist – each of which correspond to environmental influences. The source of the humours (from nourishment) and their qualitative relationship to the environment, as well as the fact that they only become a factor in disease when ‘out of balance’, suggests some similarities to the notion of *qi*.

The conceptual polysemy of *qi* also includes the close relationship with the concept of *gui* ('spirits, demons, ghosts'). This relationship is substantiated by the fact that during the Chou period the acumoxa points (where the *qi* accumulates) were used to dispel the *gui* lurking in the body. *Qi* also has a close relationship to the notion of *feng* ('wind'), a relationship which appears to date back to the shamanic period. The close relationship between *feng* and *qi* is also supported by the *Huai nan tzu* (compiled by followers of Liu An in 179-122 BCE) (Unschuld 1985) where the same acumoxa points are referred to as *feng xue* ('wind caves/holes'). As we saw in Section 3.1, the influence of the 'winds' on environmental and human health was central to early conceptions of health and disease. Both *feng* and *qi* are still distinct TCM medical terms in wide use today.

While it is beyond the scope of this work, it appears that a feature of conceptual polysemy is the difficulty in completely distinguishing between related concepts. It is tempting to consider that *feng* and *qi* can be distinguished on the external-internal or negative-positive continuums, but such distinctions do not really hold up in the analysis of their usages. *Feng* is often an external disease factor as in the condition labelled 'wind-chill'. Additionally, some of the acumoxa points with names including '*feng*' are located in areas where external winds are likely to penetrate the body such as the famous *feng chi* ('wind pool') below the occipital bone at the back of the skull which may be needled to get rid of 'external wind and chill' with the onset of flu. Yet, *feng* is also used to refer to excessive internal conditions such as 'hyperactive liver' conditions leading to dizziness or convulsions (Shanghai 1981:17). In modern usage, the term *qi* can mean 'breeze' or 'spirit' (Manser 1999), concepts which are closely related to *feng* ('wind') and *gui* ('spirits, demons, ghosts') demonstrating that the conceptual overlap between these terms persists. This conceptual overlap of spirit, breath and wind is also reflected in other traditional medical systems such as the Ayurvedic and African systems (Hartzell 1997; personal communication with healers) suggesting that it is a fundamental and common conceptual polysemy.

4.7.1 *Qi* as a medical term

Maciocia (1989:38) claims that *qi* has two major aspects in TCM: Firstly, as a "refined essence produced by the internal organs, which has the function of nourishing the body and mind" and secondly, as the 'functional activity' of these same organs. Here is a breakdown of some key types of *qi* in the body (Maciocia 1989:38):

yuan qi ('source, original' *qi*) – the 'heaven and earth *qi*'; *yuan qi* is received at birth and stored in the 'kidneys' (the 'kidneys' are considered the 'root of life')

gu qi ('grain' *qi*) - *gu qi* is extracted by the 'spleen/stomach' and nourishes the body

zong qi ('ancestral' or 'gathering' *qi*) - *zong qi* is made from *gu qi* ('grain *qi*') and the *qi* from air. The term *zong qi* has been variously translated. Maciocia translates *zongas* 'gathering *qi*', however *zong* means

'ancestor' or 'forefather' as well as 'to gather'. The fact that the concept of *qi* originated with shamanic beliefs emphasising the importance of the ancestors suggests the 'ancestral' sense is also relevant. (These associations may be culturally widespread. An African *sangoma* ('healer') recently diagnosed my asthma not as a pathology but as the presence of too many 'spirits' or 'ancestors' in the chest. The chest is apparently an important 'gathering' place for these spirits.)

zhen qi ('true, real' *qi*) – the good *qi* which maintains health, circulating in the *jing* 'channels' and the organs and protecting the body. The *zhen qi* can be subdivided into the *ying qi* and *wei qi* (see below).

ying qi ('nutritive, nourishing', 'manage, run', 'camp, battalion' *qi*) – the *qi* which nourishes the *zang fu* ('organs') and body internally. An aspect of the *zhen qi* (see above).

nei qi ('internal, inside' *qi*) - also refers to the nourishing *qi*

wei qi ('guard, defence, protect' *qi*) – the *qi* which patrols and protects the body from invasion by external forces. An aspect of the *zhen qi* (see above).

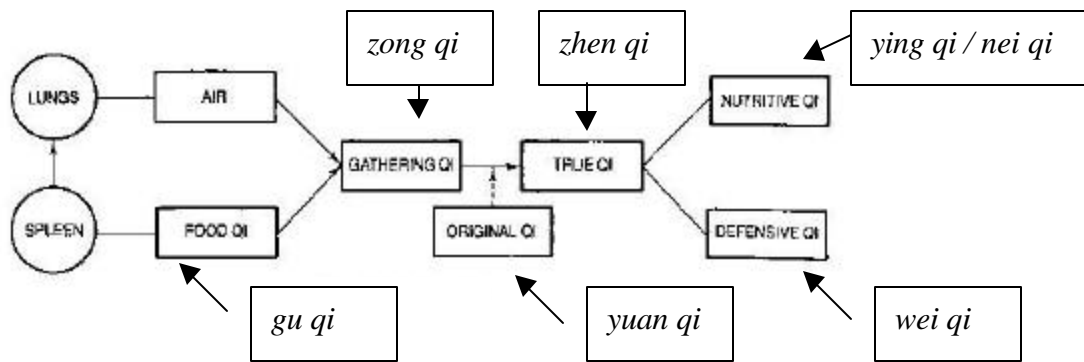


Figure 4 Various types of *qi* in the body
(adapted from Maciocia 1989:45)

4.7.2 The FORCE schema

If the enormously large ranges of senses enjoyed by *qi* are due to polysemy, the cognitive semantic approach suggests that these many senses should be motivated and related. In this section, I suggest that the FORCE schema is a central motivating factor which underpins the polysemy of *qi* and relates the various senses of this ubiquitous TCM term. Due to the limited scope of this dissertation, I have only referred to Johnson's work on the FORCE schema; a more comprehensive discussion would include a more substantial analysis of cognitive semantic theory on force dynamics, with particular reference to Talmy (2000).

Johnson (1987:43) has noted that the FORCE schema or 'gestalt' is highly pervasive in our experience since we are both forceful agents and continuously affected by forces. He has analysed the typical FORCE schema as a 'gestalt' which is:

- (a) experienced through interaction between objects, people, etc.;

- (b) involving movement of some mass through space in some direction; having vector or directionality;
- (c) having a path of motion;
- (d) having an origin or source;
- (e) having degrees of power or intensity;
- (f) having a structure or sequence of causality.

In (f), Johnson (1987) writes that we experience forces in causal sequences. Noting that the *gestalt* for 'force' involves (d) a source, (b) directionality and (c) a 'path of motion' as well as an effect brought about by (f) a sequence of causality, it appears that the SOURCE-PATH-GOAL schema as well as the CAUSE-EFFECT schema are closely related to the FORCE schema.

The characteristics of FORCE as outlined by Johnson (1987:43) apply to *qi* as follows:

- (a) *Qi* is experienced as interaction between objects and people. For example, the *qi gong* healer may use his own *qi* (or direct the *qi* of the patient) to effect healing; the TCM physician may direct or unblock *qi* along the *jing* ('channels' - see Section 4.7.3), or supplement *qi* through acumoxa treatment or the use of medicaments.
- (b) *Qi* has vector or directionality. For example, the *qi* of heaven moves down while the *qi* of earth moves up (creating a cycle). *Qi* as 'winds' are characterised by their source point (the four or eight directions). The channel and organ *qi* naturally moves in certain directions and pathologies result if this directionality goes awry. The physician may need to adjust the directional flow of the *qi* in order to correct such pathologies.
- (c) *Qi* has a path of motion. As 'steam', *qi* rises. In TCM *qi* flows through the *jing* ('channels') of the body (see Section 4.7.3).
- (d) *Qi* has an origin or source. For example, *qi* may come from heaven, from nourishment, from an organ (eg. 'lung' *qi*), from the physician, from a treatment or medicinal formula.
- (e) *Qi* has degrees of power or intensity. In TCM, a person's *qi* may be considered *xu* ('empty, weak') or *shi* ('full, strong').
- (f) *Qi* follows a sequence of causality. *Qi* does things and produces effects.

However, it is important to note some differences between the conceptualisation of force elucidated by Johnson and the Chinese notion of *qi*. Johnson's (1987:43) specification that a force "involv[es] movement of some mass through space" appears to rely on a Newtonian conceptualisation in which forces are measurable phenomena acting between discrete objects. In the Chinese conceptualisation of *qi*, the SOURCE of the *qi*, the PATH of the *qi* and the GOAL of the *qi* often appear to be conceptualised as aspects of the same phenomenon. Additionally, *qi* is sometimes referred to as CAUSE and sometimes as EFFECT. Maciocia (1989:47) writes that "The Lungs control respiration: clear Qi is inhaled and impure Qi is exhaled" and that the "Lungs send Qi down" which suggests that *qi* is a substance moved by the lungs.

However, he also writes that “the Lung-Qi flows downwards” (Maciocia 1989:47) suggesting that the movement of *qi* and lung function are somehow identical. Remember Sivin’s (1987:47) remark that *qi* is “stuff that makes things happen”, “what makes things happen in stuff”, and “stuff in which things happen”.

This type of reference in which substance and function are blended is very common in TCM. Porkert and Ulman (1982:85) assert that “the term *zang* has two distinct but concurrent meanings; first, it can refer to an actual local region of the bodily substrate, which can thus be defined (though not very precisely) in spatial and physical terms. *Zang* also refers to a particular interlocking and interdependent system of very precisely defined functions (defined in temporal and qualitative, i.e., in directional terms)”. Porkert and Ulman (1982:85) refer to this functionality as an *orbis* or ‘function circle’. This organ functionality can also be indicated by adding the term *qi* after the organ name. TCM literature abounds in references to *xin qi* (‘heart *qi*’), *pi qi* (‘spleen *qi*’) and so on (East Asian Medical Studies Society, 1985). Furthermore, the path of *qi* may also be considered an aspect of the *qi*. The *jing* (‘channels’) are not separate structures through which *qi* flows but rather defined by the flow of *qi* much as a river is defined by the flow of water. *Qi* understood as ‘wind’ comes from one of the ‘eight directions’ (SOURCE), follows a PATH and produces an EFFECT. *Qi* understood as ‘steam rising from cooking rice’ involves rice (SOURCE), the rising steam (PATH) and the cloud of steam (EFFECT). The representation of *qi* as ‘clouds in the sky’ highlights the goal, the visible effect of the ‘water cycle’ in which water is the SOURCE and evaporation and transpiration are PATHS. This kind of interrelationship between the SOURCE, PATH and GOAL in the conceptualisation of *qi* is also found in Chinese cosmology. The *qi* as ‘breaths’ emerge from chaos to create the universe which itself manifests as various kinds of *qi* (Schipper 1993:34); the source is *qi*, the movement (breath) is *qi* and the effect is *qi*. It has been suggested that the notion of *qi* “expresses the continuum of matter and energy as it is now understood by modern particle physics” (Maciocia 1989:36). If matter and energy are a continuum, then Johnson’s (1987:43) specification that a force “involv[es] movement of some mass through space” must be (re-)interpreted as meaning that both the movement and the mass are aspects of the force.

A further investigation of the TCM corpora for usages which would help define the conceptualisation of *qi* and the specifications of the underlying FORCE schema is beyond the scope of this dissertation. However, it should be noted that many common English usages suggest that in everyday language speakers often do not make clear distinctions between the SOURCE, PATH and GOAL or CAUSE and EFFECT as far as ‘forces’ are concerned. Consider the metaphoric phrase:

1. *The force of his personality*

This 'force' could be considered as either a CAUSE or EFFECT and while the 'personality' presumably 'belongs' to a specific person (the SOURCE), 'the force of his personality' could also refer to the manner in which the force was transmitted (the PATH) or even in terms of its impact on another person (the GOAL). The notion of 'profiling' in which "a particular region or configuration in a relevant domain" (Taylor 1991:84) is highlighted is relevant here. Clausner and Croft (1999) have even suggested that image schemas can be considered as subtypes of domains. In this case, the schemas described as SOURCE-PATH-GOAL and CAUSE-EFFECT could be seen as schematic domains described in terms of possible profilings. In reference to *qi*, this would mean that *qi* can be profiled against the schematic domain structures as SOURCE-PATH-GOAL and CAUSE-EFFECT.

In the next section, I look at one of the most central features of TCM, the theory of *jing* ('channels') also sometimes referred to as 'meridians' in western literature. This theory also provides the most striking conceptualisation of *qi* as a PATH.

4.7.3 The *jing* ('channels')

Texts unearthed at the recently discovered *Ma wang dui* and *Zhang jia shan* burial sites dating back to 168 and 179 BCE and located more than 1000 kilometres apart prove that *jing* ('channel') theory dates back to ancient times and was widespread. This indicates that the conceptualisation of *qi* as a dynamic force which follows a path was fundamental in the development of TCM theory. Before the discovery of these ancient texts, it was believed that the acupoints must have been located first and that the channels linking these points were a later theoretical construct. Channel theory merits some attention in this chapter because the channels are the primary way in which *qi* moves through the body. The modern terms *jing mai* and *jing luo* first appeared in the *Huang di nei jing*. *Jing* means 'to go through', 'channel', 'vessel', 'vein', 'meridian of longitude' (Hiep 1987:28), 'tract' (Hsu 1999:252), 'path' or 'warp' (Bai 2001:56), "the warp (the lengthwise, or longitudinal threads) that gives shape and solidity (*definition*, in other words) to a piece of woven fabric, a piece of fabric" (Porkert and Ulman 1982:129). *Mai* refers to the 'conduit, vessel, pulse' (Hiep 1987:28) or 'blood vessels' (Bai 2001:30). The *jing mai* are the regular channels running vertically through the body while the *jing luo* refer to the system of connecting channels which run horizontally. *Luo* means 'to tie up', 'to fasten', 'to make into a net' or 'to catch in a net' (Porkert and Ulman 1982:129), 'to twine, connect' (Bai 2001:56) resulting in the interesting concept of a net of *qi* comprising the *jing mai* and *jing luo* of the body.

While the investigation of other traditional medical systems is beyond the scope of this dissertation, it is worth noting that there is evidence that the TCM physiological conceptualisations and schemas noted here and the polysemy which results are not unique. Channel theory and related notions also appear in

Ayurveda where *prana* ('air, spirit') is considered to move through *nadi* ('channels') and accumulate at the *marmas* and *cakras* (special points and areas). The notion of a subtle web of channels or *tantra* ('thread, web') is central to Vedic thought as well as the medical discipline of Ayurveda. Hsu's (1999) translation of *jing* as 'tract' captures the polysemy of *jing* which can also mean 'classic text' (as in the *Huang di nei jing*). The term *tantra* in Sanskrit shares this polysemy as *tantra* also means 'a classic text' or can refer to a thread of discourse through time. The notion of communication and transmission as flow is captured in this usage as is the concept of continuity or 'thread' being elaborated to textual history.

While the above notions appear to explain the notion of the *jing* in terms of material or fabric, the *Huang di nei jing ling shu* also refers to the *jing mo* as *jing shui*. *Shui* means 'water' and, according to Unschuld (1985:75), it is unclear whether the *jing* were originally considered to carry *shui* ('water'), *xue* ('blood'), *qi*, or both *xue* and *qi* (either in separate systems or together). It seems there was a great deal of flexibility in conceptualisations of the substance considered to flow through the *jing*. Overall, it appears that this conceptual flexibility may have been enabled by the fact that the FORCE and related schemas are so productive.

In attempting to understand the history of ideas which led to the discovery of the *jing* by the ancient Chinese, Bai (2001) has emphasised the massive construction of canals to channel water off the land into the rivers and sea during the period of great flooding (2100-1500 BCE). These massive works were documented in the *Shan shu* (551-479 BE) the first exposition of hydrographic networks in Chinese geography (Bai 2001:21). Unschuld (1985; no date:9) has also cited the development of new transport systems, as well as social and economic structures as a source for the conceptualisation of the network of *jing*. However, he refers rather to the period of centralisation and standardisation that occurred during the unification of China in the 3rd and 2nd centuries BCE. If these authors are correct, socio-cultural factors lead to the importance and polysemy of *jing* and *qi*.

However, it is perhaps more plausible that the FORCE and SOURCE-PATH-GOAL schemas which I have hypothesised to underpin the conceptualisation of *qi* also underpin the conceptualisation of these waterways and transportation systems and the schematic understanding of waterways only served to reinforce the schematisation of *jing* and the movement of *qi* through the body. The fact that flowing water is such a prevalent image in TCM conceptualisations of force does not necessarily require special explanation. Flowing water appears to be a common basic image associated with the FORCE and SOURCE-PATH-GOAL schemas. Gentner and Gentner's (1986) research has shown that flowing water is also a powerful metaphor for conceptualisations of electricity (force) amongst English speakers today.

The conceptual relationship between *qi*, water and the PATH schema is supported by other usages. *Qi* is said to *liu* ('flow') in one channel and *zhu* ('pour') into the next (Bai 2001:59). The frequently used *shu* ('transport') acupoints are all analogised to the flow of water. These points start at the fingertips or toes, and end at the elbows and knees. The *jing* ('well') points at the tips of the fingers and toes are analogised to the sources of a river in the mountains, then come the *ying* ('spring'), *shu* ('stream'), *jing* ('river') and finally *he* ('sea') points at the elbows and knees. The acupoints themselves are known as *qi xue* ('qi caves'), *qi hui* ('qi meetings/confluences') and many point names refer to pools, ponds and seas and can be understood as places along the channels where *qi* collects, much as water collects in caves, pools and seas (see Shanghai College of Traditional Medicine 1981). It is also said that medicines *gui* ('empty into') specific *jing* ('channels') having special therapeutic effects on the corresponding *zang fu* ('organs').

It appears that the conceptual polysemy of *qi* is quite extensive. Above, I examined the relation of the concept of *qi* to that of *gui* ('spirits, demons, ghosts') and *feng* ('wind'). It appears that the conceptual relationship of *qi* to water is also quite important. Below, I suggest that this conceptual polysemy may be motivated by a schematisation of the 'water cycle'.

4.7.4 *Qi* and the water cycle

The correlation between the flow of *qi* in the *jing* and water in the waterways is somewhat surprising given that *qi* is generally considered to be a *yang* substance (active, subtle) while water is a typical example of a *yin* (dense, material) substance. A possible solution to this conundrum can be found if we re-examine the role of the *shen* ('kidneys'), which although correlated with 'water' (see Section 4.9) are often called the 'root' and 'the foundation' of both *yin* and *yang* in the body. The important concept of the *ming men* ('vitality gate') also refers to either of the kidneys or the right kidney or to the place 'between the kidneys' and includes both the fire and water aspects of the body. *Shen* ('the kidney') is "the organ of Water and Fire, it is the residence of *Yin* and *Yang*, the Sea of Essence and it determines life and death" (Zhang Jie Bin in Maciocia 1989:99). 'Kidney fire' (*yang*) and 'kidney water' (*yin*) are generally considered to underpin the other *yin yang* functions of the body (see Maciocia 1989:92). In many conceptualisations, 'kidney fire' heats 'kidney water' to produce a 'steam' or 'vapour' which rises and circulates to vitalise the whole body. This conception correlates well with other basic images we have encountered for *qi*: steam rising from food, clouds in the sky.

In fact, the entire physiology of the body (which largely consists of water at a warm temperature) can be conceptualised as a cycle of vaporisation and condensation of water due to the 1) heating and rising (*yang*) and 2) cooling and descending (*yin*) processes. This cycle of transformation mirrors the natural

environmental water cycle of evaporation, transpiration and condensation. Yu (1998:72) comments on this when he explains that “in nature, water and other fluids (*yin*) evaporate into vapour or gas (*yang*) when being heated and that vapour or gas (*yang*) liquefies (*yin*) when cold. The interaction of *yin yang* creates *qi*, so that the entire cycle can be considered as a manifestation of *qi*” (see Figure 5).

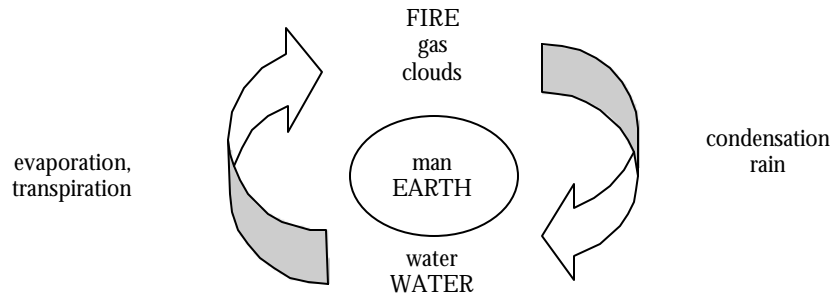


Figure 5 *Qi* and the ‘water cycle’

The cycle of the *wu xing* (‘five elements’) discussed in Section 4.9 also emphasises the fire-water polarity and the cycle it generates. The ‘cosmological sequence’ (Maciocia 1989:23) with earth at the centre is shown in Figure 9. Again, this conceptualisation is not unique to TCM but has similarities to both the Unani-Tibb (the Greco-Arabic system from Hippocrates, Galen and Ibn Sina) and Ayurvedic models.

I have already discussed how the FORCE and SOURCE-PATH-GOAL schemas underpin the concept of *qi*, but the preceding discussion suggests we need to add another schema, that of the CYCLE. *Qi* can be considered as the SOURCE, the PATH and the GOAL or CAUSE and EFFECT in various cycles of force. A common substrate in the conceptualisations of this cycle is water. The role of water evaporation-condensation and temperature in weather and climatic change is not hard to understand from the scientific point of view. The water cycle also motivates the extension of the term *qi* to the less dense manifestations of water such as ‘steam’, ‘breath’ and perhaps even ‘wind’ and ‘air’.

The suggestion that the water cycle is fundamental to an understanding of *qi* gains indirect support from a discussion on the TCM ‘gaze’ in Kuriyama (1995) who argues that in TCM, ‘seeing’, more particularly , *wang se* (‘to gaze at colour/hue’), was originally the most fundamental ability required by the physician. Kuriyama (1995:215) notes that in Confucian times, the term *yan se*, the modern compound for ‘colour’, actually referred to ‘facial expression’. According to Kuriyama (1995:216), the ancient pictogram for *wang* suggests a person stretching forward to gaze while the modern character suggests a person gazing at the moon. Kuriyama (1995) posits that the inclusion of the component , *wang* (‘to be absent’) in the pictogram , *wang* (‘to gaze’) along with the similarity of , *wang* (‘to gaze’) to the character , *mang* (‘to be

obscure'), suggests the difficulty of 'seeing' and the subtlety of what needs to be 'seen'. The ability to see *se* successfully was a highly valued skill not only in medicine. This skill was also required for the mantic technique popular in the Qin and Han dynasties (when TCM was first formalised) of predicting shifts in fortune (for instance, in warfare) on the basis of the *se* of the clouds (Kuriyama 1995:217). The importance of the cloud as visible evidence of *qi* ('atmosphere, climate') on the environmental or cosmological level provides further confirmation that the water cycle as a key schema underpinning the notion of *qi*.

It is remarkable that the same conceptualisations and terminology used to discuss the environment are used in discussing the health of a patient. The *Huang di nei jing su wen* says , , "se zhe, qi zhi hua ye" ('*se* is the flower(ing) of the spirit') (from Chapter 17 of the *Su wen* in Kuriyama 1995:228). The physician can diagnose and make a prognosis for the patient by reading his *se* ('facial expression, colour, hue') just as the seer can predict fortune through the analysis of the *se* of the clouds. The human *se* is seen in the face, the uppermost part of the body, just as the environmental *se* can be seen in the sky, the uppermost part of the environment. To see the *se* is to read the *qi* (*qi* is translated here by Kuriyama (1995) as 'spirit') whether it is the climatic or human *qi*. These kinds of correlations between the cosmos-environment and individual are quite widespread. Just as the *qi* of the cosmos ebbs and flows with the seasons and larger cycles of time, so the *qi* of an individual grows and declines with the cycles of life. To learn TCM is to learn 'to see' the landscape of the human. To ensure health or to heal is to learn how to beneficially influence that landscape through understanding the principles of change. The holism of TCM can be understood in terms of the intersecting landscapes of the human and the universe with their related complexities of form, relationship and change.

The plant-based metaphors for human growth and development, for instance to *sheng qi* ('growth *qi*') and *hua* ('flower(ing)') above, also deserve attention. In an agricultural society with a naturalistic philosophy, plants are the most salient example of the water cycle as their growth and upright nature relate directly (to use modern language) to the processes of rain, water intake and transpiration. The pervasive TCM doctrine of *ben mo gen ye* ('roots and leaves') uses this same plant metaphor to relate what is visible, external and upper (the leaves or patient's symptoms) to what is invisible, internal and lower (the roots or causes of health and disease). The invisible *sheng qi* ('growth *qi*') of the patient is evident in the flowering of *se* (Kuriyama 1995:228) in the face. In fact, the ancient *Shou wen*, the earliest Chinese dictionary which dates back to the Han dynasty defines *se* as the 'the *qi* [that appears in] the forehead' (Kuriyama 1995:216).

The distinction between unseen and seen (form) is fundamental in TCM. Notably, this is not an ontological distinction between body and mind as is common in western philosophy, or between the physical and the spiritual as is common in western religion, but one of perceptual acuity - the ability to

distinguish what is subtle or incipient from what is obvious and manifest. This distinction is evidenced in common polarities stressed in TCM: *xing se* ('form-colour'), *xing shen* ('form-spirit'), *xing sheng* ('form-vitality') and *xing qi* ('form-breath'). The "pinnacle of medical acumen" (Kuriyama 1995:219) is to know things before they have *xing* ('form'). Since the Han dynasty, 'sphygmological' skill, the ability of the physician to feel the subtleties of the pulse, gradually overtook the importance of *wang se*. Originally, this was because in certain cases, the physician was not allowed to see the patient for reasons of etiquette (particularly women of high status) and had to decipher the state of his *qi* and health by palpating the radial pulse at the wrists of the patient who held them out from behind a curtain. However, the basic principle of distinguishing fine changes in the quality of the *qi* (made palpable in the subtleties of the pulse rather than visible in the *se*) remains central until today.

4.7.5 The FORCE schema and the polysemy of *qi*

In Section 4.3, I discussed the implications of holistic theories and synthetic epistemology have for the nature of terminology. The foregoing discussion suggests that the schemas which underpin the conceptualisation of *qi* are a large factor in the polysemy of this term. More specifically, the polysemy of *qi* is influenced both onomasiologically through related concepts (such as *feng* and *gui*) as well as semasiologically through the many interrelated uses of the term. The FORCE and related schemas underpinning the concept/term *qi* allow for its flexibility of reference. *Qi* can refer to various aspects of the FORCE schema (source, path, goal, cause, effect), to different domains (the cosmos, environment, human, plant) and to varying material substrates (spirit, breath, air, wind, steam, water). However, these schemas need to be understood in the cultural context of TCM cosmology in which the particular onomasiology, or what could be considered conceptual polysemy, relating, for instance, wind, spirit and water makes sense. While the water cycle and FORCE schemas can be considered culturally 'universal', the understanding of both in TCM appears to be based on an animate (for lack of a better term) view of the cosmos in which water is a 'force' and forces have 'spiritual' dimensions, a considerable difference from most modern western conceptualisations.

It is also important to note that the extravagant conceptual and lexical polysemy of the term *qi* appears to enhance the conceptual integrity of the TCM system rather than leading to confusion as it most certainly would do in an analytic system where each structure and function is expected to have specific nomenclature. Figure 6 is a diagrammatic representation of some of the conceptual and lexical polysemy for *qi* based on the FORCE and cycle schemas and accounting for many of the translations of *qi* mentioned in this section.

'spirit' 'gas' 'steam' 'airs' 'morale' 'breeze', 'air' 'clouds' 'weather' 'fragrance' 'odour' [<i>qi</i> as 'finest matter influence']
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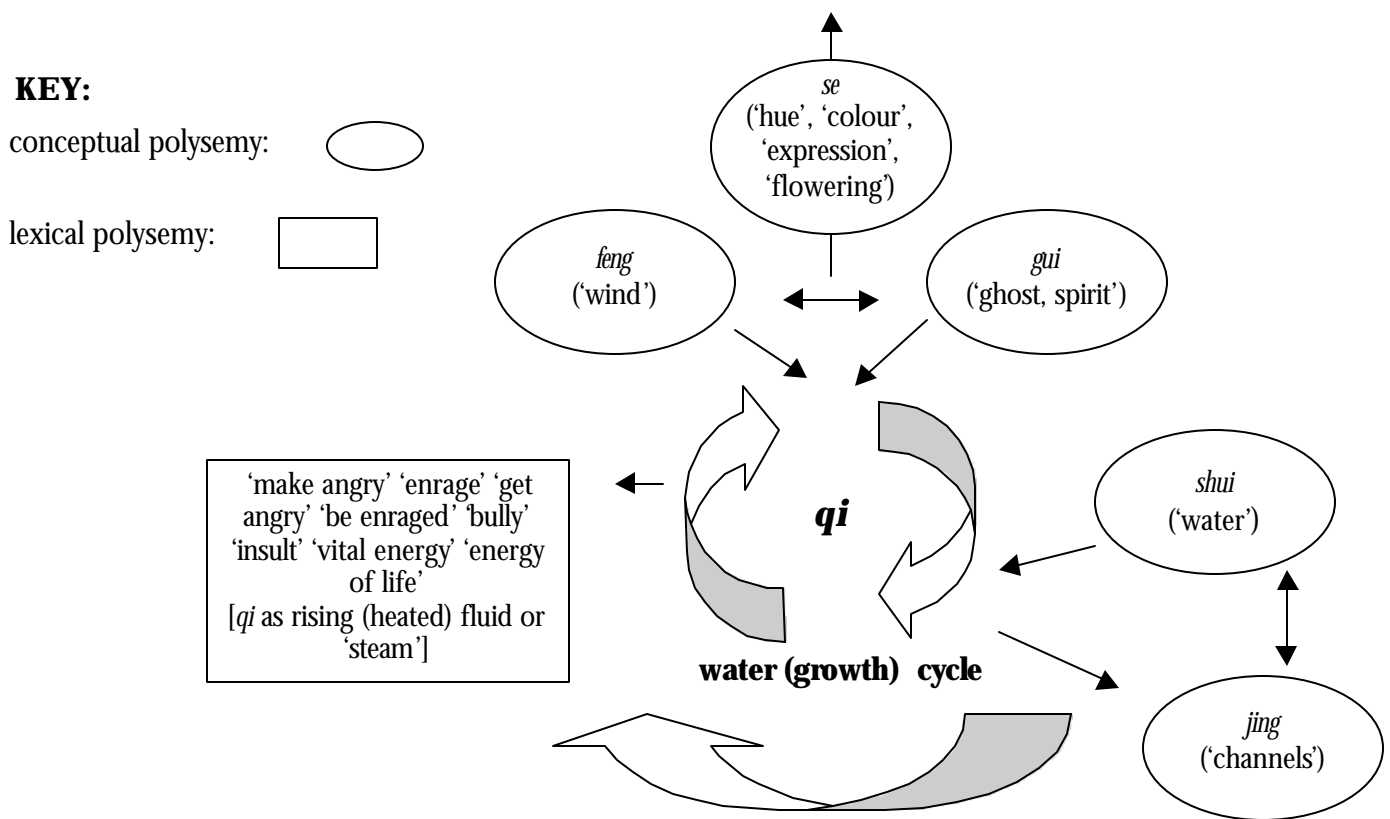


Figure 6 The conceptual and lexical polysemy of *qi*

The many senses of *qi* relating to anger may seem surprising. However, another term for anger in Mandarin is *sheng qi*, which, as noted above, can also be translated as 'growth *qi*' or 'rising *qi*' and related to plant metaphors (based on the water cycle). In TCM psychophysiology, anger is understood as rising *qi*. Furthermore, the 'rising' part of the water cycle is associated with the *mu xing* (wood/tree/plant element/phase) in TCM and anger is the emotion correlated with the *mu xing*.

4.7.6 Elaborations on the FORCE schema

Johnson (1987) moves from his discussion of the FORCE schema to a discussion of the 'blockage', 'removal of restraint', 'enablement', 'diversion' and 'counter force' schemas. Pauwels and Simon-Vandenberg (1993:345) have noted that "certain of these schemas are further specifications of a more general experience: compulsion, blockage, counterforce, restraint-removal, enablement and attraction all specify the FORCE schema". These schemas are also relevant to the TCM conceptualisations of pathology and the physiology of *qi*. While health is guaranteed by the correct intensity and directionality in the flow of *qi*, much of TCM pathology is described by blockages, counter movement or stagnancy of *qi*.

Blockages in the *jing* ('channels') cause pain and imbalances. One of the most common pathologies involving blocked *qi* is *bi*, pain from stagnant *qi* or *xue* ('blood') caused by 'invasion' of external environmental wind, cold or damp. The correct directional flow of *qi* is also central to *zang fu* ('organ') and to *jing* ('channel') theory. Each of the 'organs' (which are also sometimes referred to as *kuan* ('agents')) is responsible for moving the *qi* up or down, in or out, collecting or dispersing. The lungs, for instance, should 'send the *qi* down'. Although, as mentioned in Section 4.7.2, in TCM the source or agent of force is often blended with the force itself so that it would be equally acceptable to say 'lung *qi* descends'. If the lung *qi* flows in the wrong direction there will be coughing or dyspnoea. The lung *qi* should also disperse as a 'mist' to moisten the skin and support the *wei qi* ('defensive *qi*'). If it is weak, there is increased susceptibility to external 'evils' such as cold, wind and damp. The liver *qi*, by contrast, should ascend and disperse. Numerous *bian zheng* ('disease patterns') result from liver *qi* 'stagnation' or from excess liver *qi* which invades the functional spheres of the other organs. The spleen is responsible for the *gu qi* ('nutritive *qi*') obtained from food which it then sends up to the chest where it combines with the air or 'atmospheric' *qi* to form the *zong qi* (see Figure 4). The spleen is also responsible for 'raising the *qi*' and if the spleen *qi* is too weak various downward movements of *qi* may result in symptoms such as diarrhoea or prolapse. The stomach, on the other hand, sends the 'impure' part of the digestate down to the intestines; belching, hiccupping or vomiting is evidence of 'rebellious' stomach *qi*. The *qi* must also move sequentially through each of the 12 main *jing* which traverse through the body in a cycle which relates to various time cycles: diurnal and seasonal as well as astrological. Treatment is preferably given at appropriate times e.g. when the *qi* of the relevant channel is waxing or waning (see Bai 2001: 59).

Needling or other stimulation at the correct acupoint should result in *zhi qi* ('the arrival of *qi*') or *de qi* ('obtaining *qi*'); this *qi* is used or directed to remove blockages and restore flow or to correct the direction of the flow. Medicinal substances, *yao*, are also characterised by their effects in terms of helping to descend, raise, or disperse *qi*. They can be used to strengthen the *qi* of particular organs, or direct the 'flow' into particular channels. Finally, the TCM doctor can use his own *qi* to effect changes in the patient, a clear example of what could be called an intentional or animate understanding of force in which an intentional and animate force (*qi*) directs change along an animate path (flow of *qi*) effecting change in the animate goal (the *qi* of the patient). This underscores the nature of *qi* as an intentional or perhaps animate force, although it is not restricted to the human or even biological domains.

4.7.7 Pedagogical suggestions

I believe the above discussion has shown that the understanding of schemas underpinning the concept of *qi* can help elucidate some of the term's motivated polysemy. The question remains if this explication has pedagogical value. In Chapter 1, I suggested that while cognitive linguists generally emphasise the

contextualisation of language in environment and culture, they are also interested in those aspects of language which are more 'universal' by virtue of common conceptual structuring. It does appear from the above discussion, that the concept of *qi*, although highly culturally specific, is motivated by schemas which can be easily understood by the non-Chinese student.

As stated in the Introduction, this dissertation is an initial exploration of the pedagogical potential of a cognitive semantic approach to TCM concepts and terminology. This approach has not yet been implemented in the classroom and therefore no quantitative results are available. However, it is worthwhile looking at some of the research in applied cognitive linguistics on pedagogical approaches.

Kövecses (2001:87) has suggested that the "assumption concerning the potential [pedagogical] usefulness of cognitive linguistics is predicated on the commonsensical belief that motivation always facilitates learning". His remark appears to conflate the cognitive semantic sense of 'motivation' as 'motivated meaning' with the applied linguistic sense of 'motivation' as an important affective factor in learning. Kövecses' (2001) preliminary study of orientational metaphors in EFL learning suggests that explication of the motivations underlying common idioms not only facilitates learning of those idioms but also helps students develop meta-cognitive skills. In his study, Kövecses (2001) found that Hungarian students who were shown the UP-DOWN orientational metaphors underlying one set of English phrasal verbs not only remembered these metaphors somewhat better than students who simply memorised the set, but they were also able to make sense of a second set of phrasal verbs using different up-down metaphors. Their performance with this second set of phrasal verbs was markedly superior to the performance of students who had simply memorised the first set of phrasal verbs. Apparently, once introduced to the concept that meaning is motivated, students were able to uncover motivated meanings in new constructions on their own.

What is particularly interesting for the purposes of this dissertation is Kövecses' (2001) preliminary finding that the pedagogical advantage was not restricted to English usages where the same underlying metaphors were utilised in Hungarian (L1) metaphors but extended to English usages where no similar underlying metaphor was used in Hungarian (L1). Although far from conclusive, this suggests that the conceptual motivations underpinning linguistic usages in a target language are cognitively available to learners even where there is no linguistic instantiation in their first language (L1). This tentative finding also lends support to the cognitive semantic premises that (1) in the mind, conceptual and linguistic structures are related but not identical, and (2) that learners have access to both in a target language - particularly if they are given explicit instruction. If explicit teaching of motivated meaning can have such a notable effect in the case of foreign language learning, it may be that an understanding of the schemas underpinning the polysemy of *qi* will also prove helpful. It also suggests that once learned, the cognitive

semantic approach may be generalised by the student and become an effective learning strategy for 'decoding' the many other instances of polysemy in TCM.

I believe more research would be needed to determine the way in which the schemas motivating the polysemy of *qi* should be presented. At an introductory level, it would be possible to simply present and explain diagrams such as that in Figure 6. Alternatively, and in cases where students will be studying TCM in greater depth, students could be given the basics of schema theory along with the outline of a relevant schema such as the FORCE schema and then asked to apply this schema to a TCM term or model. They could also compare the TCM instantiations with those in common English usages or in biomedical models. It is likely that some combination of explanation by the lecturer (or text) and discovery by the student is ideal. Generally, the challenge of uncovering a meaningful pattern in a target language increases the student's potential for anticipating and uncovering further patterns and encourages the student to develop learning strategies. In the case of TCM, it would also encourage the student to assume that TCM terms and models are not arbitrary but motivated and help him develop a cognitive linguistic learning approach. A further benefit of identifying the conceptual schema(s) underpinning any TCM term or model is that it allows the student to elucidate the similarities as well as differences in the conceptualisations used (1) in biomedicine and TCM and (2) in English and Mandarin. An awareness of cultural, medical and linguistic similarities and differences should help the student to avoid the twin pitfalls of (1) unnecessarily mystifying what may be quite commonsensical conceptualisations and, (2) using English or biomedical logic to explain Mandarin or TCM models, something Unschuld (no date) has called "a retrospective extension of current thought".

4.8 Yin yang

It has been impossible to avoid reference to the concept of *yin yang* in the above discussion of *qi*. This is because the concept of *yin yang* is arguably the most fundamental concept in TCM. A unique and pervasive concept in Chinese thinking generally, the *tai ji* ('great polarity') of *yin yang* is understood to underpin all processes in the cosmos including human physiology. *Yin yang* can itself be considered as a schema which influences the conceptualisation of other schemas important to TCM. Figure 7 below shows its relevance to the cyclical polarity between heaven-earth and its relation to the water cycle as discussed in Section 4.7.4. It can be seen that *yang* characterises upward, expansive movement and growth, the rising of subtle materials (gas, vapour, spirit) and is associated with heaven whereas *yin* characterises downward, contractive movement (also decline), denser materials (water, blood) and is associated with earth. Because of the cyclical nature of cosmological and physiological conceptions, *yin* ultimately leads towards *yang* and *yang* towards *yin* in a constant dynamic. The *tai ji* symbol or 'yin-yang two fishes' shows the interrelated nature of the two poles with the 'fullness of *yang*' tapering off into *yin* and

vice versa. The curve where *yin* meets *yang* can be considered as a wave function or potential spiral depending on the 'spin' of the circle encompassing *yin* and *yang* (see Jou 1980:80). The fact that *yin* contains the seed of *yang* and *vice versa* illustrates the principle of mutual generation and dependence. Numerous schemas are included in this simple emblem, for instance, containment, part-whole, polarity, cycle and the structure of change.

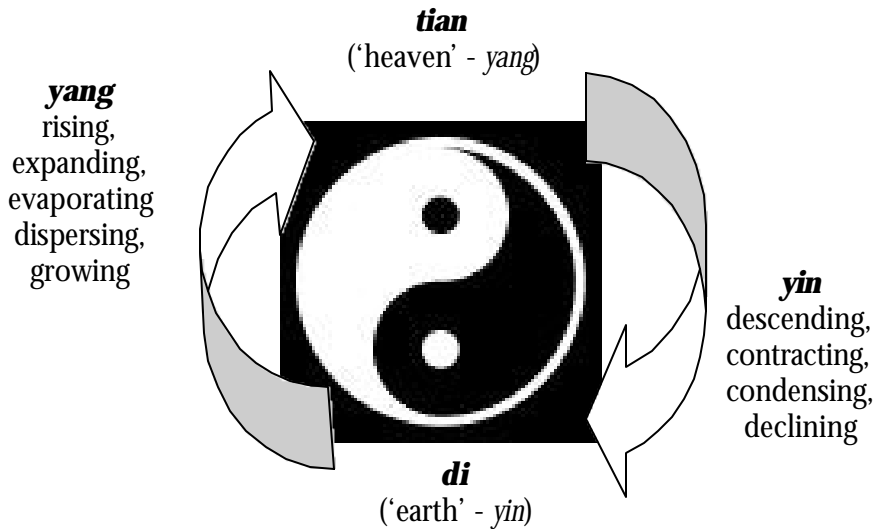


Figure 7 The *yin yang* cyclical polarity

In Section 2.6, I noted that many schemas that have been noted by cognitive linguists are characterised by polarity. In Chinese thinking generally and TCM models specifically, *yin yang* functions as a meta-schema for other polarities or ‘axiological parameters’ (Krzyszowski 1993) subsuming all the other significant polarities or axiological parameters of the system.

4.8.1 *Yin yang* and categorisation

In Section 2.1, I suggested that categorisation can be understood as a dynamic process of distinction and relation which is constantly being expanded and refined. It is very much in this sense that *yin yang* provides an extensive categorisation system. However, as the *tai ji* symbol suggests this system is flexible – what may be categorised as *yin* in one context could be considered *yang* in another. *Yin yang* is a relational categorisation system rather than a discrete set of ‘objects’ or ‘states’ which can be described by features in the classical linguistic sense. The *yin yang* categorisation also underpins what could be considered the systemic polysemy of *yin yang* subcategorisations.

The traditional characters for *yin* and *yang* represent the shady and sunny sides of a hill. The characters are: 阳 / 𠄎 for *yang* and 阴 / 𠄎 for *yin*. The first of each set of symbols is the traditional character, the second the 'simplified' character used in the Peoples Republic of China today. The traditional characters usually provide more insight into the original meaning. The traditional character for *yang* shows the pictogram for a 'hill' (imagine it turned on its side), for the sun, 日, *ri* ('sun, day') - and a character for 'rays of light' (Maciocia 1989:2). The simplified character omits the character for 'change'. The traditional character for *yin* shows a 'hill' and 'shade', while the simplified character shows the pictograms for 'hill' and 'moon', 月, *yue* ('moon, month'). Noting the simplified modern characters one wonders why *yin* and *yang* were not simply represented by the characters for the sun and moon - common symbols for numerous polarities such as male/female, day/night in a number of cultures. It is often suggested that concrete concepts are the most cognitively salient and the concept of 'sun' and 'moon' should certainly have that advantage. However, the use of 'sun' or 'moon' would only emphasise the endpoint of the day-night, male-female and other continua. The emphasis on the 'hill' rather illustrates the notion of change and cycle as the sun moves across the sky: as time passes, what is sunny becomes shady and what is shady becomes sunny. It also demonstrates the interdependence of sun and shade in the meeting of light (sun, heaven, *yang*) and matter (hill, earth, *yin*) and the flux within which all phenomena are situated.

The terms *yin* and *yang* were already mentioned in the first millennium BCE in a collection of ancient folksongs and may date back much further in history. In the folksongs the meanings of *yin* already included not only 'shade' but also 'cold', 'rainy' 'dark' and 'feminine' while the meanings of *yang* included 'sunshine', 'heat', 'summer' and 'masculine' (Unschuld 1985:55-56). By the fourth century BCE, the *yin yang* concept had further evolved theoretically encompassing all phenomena and their dynamic interactions. *Yin yang* thinking was part of both the Daoist and Confucian traditions although the former continued to emphasise the interaction of these great principles in the cosmological-natural world and the latter its relevance to correct relations for instance, between men (*yang*) and women (*yin*), the ruler (*yang*) and his subjects (*yin*). Table 2 shows some of the senses of *yin* and *yang*.

Reference	Yin	Yang
Manser (1999)	the feminine or negative principle in nature; the moon (lunar), shade, back [in the sense of behind or hidden], private parts (especially of the female), cloudy, overcast, hidden, secret, negative ion	the masculine or positive principle in nature, the sun, (solar), open, overt, belong to this world, positive, positive pole, positive ion
Shanghai College of Traditional Medicine (1981)	earth, female, night, moon, low, heaviness, falling tendency, movement inward, relative stasis	heaven, male, day, sun, high, lightness, rising tendency, movement outward, clear action
Porkert and Ulman (1982:68-70)	‘structive’ constructive component of an action or event; material location in space, southern slope; spring and summer definite or permanent states, completion, confirmation, repose, stasis, consolidation, concentration, concreteness, solidity, contraction, extension, state of being determinate or determined	active active component of an action or event, light in space, northern slope, fall and winter; beginning and coming into being; moving, being moved, changing, developing, diffusing, dissolving, dispersing determining, determinant yet undetermined

Table 2 A summary of some of the senses of *yin* and *yang*

It should be evident from Table 2 that it would be impossible to consider *yin yang* as categories in the classical sense of discrete sets, or static collections (‘containers’) of objects. Porkert and Ulman (1982) characterise *yin* as the ‘structive’ and *yang* as the ‘active’ principle. In terms of the FORCE schema examined in Section 4.7.2, *yin* and *yang* are complementary yet opposed forces – the dynamics of their interactions are represented in the *tai ji* emblem (see Figure 3). Any ‘object’ includes both *yin* and *yang* aspects and is thus subject to the principles of transformation inherent in the dynamic of *yin yang*

The concept of transformation and the potential for transformation is vital in TCM. Much of Chinese thinking about health is devoted to understanding how to manage the *yin yang* transformations and flows harmoniously. Health can be defined as the balanced and appropriate transformations of *yin yang*, while disease results from imbalances and reversals of the appropriate transformations due to either internal or external causes. However, it must be understood that *yin yang* are not only abstract principles or processes. Farquhar (in Hsu 1999:212) reported that a *lao zhong yi* (‘older Chinese [scholar] doctor’) “reacted angrily to the epistemologically influenced construction that *yin yang* were metaphors for natural phenomena. He insisted ‘that yin and yang were things (*dongxi*), not forms of thought’”.

Yin yang categorisation is also used in the analysis of ever-finer physiological structures (although as we have seen in the discussion of *qi*, in TCM structure and functionality are rarely separated). As the *Nan Jing* states, “*Yin* and *yang* can be divided down to ten, and then further down to one hundred, to a thousand,

to ten thousand and to a number so great as defies calculation; yet in essence all these are but one” (in East Asian Medical Studies Society 1985:4). Each organ whether categorised as *yin* or *yang* has its own *yin* and *yang* aspects (as was noted in Section 4.7.4 in respect to the *shen* ('kidneys')). To give another common example, both *xue* ('blood') and *qi* flow through the *jing* ('channels'). *Xue* is considered the *yin* (nourishing, dense) aspect and *qi* the *yang* (active, light) aspect of this flow - a relationship reflected in numerous phrases noting their difference and interdependence such as “*qi* is the commander of the blood” and “blood is the mother of *qi*” (East Asian Medical Studies Society 1985:28). *Yin yang* is also used to describe the various processes and paths of disease and treatment. For instance, a *yin* disease such as cold-damp may be alleviated by stimulating *yang* while a *yang* disease like a full fever may require supplementing the *yin* so that ‘water can moisten fire’. Table 3 shows some medical correspondences with *yin* and *yang*.

Medical correspondences of <i>yin</i> and <i>yang</i>	<i>yin</i>	<i>yang</i>
Regions and structures	interior, front, lower section, bones, <i>xue</i> ('blood'), fluids	exterior, back, upper section, skin, <i>qi</i>
Characteristics	cold, weakness, deficiency, insufficiency, prolapse, inhibition	heat, strength, excess, overabundance, eruption, stimulation
Organs and channels	liver, heart, spleen, lungs, kidneys, pericardium	gall bladder, small intestine, stomach, colon, bladder, triple heater
<i>Ba gang bian zheng</i> ('eight parameters') (See the discussion in Section 4.8.4 below.)	<i>li</i> ('interior'), <i>xu</i> ('empty, deficiency'), <i>han</i> ('interior, cold')	<i>biao</i> ('exterior'), <i>shi</i> ('solid, full'), <i>re</i> ('heat')
Pulses	small-fine, deep, slow, rough	large-surgingly, floating, rapid, slippery
Treatments	calming, reducing, cooling, clearing	stimulating, invigorating, increasing, strengthening, warming

Table 3 A summary of some medical correspondences of *yin* and *yang* (Some or all of this data appears in most TCM texts. For an example see the Shanghai College of Traditional Medicine 1981)

4.8.2 Polarities and parameters in TCM and English idioms

A concept similar to *yin yang* does not exist in English, nor is there a correlate for the ‘great polarity’ represented by the *tai ji*. However, many of the polarities, continua or parameters subsumed by *yin yang* such as hot/cold, light/dark, light/heavy and so on are familiar to English speakers. In addition, while English speakers are not exposed to a meta-parameter subsuming other parameters, a wide number of English usages reveal conceptual relationships between a number of parameters from different domains which appear to correlate quite well with the *yin yang* meta-parameter. It is certainly possible that

exploring such conceptual and linguistic relationships in English will help the English speaking student make sense of *yin yang* as a categorisation system. Below I give numerous examples of English usages which appear to reflect some kind of cognitive relations between domains such as temperature, emotion and colour – domains which are not generally considered to be related by the western student.

To begin with, the cold-hot parameter from the temperature domain has associations in English with the blue-red parameter from the colour domain with ‘cold’ colours at the blue and ‘hot’ colours at the red end of the colour spectrum. This and many similar associations could be explained on a physiological or experiential-perceptual basis as evidenced by these usages:

2. *She was red in the face; she was flushed* (hot)
3. *She was blue with cold; her hands were blue!*

In TCM the *yin* parameters would be *cold* and *blue* and the *yang* parameters *hot* and *red*

Similarly, in English ‘cold’ signifies lack of emotion while ‘hot’ signifies presence of emotion and the continuum from cold to cool to warm to hot is used in numerous metaphors for attitude, relationships, attraction and so on.

4. *We got the cold shoulder*
5. *We got a cool [or lukewarm] reception*
6. *We got a warm welcome*
7. *He’s hot!* [desirable]

In TCM, expressive, excited emotions such as joy and anger would be considered *yang* while retreating and retractive emotional states such as grief or fear are considered *yin*.

In Section 2.6, I discussed Krzeszowski’s (1993) hypothesis of the axiological parameter which posits that one pole in any polarity will have more positive associations than the other. An example would be the largely positive connotations of ‘up’ as opposed to ‘down’. Because humans are *yang* (as compared with other life forms such as plants), there is some correlation of *yang* with positive and *yin* with negative states. However, in Chinese thinking generally it is always the case that *yin* and *yang* must be balanced (in a dynamic sense). An excess of either *yin* or *yang* is undesirable even when that excess involves an excess of a state generally considered positive such as ‘joy’. As the examples below show, the principle of appropriate polarity is also reflected in English usages. Either parameter in a polarity may have positive or negative connotations depending on what is considered appropriate to the context. This is in

accordance with the *yin yang* model which postulates that both the *yin* and *yang* poles of any continuum have their appropriate time and place. Some examples in English:

8. *She's a cold fish* (in a relationship) – negative – friendship (warmth) or love (heat) is the expected (or desired) response in a relationship;
9. *She was cool as a cucumber* (in a meeting or difficult situation) – positive – she was able to control her emotions to her advantage
10. *We're chilling* or *Chill out!* – positive – there's no need to 'get excited' (hot), 'just relax'
11. *He's warming up to the idea* – positive – it suggests acceptance ['embracing an idea' also suggests warmth and acceptance]
12. *He's hot* – positive – he's exciting (hot) or desirable (hot)
13. *I got myself into hot water* – negative – it suggests anger or strife (heat)

Both the *blue-red* continuum in the colour domain and the *restrained emotion-expressive emotion* continuum in the emotional domain would be considered as *yin yang* continua in the Chinese model. This suggests a further possible association between blue and restraint or lack of emotion and between red and expression or excess emotion. In fact, this association is also found in English:

14. *She felt blue* – indicates a dispirited, depressive state
15. *She saw red* – indicates expressive, excessive emotion (anger)

In TCM, there are considered to be seven important emotions: happiness, anger, worry, pensiveness, sadness, fear, and terror. (Shanghai College of Traditional Medicine 1981:18). These emotions can be related to the *yin yang* cycle (rather than a continuum) as shown in Figure 8 (also see the discussion of the *wu xing* ('five phases') in Section 4.9):

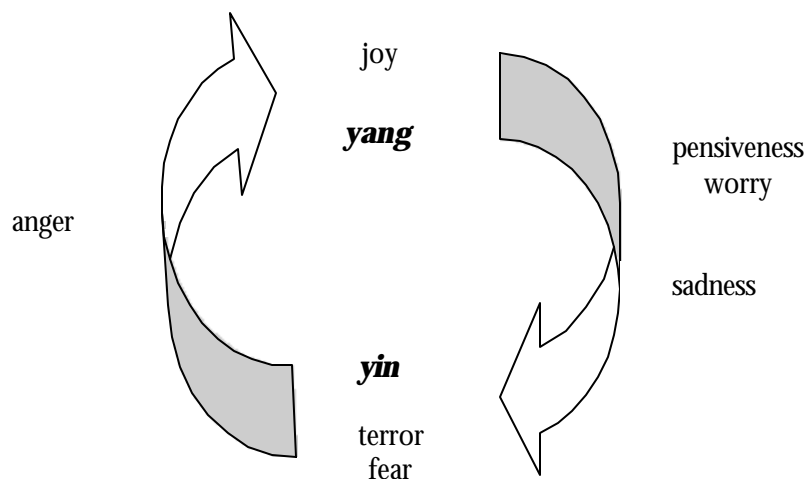


Figure 8 Yin yang and the seven emotions

Further cross-domain correlations suggest that English has what one might call a system of related polarities, which should make the *yin yang* correlations reasonably accessible. Shady and sunny, the original meanings of *yin* and *yang* are also considered cool and warm respectively by English speakers, hardly surprising since shady areas are cooler while sunny ones are warmer. The following usages suggest that English speakers make further cross-domain correlations with 'shady' and 'sunny' which also correspond to the *yin yang* polarities of hidden-open and unseen (or hard to see)/seen:

16. *He's a shady character* ('hidden' motives)
17. *Her intentions are out in the open* ('clear' motives)
18. *I only have a dim idea of what you mean*
19. *Your point is clear*

The high degree of kinaesthesia and correlation across (what are usually considered to be) the distinct domains of colour, emotion, temperature and ideas suggests that what appear to be metaphorical usages or cross-domain mappings may have a metonymical or experientially associated basis in our experience, our physiological and perceptual-cognitive makeup.

In a discussion of metaphors used in idiomatic expressions, Kövecses (2001:88) has stated that for the cognitive linguist "the connection between a source and a target is based on direct sensorimotor experience of the world (e.g. correlations in sensorimotor experience)". Kövecses suggests that this cognitive linguistic position predicts that the most common idioms will be those that are based on the most directly experienced source domain: the human body. This prediction is borne out by a number of studies (Kövecses 2001:89).

Metaphoric idioms based on sensorimotor experience may refer to body parts, organs and what could from a traditional medical perspective, be considered 'signs and symptoms', as in the following:

20. *He's got no spine* (he lacks principle or courage)
21. *He vented his spleen* (he expressed anger or frustration)
22. *She was flushed / livid / shook with rage / trembled with fear*

The common use of body references in idioms means that idioms should prove a rich source for intuitions about the body. Furthermore, it would be valuable to further investigate the relationship of these intuitions to traditional medical theories of psychophysiological function. The examples in this dissertation suggest that traditional medical systems may entail a systematic understanding of the relations between sensorimotor experience and underlying psychophysiology.

This possibility is supported by the fact that “the four principal categories of Chinese diagnostic technique are (1) looking, (2) listening/smelling (the same word in Chinese), (3) asking, and (4) palpating (Shanghai College of Traditional Medicine 1981:22), in other words, through the perception and interpretation of sensory data or ‘signs and symptoms’. (‘Listening’ refers to the sound of the patient’s voice while ‘asking’ refers to establishing the patient’s own experience and sensations.) Clearly sensory perception is a cornerstone of TCM diagnosis. As will become evident in Section 4.9, the different kinds of sensory input are all correlated with each other as well as with the various organs and body parts in TCM theory. For example, a person who experiences fear is also likely to have a blackish/blue *se* (‘colour, hue’), to have a ‘groaning’ voice, to smell ‘rotten’ and to have a weak pulse on palpation. These are all signs of a ‘kidney’ or ‘water’ disorder.

Because TCM diagnosis is largely based on the physician’s sensory perception of the patient’s state, the TCM doctor must train his perceptual acuity to a high degree. The patient’s condition is revealed through his colouring (particularly the colouring of the face, tongue body, tongue fur), the tone of his voice, his odour, and texture (palpation of the pulse, special points and areas on the body, skin texture) as well as the patient’s subjective experience. By virtue of their correlations in TCM theory, these sensory experiences reveal the state of the patient, the condition of the internal organs and help the physician determine the treatment and prognosis.

4.8.3 *Yin yang* and orientational parameters

Another rich source of body-based metaphors is not sensory experience but orientational parameters such as up-down and in-out. Again, the same experiential basis that informs many idioms also appears to inform TCM conceptualisations of physiology. As mentioned above, there are various subcategorisations of *yin yang* used in TCM diagnosis and treatment and many of these have to do with the fact that up is *yang* and down is *yin*, outer is *yang* and inner is *yin*, dispersal is *yang* and contraction is *yin*. As mentioned in Section 4.7.6, the various organs also play different roles in terms of the directional movement of the *qi*. To review a few examples briefly, ‘difficult breathing’ (often corresponding to the western disease category ‘asthma’) may result from the inability of the lungs to ‘send *qi* down’ or of the kidneys to ‘grasp *qi*’ and hold it down. Flu or worse may result if the *wei qi* (‘outside *qi*’) is weak and the body is unable to

repel or dispel *xie qi* ('evil, heterodox *qi*') such as wind or damp which penetrate the body from the outside. If the spleen *qi* is weak, the body is unable to keep blood inside the channels (resulting, for instance, in spotting) or to keep the organs and other physical structures in place (resulting, for instance, in prolapse). The liver should keep *qi* flowing around harmoniously. If liver *qi* becomes 'depressed' it results in numerous adverse emotional and physical symptoms.

Body parts also have their *yin* and *yang* aspects. The inside of the arms and legs is *yin* while the outside is *yang*. The lower body (abdomen) is *yin* while the upper body (particularly head) is *yang*. The *qi* of the six *yin* leg channels runs from the feet (lower origin) up to the abdomen, the *qi* of the six *yang* leg channels runs from the head (upper origin) down to the feet. The front of the body is *yin* while the back is *yang* (imagine the body in the foetal position and the back is 'outer' or 'exposed' while the front is 'inner' or 'hidden').

In TCM, healthy *qi* is simply referred to as *zheng qi* ('upright *qi*') of the body. Again, the nature of man is considered mostly *yang* as reflected in his upright position; a sick person is likely to be prone (*yin*). While there must always be a balance of *yin* and *yang*, the more *yin* the disease pattern the more serious it tends to be. Cognitive linguists also stress the relevance of the basic schema of man as an upright being so that 'upright is good' whereas 'down (prone) is bad'. This is reflected in numerous English expressions which make use of the upright—prone parameter:

Standing upright is good:

23. *She's standing her ground*

24. *She's back on her feet*

Not standing upright is bad:

25. *She's down with the flu*

26. *He succumbed to cancer'*

27. *It flattened me*

The correlation in TCM made between the seriousness of disease and its penetration from the upper, outer regions (*yang*) to the inner, lower regions (*yin*) is also reflected in both ordinary and health related English usages which imply that 'deeper/lower is more serious'. Generally speaking up and out is positive while down and in is more negative (especially in metaphors concerning health) but the values ultimately depend on context.

Expelling outwards is healthy/relieving:

- 28. She threw off the virus
- 29. Use this to ward off the flu
- 30. Express your feelings
- 31. Get it off your chest
- 32. He needs to let off steam

Inner/lower is more serious/important/hurtful:

- 33. I don't know what got into him
- 34. He's internalised his problems
- 35. It got under my skin
- 36. That was below the belt
- 37. It's just sunk in

Inner/lower becomes positive when the context demands a serious or important response.

- 38. Our relationship is deepening vs. Our relationship is superficial
- 39. She's a deep thinker vs. She's a superficial thinker
- 40. He gets beneath appearances to the real story vs. He never penetrated to the essence
- 41. She really delted into the topic vs. She just skimmed the surface of the topic

4.8.4 Yin yang subcategories: *Ba gang bian zheng* ('the eight parameters')

One of the most widely used subcategorisations of *yin yang* is the diagnostic model called the *ba gang bian zheng* ('eight guiding-principles differentiate verify') or as Hiep (1987:39) calls it the 'eight guiding symptom complexes'. It is commonly referred to simply as the *ba gang* ('eight parameters/rubrics') or as *bian zheng*. *Bian* can be translated as 'differentiate, distinguish, determine, and identify' while *zheng* can be translated as 'pattern, emblem, syndrome, sign'. However, Hsu (1999:85) has noted that the term *zheng* appears alone in early medical texts where it had the meaning of 'concretion' and also appeared in the compound noun *zheng jie* ('concretion knots') suggesting that blockages in the flow of *qi* were originally considered the main cause of disease (also see Section 4.7.3 on the *jing* ('channels')). As a key diagnostic tool, *ba gang bian zheng* first appeared in the famous *Shang han lun* ('Discussion of cold induced disorders') in the Late Han dynasty (founded 25 CE). The 'eight parameters' are used to assess disease patterns and are often understood in combination. Thus, there may be a *biao han* or 'external cold' disease (perhaps the first stage of the common cold) or a *yin xu* ('*yin* deficiency') disease (stress often falls into this category). Note that *yin* and *yang* function both as meta categories and as subcategories.

Yang	yin
<i>biao</i> ('outside, outer, exterior')	<i>li</i> ('inside, inner, interior')

<i>re</i> ('hot')	<i>han</i> ('cold')
<i>shi</i> ('solid, dense, to fill, excess, repletion')	<i>xu</i> ('empty, hollow, weak, deficiency, depletion')
<i>yang</i>	<i>yin</i>

Table 4 *Ba gang bian zheng* ('the eight parameters')

The parameters inside-outside, hot-cold (temperature) and *yin yang* have already been discussed to some extent above. *Xu* and *shi*, however, deserve some comment. *Xu* and *shi* are usually understood as referring to 'deficiency' or 'excess' of some bodily 'substance' for instance *yin, yang, qi, xue* ('blood') in the body as a whole or of individual organs and channels. A typical diagnosis might specify 'spleen blood deficiency' or 'liver *yang* excess'.

The concepts of *xu* and *shi* are very important in clinical practice and determine whether the physician uses *bu* or *xie* techniques and medicaments. *Bu* is widely translated as 'tonify' and *xie* as 'sedate' although the translations 'supplement' and 'drain' (Wiseman 1995) are both more accurate and make more sense in terms of the 'full' and 'hollow' meanings of *shi* and *xu*.

Numerous common English expressions indicate *xu*-like conditions. Remembering that *yin* refers to the 'water' aspect of the body and *yang* to the 'fire' aspect, we can even distinguish between *yin xu* and *yang xu* conditions in English usages.

Expressions which suggest that the person's/patient's fluids or *yin* are depleted due to excess activity or stress (*yang*) are, for example:

- 42. *to be burnt out*
- 43. *to be fried*
- 44. *to be stressed out*
- 45. *to be drained*

Many Chinese TCM practitioners who come to the west express surprise at the number of patients who exhibit the kind of *xu* – particularly *yin xu* - conditions referred to in these common expressions.

Expressions which suggest alleviations of such conditions include:

- 46. *to feel refreshed*
- 47. *to feel restored*
- 48. *to feel renewed*

Expressions which suggest either *yin* or *yang xu* or both include:

- 49. *to feel exhausted*
- 50. *to be out of stock*
- 51. *to be finished*
- 52. *to be run down*
- 53. *to feel depleted*

Expressions which suggest *yang xu* include:

- 54. *to be washed up*
- 55. *to be washed out*
- 56. *to have lost one's spark(le)*
- 57. *to have lost one's get up and go*
- 58. *to have lost one's zest /zing*

Expressions which suggest alleviation of such conditions include:

- 59. *to recover one's sparkle*
- 60. *to get the twinkle back in one's eyes*
- 61. *to recover one's zest for life*
- 62. *to put the spring back in one's step*

There are also many English expressions a person/patient might use which reflect *shi* or excess conditions:

- 63. *I'm burning up*
- 64. *I feel like I'm going to explode*
- 65. *I've got a raging headache*
- 66. *I feel bloated*
- 67. *I feel heavy*

4.8.5 Yin yang: phases in a cycle

A notable difference between most cognitive linguistic discussions of parameters and the TCM parameters discussed above is the fact that cognitive linguists usually conceptualise parameters along a continuum or line while the TCM parameters are generally based on a cyclical model such as the *yin yang* or *tai ji*. While the linear model allows for gradual change, it does not permit the kind of transformation which is common in the TCM model. For instance, it is quite common in medical diagnoses for a cold condition to turn to heat (cold leads to stagnation leads to heat) or for an excess condition to lead to deficiency (high fever leads to exhaustion of body fluids). The TCM model insists on a dynamic view of nature, man and physiology.

A common subcategorisation of *yin yang* is a fourfold division which leads into the discussion of the *wu xing* ('five phases/elements') in Section 4.9. This subcategorisation emphasises the transitional nature of *yin yang* with a period of rise, maturation, decline and rest - in the *tai ji* emblem (see Figure 3) this is portrayed as a wave pattern with the germ (the dot) of *yin* within *yang* and *vice versa*. The *yin yang* phases can be understood in terms of the diurnal and annual cycles with the '*yang* within *yin*' being dawn or spring, the '*yang* within *yang*' being noon or summer, the '*yin* within *yang*' being dusk or autumn and the '*yin* within *yin*' being night or winter (Maciocia 1989:4). In TCM, the four stages also relate to the phases of life: infancy, youth, middle age and old age. Note that in China, South is put at the 'top' of the compass while North is at the 'bottom' (Maciocia 1989:3), so that there is an experiential correlation between the sun which is high in the sky at noon and at midsummer and its position on the compass.

Expressions which reflect this cyclical conception of the cycles of time, the seasons, and their correlations with the stages of life, are common in everyday English usages:

- 68. *the program is in its infancy*
- 69. *the springtime of her life*
- 70. *the evening of her life*
- 71. *his influence is waning*
- 72. *night closed around her* (signifying death)

Moreover, these phases can be correlated with other domains of experience such as mental processes, temperature and emotions, individual and historical processes:

- 73. *it finally dawned on her*
- 74. *she's warming to the notion*
- 75. *it was the highpoint of my trip*
- 76. *the sun set on the empire*

In English, as in Chinese, poetry spring often represents opportunity, growth, beginnings, hope; summer may represent coming of age, accomplishment and enjoyment; autumn (or metonymically the falling of leaves) can stand for reflection, loss, departure, decline or sorrow while winter often stands for old age, death, stillness, reflection or completion.

4.8.6 Change and transformation

The concept of change and transformation is key to Chinese thinking and emphasised in both the *yin yang* and the *wu xing* model examined in the next section. The Chinese universe is fundamentally dynamic as are its physiological models. The cycles of change are regulated by the interplay of *yin* and *yang*. There are two terms for change, *hua* and *bian*, commonly used in philosophy and medicine. There has been considerable debate amongst scholars as to the distinction between the two, a distinction which rarely is made in English translations. The *Huang di nei jing su wen* says, “when things are born, one calls it ‘transformation’ (*hua*) and when things reach their extremes, one calls it ‘transition’ (*bian*)” (see Hsu 1999:107). This would explain Dr Zhang’s (in Hsu 1999:112) illustration of the concept *hua* with the phrase *shui hua wei qi* ‘water changes into steam’ which can be interpreted as another reference to the water cycle discussed in Section 4.7.4. The character for *hua* (‘flower’) is the same as that for *hua* (‘change’) with the addition of the radical for ‘plant, herb’ perhaps supporting the concept of a natural transformation or progression to the next phase. The relationship between plant growth and the water cycle has already been noted. It is possible that *hua* indicates change which comes from internal processes. While *bian* indicates a change of situation or turn of events due to *yin yang* interactions and transitions.

4.8.7 Pedagogical suggestions

In Section 4.7.7, I suggested that emphasising conceptual or linguistic features common to both the ‘first’ and ‘additional’ or ‘second’ languages helps the learner identify and make sense of the differences. A better understanding of similarities and differences helps to clarify the underlying conceptualisations which motivate linguistic structures. For instance, in the discussion of *qi*, I emphasised the importance of underlying schemas. I argued that the concept of *qi* is underpinned by the FORCE schema which is also commonly used in English conceptualisations. However, there are differences which need to be underscored. In particular, there is the TCM preference for cyclical representations as opposed to the often linear representations of force in English usages and within the modern scientific paradigm. In TCM, there is the cyclical representation of force as illustrated by the *qi* and the related water cycles (discussed in Section 4.7.4). Change itself is conceptualised in a cyclical fashion as represented by the dynamic interplay between force and counterforce, the *yin yang* relationship of mutual dependence and flux.

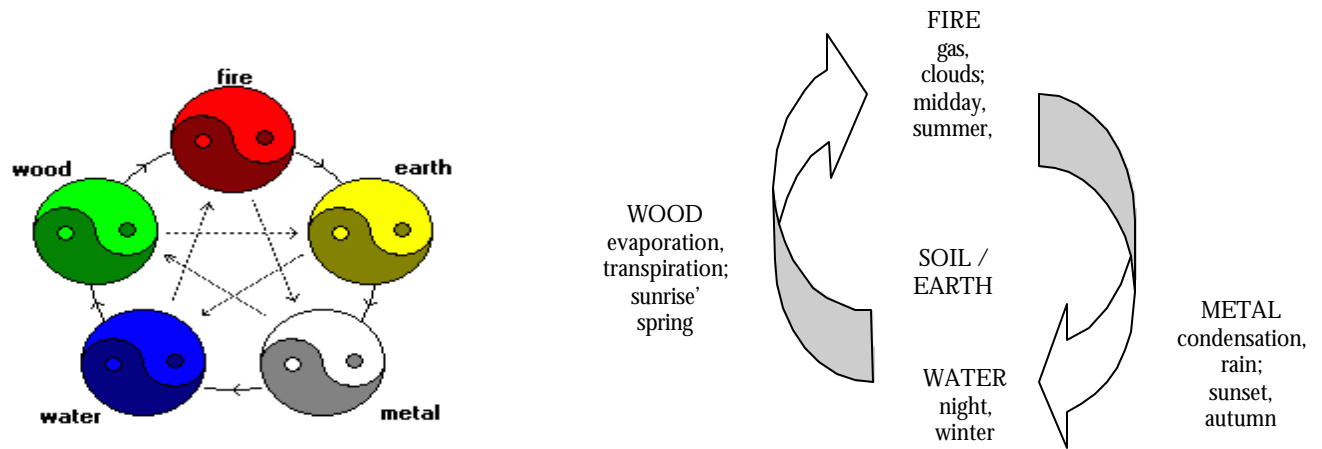
In this section on *yin yang*, I have particularly emphasised the polarity schematised by *yin yang* the interrelated system of parameters which result and the ways in which such parameters are used to categorise phenomena in TCM. I have given some examples which suggest that the cross-domain

correlations explained by the *yin yang* schema in TCM also appears to inform in English usages. Colour, temperature, emotion and other domains that are not generally correlated in principle (as opposed to practice) in scientific models of health appear to have conceptual correlations in everyday English. The aim of underscoring these aspects of English is to extend awareness of the known (English) to make the unknown (TCM) more accessible. This aim should be enhanced by having students attempt to identify such usages themselves. This can also be done in the clinic where patients may describe their conditions using metaphorical expressions. The observation of cross-domain correlations in clinical practice will also enrich students' understanding of the experiential basis for the terminology and models used in TCM diagnosis. Again, an important difference between the conceptualisation of English and TCM parameters is that in English polarities are usually conceived as linear continua, while in TCM they have a cyclical representation. At its extreme, each pole transforms into the other: heat into cold, strength into weakness. The latter is important in understanding TCM models in the clinic where both health and disease are understood as processes of continual transformation.

The extensive correlations associated with the *yin yang* phases bring us to the other major model of TCM, the *wu xing*. The *wu xing* appears even more remote from modern scientific conceptualisations than *yin yang*. However, by understanding the cyclical nature of *yin yang*, particularly as instantiated in the conceptualisation of the water cycle and a four-phase division of this cycle, the *wu xing* model becomes far more accessible. By emphasising the underlying schema which motivates meaning in this model, what might otherwise appear a disparate and rather arbitrary set of correspondences, are seen to exemplify the conceptual integrity of the system.

4.9 The *wu xing*

The Oxford Concise English-Chinese Chinese-English Dictionary (1999) translates *xing* as 'walk, travel; prevail; do, carry out; put into effect, practice; be all right; trip; behaviour'. The term *wu xing* ('five *xing*') is one of the more highly debated in TCM with some scholars preferring the translation 'five phases' and others 'five elements'. The debate centres on the question of whether the *wu xing* represent things or point to processes.



* For a discussion of the variance of the position of 'soil/earth' see Section 4.10.

Figure 9 The *wu xing* cycle and its relation to the 'cosmological' (or water) cycle
(*wu xing* cycle from Reid)

The *wu xing* model includes the following 'elements' or 'phases': *mu* ('wood, tree'), *huo* ('fire'), *tu* ('soil', 'earth'), *jin* ('metal') and *shui* ('water') (see Figure 9). To the extent that these are all 'materials' or 'objects', the translation 'element' is justified. However, the early choice of the translation 'element' may also have been motivated by the apparent similarity of the *wu xing* to the humoral 'elements' of early Greek medicine. Most modern scholars have chosen to emphasise the 'process' aspect by calling the *wu xing* the 'five phases'. There are numerous variations on this theme such as the 'five transformational phases' (Porkert and Ulman 1982), the 'five evolutive phases' (Hiep 1987) and the 'five activities' (Sivin in Hsu 1999:263). Some of the earliest references to the *wu xing* describe them as *fu* ('abilities, talents, seats of government') and *cai* ('materials') (Maciocia 1989:16) demonstrating that both the material and process aspects of meaning have an historical basis. It is probably most accurate to consider the *wu xing* both as 'objects' (or categories of 'objects') and as functions or aspects of transformation much as we have done with the closely related concept of *yin yang*

From a cognitive semantic viewpoint, it is notable that the *wu xing* represent basic level categories (see Section 2.1). As Ungerer (2001:201) remarks in a discussion of Rosch, the main advantage of basic level concepts is the principle of cognitive economy, "the claim that basic level concepts permit us to assemble the largest amount of information with the least degree of cognitive effort". Ungerer (2001) also states that basic level categories must have a recognisable *gestalt* and be easily related to identifiable motor movements. The *wu xing* are common objects encountered in experience which have distinctive qualitative characteristics. This allows them to also play a role as superordinates or meta-categories which help to categorise a larger range of objects. For instance, *mu* ('tree, wood') includes 'things which grow', 'things which are flexible', and 'things characterised by upward movement'. By extension, this qualitative

aspect of *mu* allows it to stand for basic phases or processes characterised by growth, flexibility and upward movement. In effect, the *xing* have verbal as well as nominal significance. Their simple *gestalts*, environmental salience and locational/orientational characteristics make them valuable in categorising both objects and processes.

In the following discussion, I elaborate on the characteristics of the *wu xing* which allow them to function as meta-categories in TCM with reference to the *yin yang* and water cycles discussed above (see Sections 4.8.1 and 4.7.4). *Mu* is usually translated in English language TCM texts as 'wood'. However, *mu* also means 'tree', 'grass', 'herb' or 'wood', in other words, things which grow. Tree is a basic level concept that also represents the phase of growth, upward movement and the rising aspect of the water cycle in the plant domain. These basic associations lead to its correlations with springtime, youth, the colour green and even the emotion associated with the upward movement of *qi* – anger. *Huo* ('fire') is a basic level category, which, through experiential correlations, also represents heat, the phase of consummation, maturity and the high point of the cycle. This makes its association with summertime, adulthood, the colour red and the emotion of joy (a 'high' emotion) easier to grasp. The salience of *tu* ('soil, earth') especially in an agricultural society is obvious. *Tu* also represents stasis, completion, the 'pause' and often the 'centre'. It correlates with the time of harvest, with food and with reflection or thinking. *Jin* usually translated as 'metal' originally meant 'gold' which is again a basic level concept. 'Gold' represents concretion, an accumulation – and the density of gold is reflected in its correlation with downward movement, dusk, cooling processes, crystallisation and decline. *Shui* ('water') is the final *xing*. In terms of the water cycle discussed in Section 4.7.4, 'water' is the lowest point, the point of condensation but also the point where the process of growth originates (see Figure 9). Water's position in the cycle and its qualities clarify its correlation with cold, winter (the lowest point of the annual cycle), night time and the emotion of fear (associated with cold). Table 5 shows these and other common correlations. In this dissertation, I have opted to call associations explicitly identified in the *wu xing* model 'correlations' to distinguish this technical relationship from associations which may be made on other bases. In the TCM literature they are often termed 'correspondences'.

	<i>mu</i> ('tree, wood')	<i>huo</i> ('fire')	<i>tu</i> ('soil')	<i>jin</i> ('metal, gold')	<i>shui</i> ('water')
directions	east	south	centre	west	north
seasons	spring	summer	in-between	autumn	winter
<i>wu qi</i> ('five seasonal influences, climates')	wind	heat	dampness	dryness	cold
stages of development, life cycle	birth	growth	transformation/ maturity	harvest/ withdrawal	storage/ dormancy
sense organs	eyes	tongue	mouth	nose	ears
colours	green	red	yellow	white	black
tastes	sour	bitter	sweet	pungent	salty
odours	rancid	scorched	fragrant	rotten	putrid
meats	chicken	mutton	beef	horse	pork
sounds	shouting	laughing	singing	crying	groaning
<i>wu zang</i> ('five <i>yin</i> organs')	<i>gan</i> ('liver')	<i>xin</i> ('heart')	<i>pi</i> ('spleen')	<i>fei</i> ('lungs')	<i>shen</i> ('kidneys')
<i>wu fu</i> ('five <i>yang</i> organs')	gall bladder	small intestine	stomach	large intestine	bladder
tissues	sinews	vessels	muscles	skin	bones
fluids	tears	sweat	saliva	mucous	urine
<i>wu zhi</i> ('five impulses')	<i>nu</i> ('anger')	<i>xi</i> ('joy, excitement')	<i>si</i> ('pensiveness, sympathy')	<i>you</i> ('sadness, grief')	<i>kong</i> ('fear')
spirits	<i>hun</i> ('soul')	<i>shen</i> ('spirit')	<i>yi</i> ('thought')	<i>po</i> ('animal spirit')	<i>zhi</i> ('will')

Table 5 Some correlations (correspondences) in *wu xing* ('five phases') model

Some further correlations which deserve mention are the correlations between the *wu xing* and the *zangfu*. The *zang* are the *yin* 'organs', 'depots', 'orbs', 'viscera', and 'visceral systems of function'. The character for *zang* 脏, consists of the component for 'flesh' (also 'moon' which is *yin*), and a component meaning 'to store' (Maciocia 1989:68; Hsu 1999:264). The *fu* are the *yang* 'organs'. The first component of the character again stands for 'flesh' while the second indicates 'seat of government'. The *fu* have governmental roles. For instance, the stomach and the related *zang*, the spleen, are the 'officials in charge of food storage'. The organs are paired and each *zang fu* pair belongs to one of the *wu xing*. These pairings are based on the qualitative nature of the organs and on the flow of *qi* from one channel to another. For instance, the lungs and large intestine belong to the *jin xing* ('metal phase') and *qi* flows from the lung to the large intestine channel in the cycle of *qi* through the body.

The term *zhi* is usually translated as 'emotion'. However, in TCM there are supposed to be 7 *qing* ('emotions') comprising fear, anger, joy, worry, sorrow, fear, grief and fright while *zhi* has more complex translations including 'will', 'intent', 'mind', 'orientation', 'psychic reaction' 'emotion' (Hsu 1999:264) and 'aspiration' (Manser 1999). The *zhi* include the same emotions as the *qing* excepting grief and fright (which are considered similar to sorrow and fear).

Of particular interest to western students are the correlations with the 'spirits'. Each 'organ' has a 'spirit' associated with it. Schipper (1993) mentions an ancient Daoist ritual formula in which they refer to the three *hun* ('celestial spirits') and seven *po* ('terrestrial spirits'). He also says that while the *shen* (correlated with the heart) and *hun* (correlated with the liver) are able to go to *tian* ('heaven', *yang*) during sleep or trance the *po* ('bone souls') (correlated with the lungs) are part of the skeleton and it is in their nature to go back to earth (*yin*). Interestingly, rising is the nature of the liver and the *mu* ('tree, wood') *xing* up is the nature of the heart and the *huo* ('fire') *xing* while the *qi* of the lungs should descend. This correlates with the rising of the associated *hun* and *shen* and falling of the associated *po* spirits. The attribution of spirit or consciousness to different organs of the body is not unique to TCM. Many traditional knowledge systems attribute mental phenomena and emotions to various organs, for instance, consciousness to the heart rather than the brain. There are many more correlations that have been made which are not included in this chart: musical tones, planets, grains, meats, magical animals and so on. As TCM is a holistic system, the 'systematic correspondences' in principle include all aspects of reality.

Below are semantic maps of some of the correlations in the various *xing*. Similar tables appear in most TCM textbooks although not all correlations appear in all tables. The reader can refer to any of the TCM books listed in the reference section. Correlations not included in Table 5 but commonly made in TCM texts and clinical discourse (some of which may serve as semantic links) are included. Also, note that in TCM each *zang* (*yin* organ) is associated with a *fu* (*yang* organ) giving two organs per *xing* (in fact, the heart *xing* includes four organs but the second pair are not included here). Domains are indicated by the groupings contained in freeform lines. Direction is a particularly important factor in TCM and for this reason, what from the cognitive linguistic standpoint might more usually be considered the spatial domain, is here labelled 'DIRECTION'. In fact, in TCM, space and time are considered the *yin* and *yang* aspects of what might be considered a spatial-temporal domain. As Maciocia (1989:3) writes: "The Heaven, containing the sun, moon and stars on which the Chinese farmers based their calendar therefore corresponds to Time: the Earth, which is parcelled out into fields corresponds to Space."

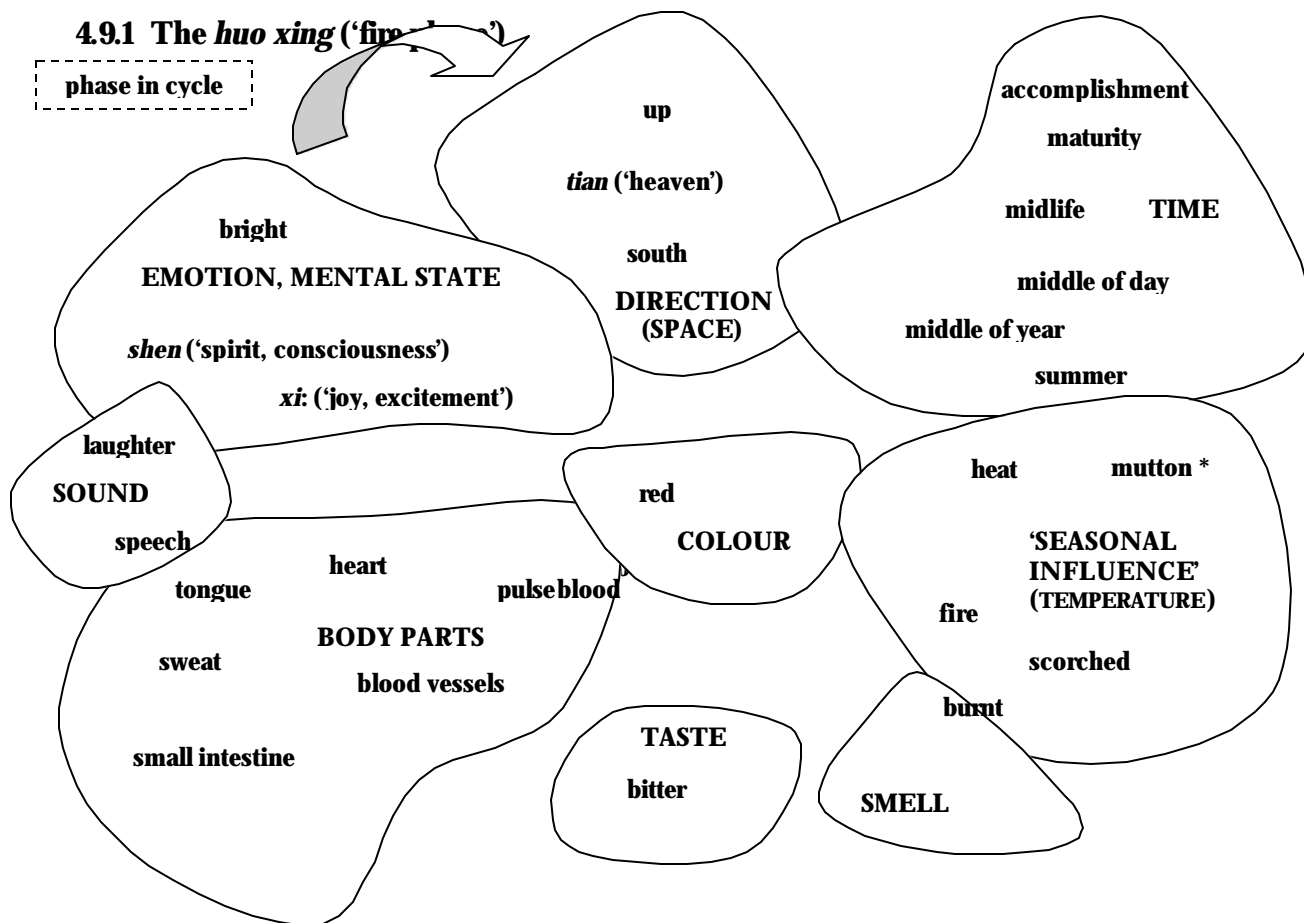


Figure 10 A semantic network of the *huo xing* ('fire phase')

Above we noted the correlations between 'up' and south. As mentioned above, the Chinese compass has south at the top. This, along with the fact that in the northern hemisphere the sun is stronger in the south, underpins the correlations with heat and the times when the sun is hottest: midday and midyear (summer). Heat itself is associated with fire, and perhaps for this reason correlated with a burnt taste, with mutton (considered a 'warming' meat in TCM and other traditional medical systems) and the scorched smell. The 'heart' has a high position in the body relative to the other organs and is correlated with 'high' emotions. In Chinese, a *gao xing* ('tall mood') indicates a good mood or happiness. The character for *gao*, 高, ('high, tall') is pictorially and semantically very similar to 喜, *xi* ('enthusiasm, joy'). The HAPPINESS IS UP metaphor is shared by Chinese and English speakers (Yu 1998). The heart is also common in both Chinese and English metaphors for happiness (Yu 1998). The correlation with the small intestine is based on the pairings of the *yin* and *yang* organs, itself based on the position of the channels on the body. The correlations between the heart, the pulse and blood already make sense to the

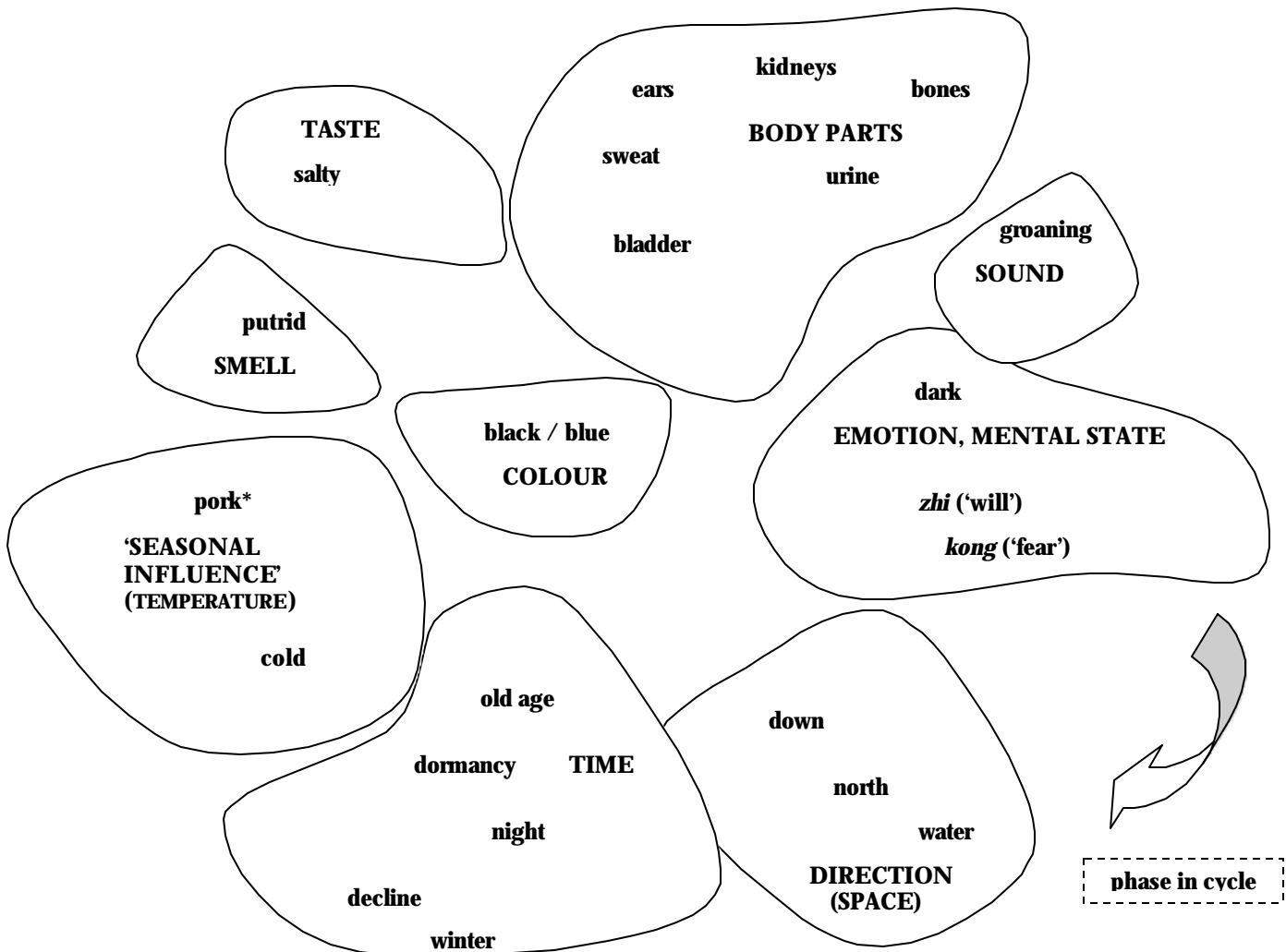
western student as they as they correspond with scientific conceptions of physiology. In TCM, however, the heart is not considered as a ‘pump’ but as the ‘commander of the blood’.

Excitement and joy are easily linked to the heart and the direction ‘up’ in English usages:

- 77. *his heart raced*
- 78. *her heart was pounding*
- 79. *her heart overflowed with joy*
- 80. *her heart leapt for joy*
- 81. *upbeat*

However, Yu (1998) points out that ‘off the ground’ in Chinese usually has negative connotations, presumably because *yang* should always be rooted in *yin* (cf. the English idiom *keep your feet on the ground*).

4.9.2 The *shui xing* (‘water phase’)



* Pork is considered to be a ‘cooling’ meat in TCM

Figure 11 A semantic network of the *shui xing* ('water phase')

The correlations in the *shui xing* ('water phase') are in many respects the opposite of those for the *huo xing* ('fire phase'). Firstly, there are the correlations with DOWN, north on the compass, night, cold and winter which could all be based on the sun going down or being in a lower position in the sky. The correlation with water may be based on the association with downward flow and cold (and, more specifically, with this aspect of the water cycle) as is the correlation with the kidneys and bladder which have a relatively low position in the body and are involved with the flow of urine. The correlation of the taste 'salty' and odour 'putrid' may also be based on the water association, while 'groaning' is a low vocal sound.

The association between cold and fear appears to be experiential, as exemplified in the following English idioms:

82. *his blood ran cold*

83. *she shivered with fear*

84. *icy cold fear seized her*

85. *a cold stab of fear went through him*

4.9.3 The *mu xing* ('wood phase')

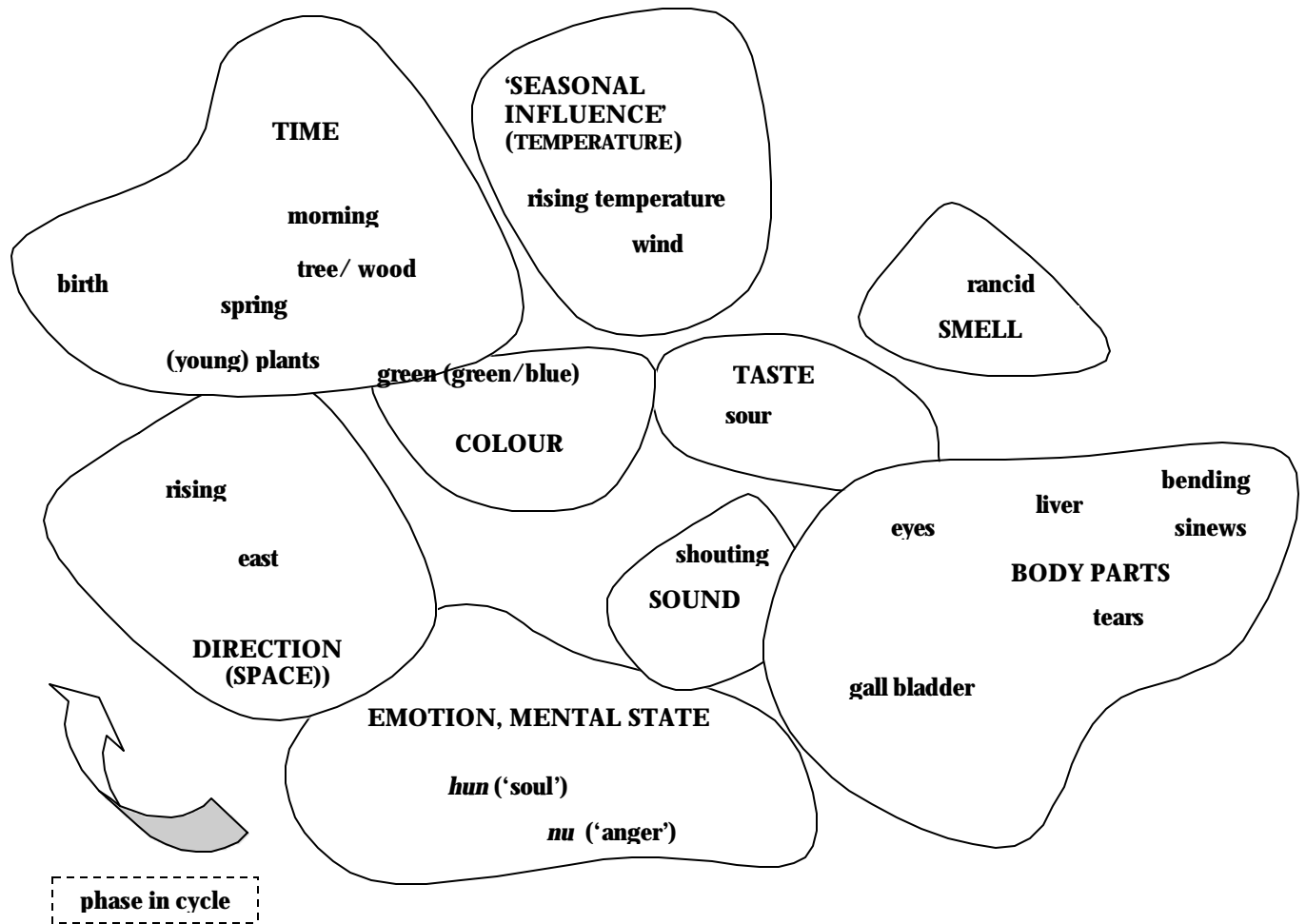


Figure 12 A semantic network of the *mu xing* ('wood phase')

The associations of *mu* with 'growing' and the upward movement of water in the water cycle or plant growth cycle have already been discussed at some length in Section 4.7.4. This makes sense of the correlations with birth and beginnings, including the beginning of the day in the east with the rising sun, and the beginning of the year in spring. The association of growth and spring with 'wood' or 'trees' is easily made and the correlation with the sinews can be explained by their function of bending which is similar to the pliant quality of young plants. Further associations with spring and growth include the colour 'green' and the 'sour' taste (the taste of young edible greens). The nature of spring and growth is upwards and outwards (dispersal) and wind is associated both seasonally and through its directional characteristics. The sound of the *mu xing* is shouting and the emotion is 'anger': both involve the rising and expression of *qi*. Less familiar to westerners is the association with the *hun* ('soul'). However, the *hun*

has a rising nature and is said to leave the body from the top of the head during sleep or at death. Whether an association can be made between the *hun* ('soul') and the eyes, as in the English expression 'the eyes are the window of the soul', I am not sure, although an association between the eyes and tears seems natural. Again, it must be emphasised that the semantic associations I have postulated are not necessarily the motivations which lead to the semantic structure of the *xing*

4.9.4 The *jīn xīng* ('metal phase')

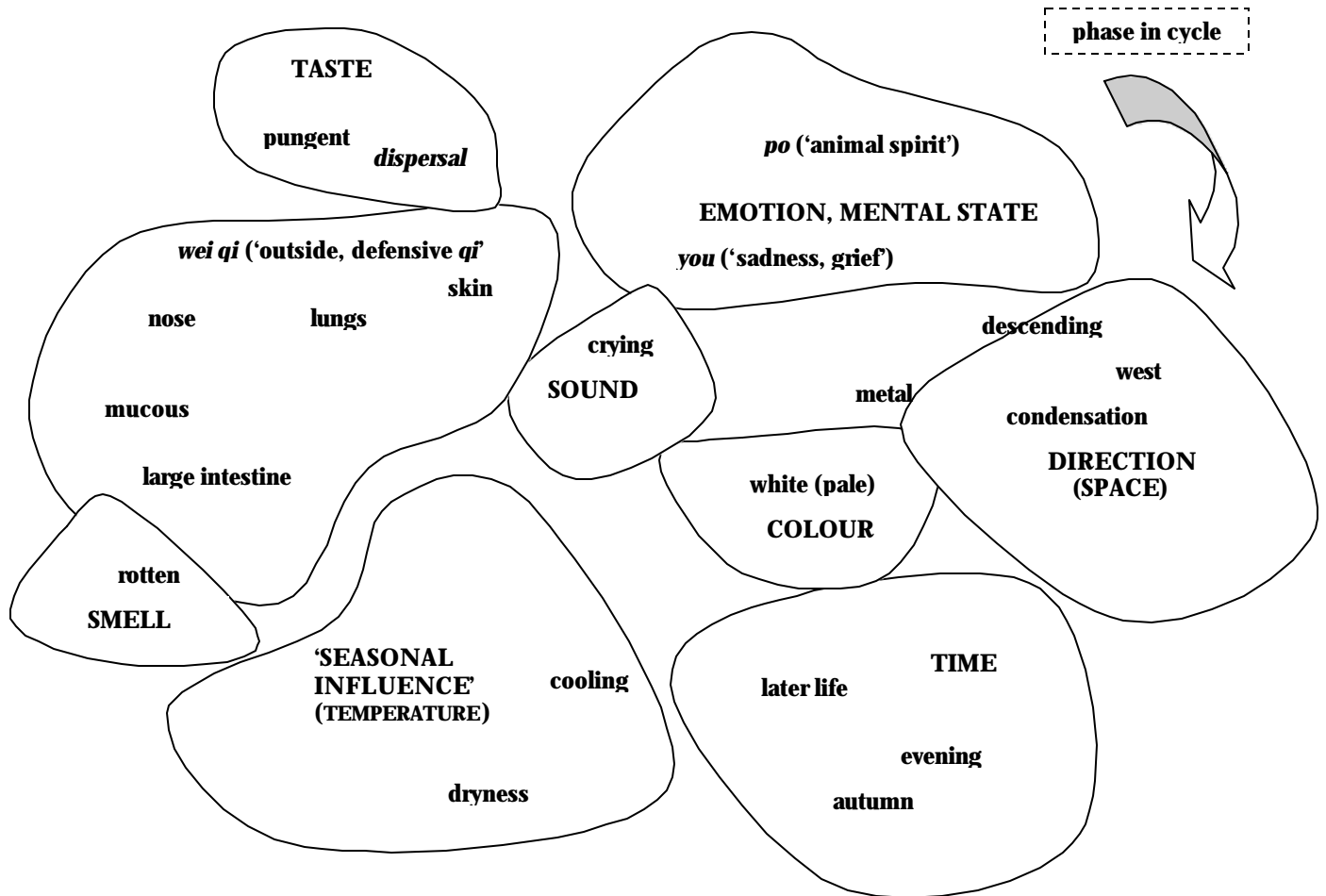


Figure 13 A semantic network of the *jīn xīng* ('metal phase')

The *jīn xīng* ('metal phase') is in many ways the opposite of the *mu xīng* ('wood phase'). Its direction is west, the direction of the setting sun, and it is characterized by downward movement in general (both the correlated organs, the lungs and the large intestine are responsible for sending *qi* downwards). Some TCM specialists (personal communication) have explained that water condenses on rocks which are associated with metal, an image which corresponds with the position of 'metal' in the condensation phase of the water cycle and perhaps the colour white relates to the sheen of metal. The *jīn xīng* is also

correlated with autumn (as the days get shorter and the sun is lower in the sky), dry weather, the time of harvest, retiring, and withdrawal. The association of autumn with sadness, grief and loss has already been mentioned and the association with crying appears to follow naturally. In TCM, lung problems are considered to aggravate and be aggravated by sadness, especially prolonged grief. Autumn, the period associated with the *jin xing* is a time when colds, flu and other diseases that affect the lungs are most prevalent. The lungs are particularly responsible for dealing with the 'outside' as they support the *wei qi* ('defensive, external *qi*'). This may also underpin the correlation made between the lungs, the skin and both of which are at the forefront in terms of dispersing *xie qi* ('evil *qi*'). The 'pungent' taste is considered 'dispersing' in TCM. The correlation with the nose may be explained by the role of the lungs in bringing in *qi* from the air through the nose, or its role in dispersing irritants (through sneezing). The correlation with the *po* ('animal spirits') may make sense in terms of the downward movement of *qi* associated with the lungs and the related large intestine. The *po* are considered to return to the earth at death and to leave through the anus area. Finally, a rotten odour may be correlated with the *jin xing* because the large intestine, is considered to be the 'official' responsible for 'rotting and ripening' of food.

4.9.5 The *tu xing* ('soil phase')

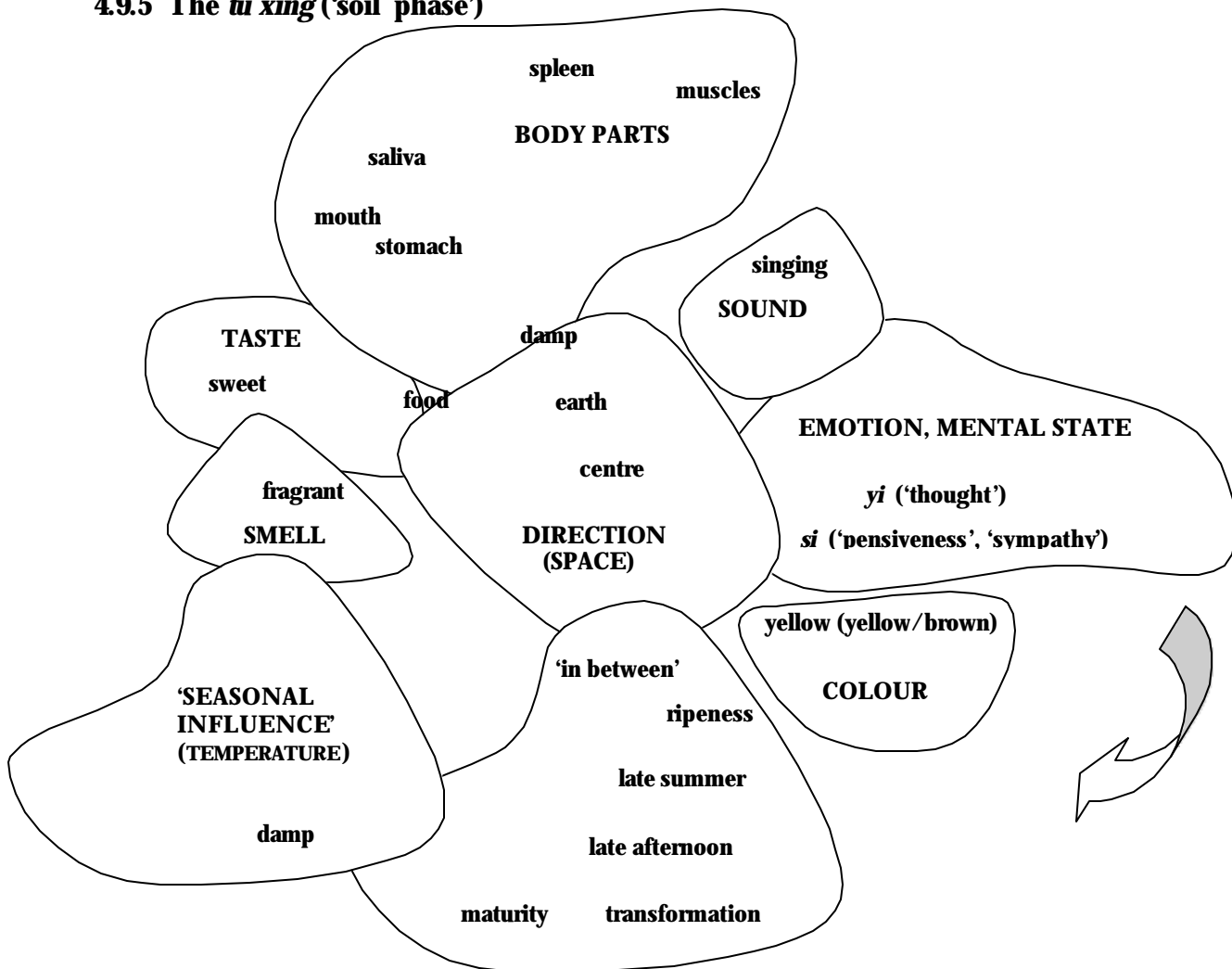


Figure 14 A semantic network of the *tu xing* ('soil phase')

The *tu xing* ('soil phase') is perhaps the most complex of the *wu xing* because it takes different positions and plays a somewhat different role in different models. In what is sometimes referred to as the 'cosmological' model, 'soil' or 'earth' is pictured at the centre with the other four *xing* arranged around it in a cross. In most diagnostic models however, 'soil' is pictured as one of the five *xing* creating a pentagon (see Figure 9). The pentagon is used to describe many of the therapeutic and pathological relationships between the *xing* as described below. While each of the other *xing* is clearly correlated with a season, the 'soil' *xing* is sometimes correlated with 'late summer' and at other times correlated with a 18-day period at the end of each of the other seasons. In the latter conceptualisation, 'soil' represents a pause or consolidation period in between the other *xing*.

As the time of late summer, the correlations of the soil *xing* with the harvest and food, a fragrant odour, a sweet taste (in TCM the taste of rice or other grains is considered 'sweet') and the colour yellow-brown (ripened grain) make sense. The maturing of the harvest correlates with maturity in the life cycle. The correlation with dampness could have a seasonal basis or might be because the spleen is considered to be particularly susceptible to damp conditions in TCM. The correlation between the spleen and stomach (considered to be the *yin* and *yang* organs of digestion in TCM) relates both to the digestion of food from the soil and to their central position in the body. The association with digestion also motivates the correlations with the mouth and saliva. The correlation of the spleen/stomach and soil *xing* with the 'spirit' *yi* ('consciousness, thought, ideas, thinking, awareness') hardly seems as obvious but the following English metaphors give us 'food for thought'. Apparently, the production of things in the mind (ideas) is considered similar to the production of things from the soil:

86. *let me chew on that for a while*

87. *to ruminate on something*

88. *to digest information*

The understanding of soil as the 'in between' season, as a pause between the other *xing* or as the centre holding the other *xing* together may also may motivate its correlation with thought or consciousness. 'Holding the center' and 'keeping the centre' are considered vital in Chinese medicine and related practices such as the martial arts.

4.9.6 The *wu xing* in diagnosis and treatment

The various correlations made with each *xing* are useful in diagnosis and treatment. For instance, a patient with a fragrant (unpleasantly sweet) odour, a 'soggy' pulse (indicating dampness), and a yellow *se*

(‘colour, hue’) may be diagnosed with a ‘spleen’ disorder. Causative factors or additional symptoms in the pattern of disease may be that the patient thinks too much (can’t calm his mind or does too much ‘thinking’ at work), eats too many sweet things or gets worse when the weather is damp. Treatment may include using points on the soil channels of the spleen or stomach or use of herbs which support soil, reduce damp, etc.

Diagnostically and therapeutically the most important aspect of the *wu xing* are the *wu xing xiang hu guan xi*, (‘*wu xing* mutual relations’) of which the most important are the *sheng wu*, and *ke* cycles. The *sheng* (‘give birth to, give rise to, engender, grow, generate’) cycle demonstrates how one *xing* or phase gives rise to the next. This underpins common TCM maxims such as ‘wood burns to make fire’, ‘fire produces ashes’ (earth) or ‘water grows wood’. The *sheng* cycle is normally a healthy cycle but can be used therapeutically as, for instance, when the physician ‘treats the mother’ to support the ‘child’, for instance by needling points on the ‘mother’ channel. For example, for certain lung disorders (particularly those involving dampness), the TCM physician may choose to help ‘metal’ (i.e. lungs) by treating ‘the mother’, that is ‘soil’ either with acupoints or *materia medica*. The *ke* (‘restraining, controlling, subduing’) cycle is described by expressions such as ‘fire melts metal’, ‘metal chops wood’, etc. and is implicated in a wide number of disorders as well as treatment. An example of a common disorder is the condition described as ‘the liver invading the spleen’ where the wood (i.e. the liver) *xing* is overacting to the detriment of soil (i.e. the spleen). An example of a treatment would be the stimulation of fire (the heart) to help restrain metal. The psychological aspect of such treatment can also be seen in this model. Joy (the emotion correlated with fire) helps to counteract excessive sorrow (the emotion correlated with metal). The *wu* (‘bully, counteract’) cycle is a more dangerous one in which the *xing* which should be controlled starts to ‘bully’ the controlling *xing* and it may be implicated in serious pathologies.

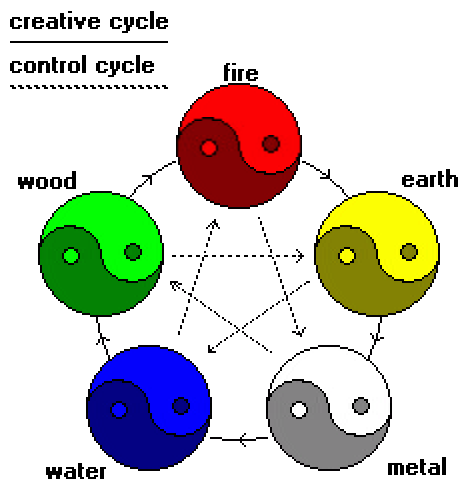


Figure 15 Diagram of the *sheng* (‘generating’) and *ke* (‘restraining’) cycles

(from Reid)

Below are some common examples of clinical expressions for therapeutic measures using the *wu xing* model which are taken from Hsu (1999:210). I have also noted the relevant cycle used to achieve the therapeutic effect:

89. *yi huo bu tu* ('blaze the fire to nourish the soil (earth)'); the *sheng* cycle (nourishing the mother to support the child)
90. *pei tu sheng jin* ('bank up soil to produce metal'); the *sheng* cycle nourishing the mother to support the child)
91. *pei tu zi shui* ('bank up soil to control water'); the *ke* cycle of restraint
92. *zuo jin ping mu* ('assist the metal to level the wood'); the *ke* cycle of restraint
93. *xie nan bu bei* ('purge the south and nourish the north'); this refers to the basic fire (south, *yang*) / water (north, *yin*) polarity – fire is too strong and water must be 'nourished'

TCM 'maxims' such as these function similarly to idiomatic expressions or sayings. They may recommend or justify a course of action and their precise meaning can only be determined in context. Hsu (1999:211) illustrates some possible interpretations of *jin sheng shui* ('metal gives rise to water') as follows:

A doctor may, for instance, use it in explaining why he supplements acu-points on the *taiyin*-Lung-Tract, which corresponds to Metal, to treat a dry throat that ultimately results from a Water-Kidney-Depletion: the Lungs govern the *qi* and 'the Kidneys adopt it' (*shen na qi*). By treating the Lungs he supplements the Kidneys. He may mention this maxim in another context too, for instance, when confronted with a patient with swollen extremities. In this context, the phrase 'Metal gives birth to Water' explains the disturbance in the dynamics of the Fluids and implicitly indicates the appropriate treatment...

N.B. the term taiyin is a reference to another subcategorisation of yin yang as applied to channel theory.

The relationship of each *xing* to the others adds complexity and depth to the model and to the functionality of each *xing*. In the *sheng* ('generating') cycle, wood is on the upward movement of the cycle and engenders fire which may explain why the emotion anger (and the associated sound of shouting) which might be more easily associated with 'heat' are identified with 'wood' rather than 'fire'. Furthermore, while the liver (wood) is the main organ associated with anger in TCM, heat and disruption can move along this *ke* cycle vector negatively affecting the spleen (soil).

4.9.7 Pedagogical suggestions

Most TCM textbooks mention the *wu xing* and show a table of correspondences. However, a full discussion of the *wu xing* is often neglected and many modern textbooks warn against using the *wu xing* as the sole basis for treatment, e.g. in acupoint selection (for an example of this see the Shanghai College of Traditional Medicine 1981:8). This reticence may be based on the archaic nature of some of the correspondences – spiritual and cosmological correspondences were de-emphasised in communist China – and perhaps also on the difficulty of establishing theoretical consistency in practice. However, the *wu xing* are clearly considered important in the ancient texts, are often referred to in maxims such as examples 89-93 above and need to be engaged by the student. The semantic map is a flexible tool which allows the student to develop conceptual associations or what the applied linguist calls a ‘richer’ understanding of the relevant terms. Such maps also enable the student to ‘make sense’ of what might otherwise appear to be obscure passages, for instance, this excerpt from the *Huang di nei jing su wen* (anon. 1956:13 in Hsu 1999:108):

[1] The rules of the origins of heaven

The Yellow Emperor [Huang Di] asked: Heaven has Five Phases, and they couple with the Five Directions, thus giving birth to the Cold, the Hot, the Dry, the Damp, and the Windy. Man has Five Organs, and they change the Five *qi*, thus giving birth to Joy, Anger, Worry, Sorrow and Fear. The ‘Discussion’ says that the Five Cycles mutually ride each other and that they all govern each other and that on the day when one arrives at the end of the year the circle is complete and starts all over again...

The applications of change are the profound in Heaven (*tian*), the Way (*dao*) in Man (*ren*) and change on Earth (*di*). Change gives birth to the Five Flavours, the Way (*dao*) to wisdom and the profound to the Spiritual (*shen*). When the Spiritual is in the Sky, it is Wind, and when it is on Earth, it is Wood; when it is in the Sky, it is Heat, and when it is on Earth it is Fire; when it is in the Sky, it is Dampness and when it is on Earth, it is Soil, when it is in the Sky, it is Dryness, and when it is on Earth, it is Metal; when it is in the Sky it is Coldness and when it is on Earth it is Water. Therefore, when it is in the Sky, it is Breath (*qi*), and when it is on Earth, it takes Form (*xing*). [11] Form (*xing*) and Breath (*qi*) stimulate each other, and through their change give birth to the ten thousand things.

Understanding the correspondences in this passage is facilitated by the brief discussion of the *wu xing* and the semantic networks above. This passage also exhibits the intertwining of the *yin yang* and *wu xing* models. *Yin* and *yang* are represented by the complementary relations between *di* (‘earth’) and *tian* (‘heaven/sky’) or between *xing* (‘form’) and *qi*. For instance, on earth the *wu xing* manifests as ‘wood’, in the sky (heaven) it manifests as ‘wind’. As man comes to understand the processes of change as represented by the *wu xing* he follows the *dao* (‘way’) and is in accord with both heaven and earth.

Pedagogically, understanding the schemas underlying the notion of *qi*, and the categorisations made possible by *yin yang* should help the student make sense of the *wu xing*. Understanding underlying

conceptualisations allows each model to shed light on the others. This is particularly important because TCM 'theory' does not always appear consistent when presented without an understanding of the underlying conceptual frameworks. Due to the enormous diversity of TCM theories and practices over the millennia, different schools may favour one or the other model or interpret categories in somewhat different ways. From the scientific or analytic perspective, this is problematic. Terms are expected to be consistent in reference and theories internally consistent. However, from a linguistic and synthetic viewpoint it becomes clear that underlying conceptualisations motivate the polysemy of key terms and the ways in which these key terms are related in central TCM models. Below, I argue that TCM is characterised by multiple models which have heuristic value rather than by theoretical consistency. Again, I suggest that while this kind of inconsistency appears unacceptable from a scientific perspective, it makes sense from a linguistic viewpoint.

4.10 Multiple models

Some scholars have maintained that the variance in the position of 'soil' (sometimes pictured in the centre of the other four *xing*, sometimes placed in a pentagon along with the other *xing*) is evidence of inconsistency and further that this inconsistency undermines the integrity of TCM theory. In reference to what is sometimes considered the 'uncomfortable fit' of the *yin yang* and *wu xing* theories, Unschuld (1985:58) remarks that "such syncretistic constructs, and various others, were applied only when necessary for a specific argument; they remained possible but not stringent facets of a complex and heterogeneous theoretical system". In practice there does seem to be a marked tendency for TCM 'theories' to work rather as explanatory models which highlight or illustrate observed phenomena (Hsu 1999; Farquahar 1982). Hsu (1999) has suggested that TCM theory is more like a 'doctrine' which is a source of 'maxims for practice' than a consistent theoretical framework which has predictive value. A doctrine is subject to interpretation and is often used to explain already observed phenomena; various components of the doctrine can be applied in different instances and at different times to provide insight. Interesting from a linguistic viewpoint is the fact that in TCM many of what we might call theories are referred to simply as *shuo* ('speak'). Thus, there is *wu xing shuo* and *yin yang shuo*; these 'theories' are simply ways of talking about phenomena.

In fact, TCM models or 'maxims' function much like the schemas and metaphors we use in daily language. For instance, Lakoff has shown that a number of different source-target metaphors are used in our descriptions of anger including ANGER IS INSANITY, ANGER IS A DANGEROUS ANIMAL, ANGER IS AN OPPONENT (Lakoff 1987:390-393). We do not reject any of these metaphors because of theoretical 'conflicts'; in fact, to make sense of anger or any other concept we may unconsciously move from one metaphor or ICM to another. Gentner and Gentner (1996) have described this same phenomenon in

their research on different analogies used to understand electricity, specifically the ‘moving crowd’ and ‘flowing water’ analogies (what they term ‘analogies’ could also be considered as metaphors or ICMs). They have shown that these analogies can help (or hinder) certain aspects of our understanding but are not mutually exclusive or in fundamental cognitive conflict.

If we consider TCM ‘theory’ as a set of interrelated conceptual models, we avoid the two most common problems facing the interpretation of TCM: on the one hand, accepting TCM ‘theory’ as doctrine even when it appears contradictory or obscure and, on the other hand, rejecting it because it does not resemble a theory in the ‘scientific’ sense. We can also understand why apparent discrepancies do not necessitate the kind of theoretic revolution supposed to typify scientific change (as described by Kuhn 1970) but allow for ‘syncretistic’ co-existence and evolution.

4.11 TCM polysemy – some theoretical considerations

In Section 2.7, I looked briefly at the cognitive semantic understanding of metaphor and metonymy and the role they play in motivating polysemy. While this dissertation does not include an in depth exploration of cognitive semantic theory it is worthwhile considering some possibly relevant issues. In this section, I look at the central models and polysemous terms discussed above – *qi*, *yin yang* and *wu xing* and consider what role metaphor and metonymy play in their semantic networks.

Exploring Chinese metaphors from a cognitive semantic viewpoint, Yu (1998:81) suggests that both *yin yang* and *wu xing* are “giant metaphors that constitute ways of categorizing and conceptualising the world for people who accept the theories or metaphors”. His analysis is primarily concerned with the influence of the *yin yang* and *wu xing* models on everyday metaphors for emotions. He concludes that the greater number of specific references to body parts (particularly organs) in Chinese emotional metaphors as compared to their English counterparts can be attributed to correlations from traditional medical theory. Perhaps Yu’s (1998) emphasis on metaphor as opposed to metonymy is influenced by the understanding of metaphor as a relationship between two domains. The relating of body parts to emotions is usually considered a clear-cut example of a metaphorical mapping between a source and target domain. However, on closer scrutiny there seem to be some problems with considering the correlations in the *wu xing* and *yin yang* models as instances of metaphor.

In Section 4.9, I noted that the *wu xing* could be considered as basic level concepts which help function as categorising principles. It might thus seem that a basic level concept such as ‘soil’ can metaphorically represent an entire category or elements within that category. The specific reference would become clear from the context (and would require expertise in that context for its interpretation). The *wu xing* would

then be a typical case of metaphor in which concrete objects (or basic level categories) from a source domain are used to refer metaphorically to targets in less palpable domains such as those of organ function, emotions or 'spirits'. For instance, the term 'soil' may refer to the functions of the 'spleen/stomach' (the 'soil organs'), to a 'pensive' state or to the *yi* ('consciousness, awareness'). In this case, the 'maxim' in Example 90, *pei tu sheng jin* ('bank up soil to produce metal') could be understood as a metaphorical usage in which 'soil' points metaphorically to the spleen (remembering that the spleen is more a functionality than a body part in TCM) while 'metal' points to the lungs.

However, the usage of basic level categories to refer to less palpable domains is not entirely consistent. If a patient presented with a cough and phlegm the most likely interpretation of *pei tu sheng jin* ('bank up soil to produce metal') would be that 'spleen damp' should be 'cleared' to help reduce phlegm and support lung function. However, the same condition could also be described as 'spleen damp harasses the lungs' or merely as 'dampness', and be interpreted to mean that 'soil' points should be treated or that the patient should reduce intake of 'sweet' foods (since sweet is the taste correlated with the soil *xing*). To give another example, if a patient presented with irritability or insomnia, the TCM physician might simply say 'the *shen* isn't housed properly' indicating, by reference to the '*shen*', the 'spirit' correlated with the heart in the fire *xing*. Likely treatments would include using acumoxa points on the heart channel, an herbal formula to 'nourish heart *jin*' and related therapies. In this case, the possible basic level concept, 'fire' is referenced by the 'abstract' notion of *shen*.

Hsu (1999:212) has argued that one cannot talk of metaphor at all in TCM, as "there is no ontological hierarchy" and therefore 'primary' (source domain) and 'secondary' (target domain) meanings. "Wood is as much a thing (*dongxi*) inherent to the body as a thing inherent to a mountain".

TCM diagnosis is generally based on *bian zheng* ('identification of patterns') in which the disease is classified as a pattern or combination of patterns (see Maciocia 1989:175). The pattern can be described by reference to a number of models including the *wu xing*, the *ba gang* ('eight parameters') discussed in Section 4.8.4, channel theory and a number of other models (mostly based on other subdivisions of *yin yang*). From this perspective, the *zheng* ('patterns') function in TCM as ICMs. For instance, there are a number of *zheng* involving 'spleen damp' some of which also involve the lungs. On hearing the 'maxim' *pei tu sheng jin* ('bank up soil to produce metal'), the trained TCM physician will know that it refers to one of the patterns or ICMs involving both the spleen and lungs. Specific terms such as 'metal' are then understood as referring to the relevant aspect of the relevant *xing* in terms of the pattern.

As a category a *xing* does not include arbitrary elements, but is structured in a systematic way. For instance, it consists of elements from a number of domains such as the domains of 'emotion', 'colour',

‘environmental influence’. Because of this systematic structuring, it is possible to relate elements from one *xing* to elements in another. The passage from the *Huang di nei jing su wen* (from Hsu 1999:108) quoted above in Section 4.9.7 which relates the elements from the ‘environmental influences’ or “Sky” to elements in the domain of “Earth” that is, to the *wu xing* as the basic level categories:

When the Spiritual is in the Sky, it is Wind, and when it is on Earth, it is Wood; when it is in the Sky, it is Heat, and when it is on Earth it is Fire; when it is in the Sky, it is Dampness and when it is on Earth, it is Soil, when it is in the Sky, it is Dryness, and when it is on Earth, it is Metal; when it is in the Sky it is Coldness and when it is on Earth it is Water.

When the Spiritual is in the Sky, it is Wind, and when it is on Earth, it is Wood; when it is in the Sky, it is Heat, and when it is on Earth it is Fire; when it is in the Sky, it is Dampness and when it is on Earth, it is Soil, when it is in the Sky, it is Dryness, and when it is on Earth, it is Metal; when it is in the Sky it is Coldness and when it is on Earth it is Water.

One possibility would be to consider the *xing* as ‘domains’. In this case, the ‘soil’ domain would include all of the correlates of ‘soil’ viz. the ‘spleen’ and ‘stomach’, the flavour ‘sweet’, ‘pensiveness’ and so on. This would result in a cross categorisation of phenomena in terms of the *xing* domains (i.e. ‘wood’, ‘fire’, ‘soil’, ‘metal’ and ‘water’) and other domains familiar to both Mandarin and English speakers (i.e. ‘emotions’, ‘colours’ and so on). In the above passage, “Wind” and “Wood” would both belong to a single domain i.e. the ‘wood’ *xing* as well as different domains i.e. “Sky” and “Earth” or what has elsewhere been called ‘environmental influences’ and the five ‘elements’. The notion of intersecting domains would help explain the complex network of semantic relationships in TCM. Additionally, it would explain why many of these semantic relationships appear to be both metaphorical and metonymical.

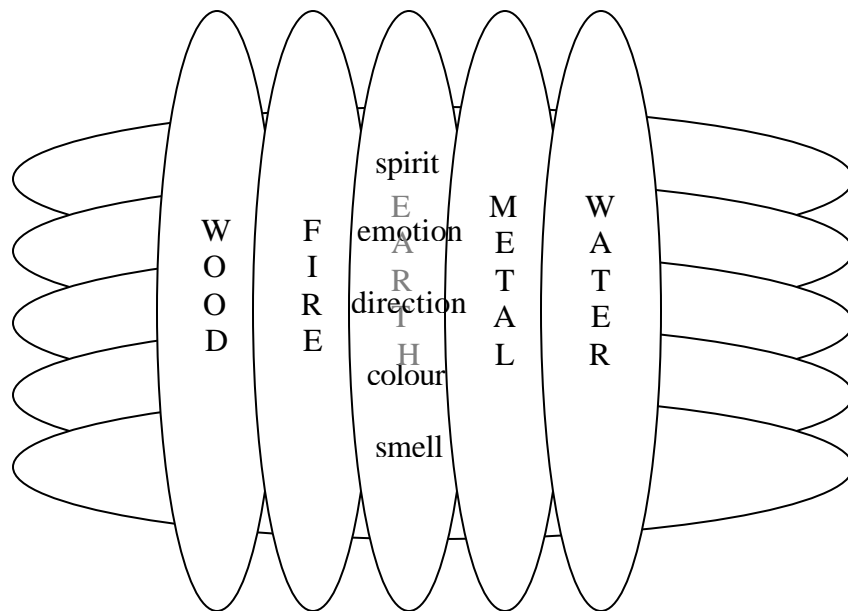


Figure 16 The intersection of ‘domains’ in the *wu xing* model

In his discussion of idiomatic expressions, Kövesces (2001:90) states that “the presumed conceptual organisation related to idioms would consist of a source domain and a target domain on which the idiomatic expressions are conceptually based (in the case of metaphor-based idioms) and a single domain structured by an ICM with a variety of elements (in the case of metonymy-based idioms).” The maxim *pei tu sheng jin* (‘bank up soil to produce metal’) involves both metaphor and metonymy. On the one hand, ‘soil’ can be understood to refer metaphorically to another domains in the soil *xing* (for instance to the domain of ‘organs’). On the other hand, ‘soil’ can be considered a metonymy which could stand for a number of elements in the soil ‘domain’. The exact reference would be determined by the structure of the relevant ICM or disease ‘pattern’.

A further consideration is the fact that TCM models such as *yin yang* and *wu xing* are dynamic models. In this dissertation, I looked briefly at the way in which the CYCLE schema structures the dynamics of the *qi*, *yin yang* and *wu xing* models. For instance, in the *wu xing* model each *xing* transforms or interacts with the others in a number of cycles. In the *sheng* (‘gives rise to, give birth to’) cycle, ‘wood’ transforms into ‘fire’ (and thereby to elements in the ‘fire’ *xing* or domain). For this reason, a reference to an element in one of the *xing* may also reference a corresponding element in another *xing* or its correlations.

This complexity becomes apparent in the following excerpt from an article on various ‘liver fire’ pathologies translated by Flaws (2003).

“Liver fire has a number of different causes. [1] First, the liver qi may be greatly exuberant. In that case, a wind environmental excess may cause fire to blaze. It is also possible for addiction to smoking tobacco and drinking alcohol or eating too many sweet, thick-flavored foods to cause brewing of heat which may transform into fire. Any of these can result in the engenderment of liver fire which, in these cases, is a replete fire. [2] Secondly, if liver depression is not resolved, enduring depression may transform fire. This is also a replete fire. [3] Third, if kidney yin vacuity does not descend, water will not sprinkle or moisten wood. In that case, the dragon loses water’s subduing and yang loses yin’s treasuring. This results in ministerial fire’s floating and rising upward and outward. It is also possible for replete fire to scorch or burn yin, thus also giving rise to floating ministerial fire. [4] Fourth, due to spleen-stomach vacuity weakness, the source of qi and blood engenderment and transformation may become desiccated and thirsty (i.e., dry). Hence, the liver loses the source of its nourishment. [5] Fifth, if metal becomes debilitated, wood may lose that which controls it. Instead, wood may become effulgent.”

[1] Wind is the ‘environmental influence’ correlated with the wood *xing* and the liver is the organ correlated with the wood *xing*. The combination of the liver *qi* and wind excesses leads to general excess in the wood *xing*. In *sheng* (‘give birth to’) cycle of the *wu xing* model, the wood *xing* precedes the fire *xing* so the wood aggravates fire (‘causes fire to blaze’). The relationship of sweet, heavy foods to ‘brewing of

heat' refers to the inability of the spleen (in the soil *xing*) to resolve excess dampness which leads to stagnation and then to heat.

[2] In the cycle of *qi*, it is the nature of the 'wood' *qi* to rise and disperse. If liver *qi* cannot disperse it is considered to be 'depressed'. In this case, the blockage of excess liver *qi* leads again to stagnation and then to heat (or fire).

[3] The 'water' *xing* and the kidneys are in the descending and condensing aspect of the cycle of *qi*. If kidney *yin* (here *yin* refers to the moistening, cooling aspect of the kidneys) is *xu* or 'vacuous' the kidneys cannot perform their descending function properly. In the *wu xing* the 'water' *xing* precedes the 'wood' *xing*. It is the duty of the 'water' *xing* correlated with the kidneys, to 'moisten wood'. However, because the kidney *yin* is *xu*, the *yang* aspect of the *ming men* ('vitality gate' or kidneys), the 'ministerial fire', is no longer treasured or subdued by the *yin* aspect and 'floats up'. The necessary balance between *yin* and *yang* has been lost. (See Section 4.7.4 for a short discussion of the *ming men* and Section 4.8.4 for a discussion of *xu* one of the *ba gang* ('eight parameters'). According to the passage it is also possible that excess fire has 'scorched' *yin* destroying its ability to moisten *yang* and leading to the same pattern of disease.

[4] The 'soil' *xing* and correlated spleen and stomach organs are responsible for taking in nourishment and producing the *gu* ('nutritive' *qi*) which helps to make *qi* and *xue* ('blood'), the *yang* and *yin* bodily substances. If these substances are *xu* ('vacuous'), the body is undernourished and becomes dry. This is particularly due to the lack of *xue* ('blood') the *yin* substance which according to TCM physiology should be 'stored' in the liver. Again lack of *yin* leads to a *yang* imbalance: fire.

[5] The metal *xing* is related to the wood *xing* by the *ke* ('constraint' cycle). Metal, correlated with the lungs and the descending function of *qi*, should constrain wood or the liver. If the metal *xing* is weak, wood may 'burn' out of control.

The article goes on to recommend suitable treatment plans for the various diagnoses such as: 'clear the liver and drain fire'; 'enrich *yin* and downbear fire'; 'clear the liver and extinguish wind'; 'clear the liver and harmonise the stomach'. Under, the treatment plan for 'clear the liver and drain the heart', Dr Du Jun Hui explains (in Flaws 2003): "The heart is categorized as fire and the liver is categorized as wood. Wood engenders fire. Therefore, the heart is the child of the liver. If liver fire ascends and flames, it must harass the heart spirit or shift heat to the heart, thus resulting in heart-liver fire blazing. This is based on the saying, 'The mother's disease reaches the child'."

4.12 The ‘medicine of ‘systematic correspondence’: theoretical approaches

In Section 2.7, I examined Jakobson’s (2002:44) hypothesis that the dichotomy between metaphor and metonymy is of “significance and consequence for all verbal behaviour and for human behaviour in general”. Jakobson notes that this dichotomy was also observed by Frazer with regard to magical practices, which are often not far removed from shamanic medical practices. According to Jakobson (2002:46), Frazer distinguished between “charms based on the law of similarity and those founded on association by contiguity”. The result was ‘sympathetic’, ‘homeopathic’ or ‘imitative’ magic practices at the metaphoric pole and ‘contagious’ magic at the metonymic pole. Again, TCM models appear to produce a network of relations based on both similarity (across domains) and contiguity (within domains).

In his *Medicine in China: A History of Ideas*, Unschuld (1985:5) posits that most medical systems involve one of two possible paradigms of cause-and-effect. The first is the paradigm of cause-and-effect relationships between *corresponding* phenomena, the other, the paradigm of cause-and-effect relationships between *non-corresponding* phenomena.

Medical paradigms of non-correspondence explain disease in terms of the association of unrelated factors. This would include not only demonic medical theories which postulate that disease is an effect of the ill will of unrelated, and malevolent spirits or ghosts but also paradigms such as the germ theory of disease in which ‘malevolent’ germs invade and cause disease (Unschuld 1985:6). While the theory of malevolent *gui* (‘ghosts’) was influential in the history of TCM (see Section 3.2), the systematic medicine of TCM is largely based on correlations or ‘correspondences’.

Concerning the medical paradigm of cause-and-effect relations between *corresponding* phenomena, Unschuld (1985:5) identifies two subparadigms labelling them ‘magic’ and ‘systematic’ correspondence. The first or magical subparadigm includes “a finite number of isolated chains of correspondence” as for instance between a “person and a doll resembling that person” (Unschuld 1985:6) and recalls Frazer’s ‘sympathetic magic’. Here we see a metaphoric mapping where the doll is the target domain (in more than one sense) for the structure of the source domain, the person. The resemblance goes one way (the doll resembles the person), however the cause-effect relation works in reverse (harm or benefit to the doll affects the person). The second or ‘systematic’ subparadigm “is based on a recognition that only a limited number of underlying principles exist and that all tangible and abstract phenomena can be categorised as a manifestation of [these principles]” (Unschuld 1985:6). Rather than individual mappings between objects of similar structure such as the doll and the person, certain pervasive models (e.g. *yin yang* and *wu xing*) are used to categorise a large variety of phenomena, or as the Chinese would say “the ten thousand things”.

This type of systematic medical system appears to be highly metaphorical with many seemingly diverse phenomena related by virtue of structural and qualitative similarities. At the same time, because of the pervasive “underlying principles” which categorise “all tangible and abstract phenomena” (Unschuld 1985:6), a dense semantic web of correspondences based on contiguities within categories, models or ICMs results. It appears that the more pervasive the central principles in a given system and the greater their integration, the more likely that intersecting domains (or what I have called domain matrices) and ICMs will engender a complex network of both metaphorical and metonymical relations. This conclusion deserves more investigation as it may have relevance for the understanding of traditional medical and knowledge systems more generally.

In their discussion of the semantic cohesion of Bantu ontological classifiers, Palmer and Woodman (2000: 228) discuss Lakoff's assertion that “chaining is based on metaphorical and metonymical links to culturally defined domains of experience”. However, they challenge his hypothesis that a noun class can be considered as a “radial category centering on a prototypical member of a single domain of experience” (Palmer and Woodman 2000:229). They propose that the Bantu noun class is better described as a “network of radial categories based on a cross-section of the cosmos”. They also conclude that “components of the central models and scenarios can themselves serve as sources of abstraction, metonymy and metaphor. Thus, the semantic network of a classifier system can provide prototypes that are either abstract or richly specified” (Palmer and Woodman 2000:229). They also conclude that “central models within a class are linked to one another by metonymy” (Palmer and Woodman 2000:230). While there are clearly some important differences between the systematic classifications of TCM and naturally evolving noun class systems, both presumably originated with traditional world views on man's position and function within the cosmos.

Some scholars have suggested that scenarios, particularly ritual scenarios, play an important role in determining the membership of polycentric nominal classes (Palmer and Woodman 2000). However, many of the elements in ritual scenarios are themselves based on ‘analogical modeling’ (see Hartzell 1997) in which earthly objects and processes stand for cosmic materials or processes. In other words, it is possible that the meaning of the ritual scenario is itself based on some cognitive process such as metaphor or metonymy.

Discussions of nominal classes have also focused on the prevalence of schemas. In some cases, the schemas proposed structure a particular class, in other cases a schema is purported to structure the class system itself (Hendrikse 1997). The discussion in this dissertation appears to show that the ‘systematic’ of TCM is structured to a large degree by recurring schemas. More precisely the schemas involved in a central model, such as *yin yang* structure the other models and patterns of categorisation.

In Section 4.7, I looked at the schemas that structure the concept of *qi*. The discussion of *qi* and the dynamic cycle which structures its conceptualisation led into a discussion of the *tai ji* or *yin yang* cycle. This is typical of the TCM system. The same principles structured by the same schemas are used to make sense of a range of diverse phenomena. In TCM, schemas are directly presented and used in description, diagnosis and prescription.

Of particular interest is the fact that many of the schemas identified by Johnson (1987) (see Section 2.6) are directly referred to in TCM descriptions of physiology rather than embedded in metaphorical usages. An example is the TCM description of anger as 'rising *qi*', which appears to make use the same schemas that are embedded in the English metaphor for anger ('heated fluid in a container') but which are not generally considered a precise description of the physiology of anger by English speakers. 0 shows some common schemas which structure TCM concepts and models that are used descriptively in TCM discussions of physiology and disease.

(IMAGE) SCHEMAS	
BALANCE	The <i>tai ji</i> illustrates the balance of <i>yin yang</i> , the <i>wu xing</i> elaborates the relationships of balance. Balance also relates to the <i>zheng</i> upright and UP-DOWN schema and SOURCE-PATH-GOAL schema (Krzeszowski 1993:319)
CYCLE	The <i>tai ji</i> process of <i>yin</i> to <i>yang</i> and <i>yang</i> to <i>yin</i> is a never-ending cycle; there are a number of cycles described by the <i>wu xing</i> interrelations. The <i>jing</i> ('channels') also map a daily cycle of <i>qi</i> and blood flow.
PART/WHOLE	The <i>tai ji</i> is the whole, <i>yin</i> and <i>yang</i> the parts
FULL/EMPTY	In the <i>ba gang</i> ('eight parameters') <i>shi</i> ('full') is <i>yang</i> while <i>xu</i> ('empty') is <i>yin</i> . In diagnosis, any symptom or pattern of disease may be characterised as <i>xu</i> or <i>shi</i> .
COUNTERFORCE	<i>Yin</i> and <i>yang</i> as well as the <i>wu xing</i> are also systems which include checks and balances
LINK	The system of <i>jing</i> ('channels') is linked in a number of ways including by the flow of <i>qi</i> and their interrelationships described by <i>yin yang</i> and <i>wu xing</i> . The LINK schema is closely related to the PART-WHOLE schema (Krzeszowski 1993: 313)
NEAR/FAR CENTRE/PERIPHERY	A key component of point selection is the 'root and branch' relationship of distant points to treat 'organ' disorders. There are numerous relations between the inner organs and the outer features such as between the lungs and nose or heart and tongue.
RESTRAINT REMOVAL	One of the key treatment approaches is to 'remove' <i>bi</i> ('blockages') (<i>yin</i>) by stimulating (<i>yang</i> action) the flow of <i>qi</i> (<i>yang</i>)
PROCESS	TCM physiology is entirely understood in terms of the process <i>yin yang</i> , <i>wu xing</i> the various activities of the <i>zang fu</i> 'organs' and flow through the <i>jing</i> 'channels'.
UP/DOWN	Up is <i>yang</i> , down is <i>yin</i> and the <i>zang fu</i> ('organs') and <i>jing</i> ('channels') send the <i>qi</i> and other substances up or down. For instance, the lungs should send the <i>qi</i> down. Most herbs and points are characterised by their tendency to send <i>qi</i> up, down, in or out.
EXTERNAL/INTERNAL	The <i>wei qi</i> ('external' <i>qi</i>) protects the body by patrolling the exterior, the <i>nei qi</i> ('internal' <i>qi</i>) circulates internally, many external features are linked to internal features for example the nose and skin are external aspects of the internal lungs
IN/OUT; DISPERSE/CONSOLIDATE	Many points and herbs are characterised by their ability to disperse or consolidate <i>qi</i> , blood and other substances.
CONTAINER	The entire EXTERNAL / INTERNAL schema relies on the view of the body as a container. Additionally, the <i>jing</i> 'channels' contain the <i>qi</i> (and possibly blood), the <i>fu</i> are 'storage' organs, etc. This schema is also related to the IN / OUT schema (Krzeszowski 1993: 316)
EMPTY / FULL	This schema is found in the <i>xu</i> ('empty') / <i>shi</i> ('full') parameter of the 'eight parameters'. The relative strengths of <i>qi</i> , <i>yin yang</i> are often understood in terms of <i>xu</i> and <i>shi</i> .
INCREASE / DECREASE	A good deal of TCM therapy is directed at <i>bu</i> ('supplementing') what is <i>xu</i> ('empty') or <i>xie</i> ('draining') what is <i>shi</i> ('full'). <i>Qi</i> or 'blood' and other substances in the channels can also be <i>xu</i> or <i>shi</i> .
UPRIGHT (ORTHODOX) / EVIL (HETERODOX)	This is an extremely important schema in TCM where <i>zheng</i> ('upright') also means 'correct/good'; the pictogram for <i>chi</i> ('sickness') shows a bed – someone lying prone. Most negative influences in illness are characterised as <i>xie</i> (evil/heterodox).
SOURCE-PATH-GOAL	The <i>jing</i> 'channels' are paths, treatment is directed at moving <i>qi</i> (or other substances) along the <i>jing</i> .

Table 6 Schemas used in TCM models

4.13 The convergence of epistemology and ontology

A further point is that this dense network of relations is considered not only epistemologically useful but also ontologically valid. Again, this convergence of epistemology and ontology is not restricted to TCM but appears to be a characteristic of traditional medical and holistic, synthetic knowledge systems more generally. While a closer analysis is beyond the scope of this dissertation, it is worth noting briefly the similarities between the Chinese and Indian traditions. Schipper (1993) has reported that rituals performed by Daoist adepts are intended to both mirror and facilitate cosmic processes. Hartzell (1997) has noted a high degree of 'analogical modelling' in the ancient Vedic tradition: Cosmological processes (dynamic cycles or 'scripts') are re-enacted on earth. Each of the various elements in such rituals stands for and acts as its cosmic counterpart. For instance, *agni* (the 'body fire') stands for the sun, the 'breath' for wind and so on. Again, the dual relationship of similarity across domains (often the heavenly and earthly domains) and contiguity within domains is evident.

It has been noted that in TCM training, a physician must refine his capacity for sensory perception (seeing, touching, hearing, smelling, tasting). The physician's perception and experience is the tool he uses to detect the condition of the patient. The state of the internal organs and the general condition of the patient is revealed in the *se* ('colour, hue') of the face (and the tongue fur), in the tone of the patient's voice, in the patient's odour, through palpation and pulse, through examination of the skin texture and of course, through the descriptions of subjective experience provided by the patient himself. The interpretation of this sensorimotor information enables a diagnosis of the patient's internal state. In TCM, the external sensorimotor signs tell the physician what is happening in the interior, invisible areas of the body, for instance with the *zangfu* ('officials, organs'), emotions or *qi*. External manifestations, usually referred to as 'signs and symptoms' are considered to faithfully reveal internal states. The exterior sensorimotor manifestations are not only epistemologically, but also ontologically linked to the interior states. The eyes are an external aspect of the liver, the *se* ('colour, hue') is manifestation of the *qi*.

4.14 Conclusion: TCM and the cognitive semantic approach

TCM physiological descriptions tend to support cognitive semantic research on the schemas underpinning common metaphors in which the body is the source domain. This supports the basic premise of the cognitive semantic approach that "there is no aspect of our understanding that is independent of the nature of the human organism" (Johnson 1987:209). If the anger example is not unique, it suggests that TCM and other traditional medical systems have much to offer the cognitive linguist interested in the relation between conceptualisations of the body and the understanding of other domains of experience. Instead of a number of possibly unrelated metaphors using the body as a source

domain, the traditional medical system offers a complex, systematic and holistic view of the body using a number of interrelated schemas which appear to structure the understanding of the emotional and other 'more abstract' domains. Moreover, the traditional medical system claims that the mapping between these domains is real not merely hypothetical, an interesting claim from the viewpoint of the scientifically oriented student.

I have gone into some detail in the theoretical discussion of the nature of TCM polysemy because TCM appears to be very rich in data of interest to the cognitive linguist. This remains an initial exploration which aims to show that the topic deserves further attention and discussion. It seems clear that many of the basic schemas identified by cognitive semanticists are used in TCM conceptualisations of physiology and provide a high level of conceptual coherence to the system. It also appears that cognitive processes such as metaphor and metonymy are important factors in the categorisation systems used in TCM. The analyses in this chapter suggest that the categorisation systems of TCM produce highly interrelated networks of correlations or correspondences. These categorisation systems tend to be synthetic in contrast to the highly analytic categorisations of biomedicine. The categorisation systems in TCM are also distinguished from biomedicine because the categories are related according to a dynamic model of transformation. This makes TCM a truly holistic system in which each aspect is related (through the models of transformation) to the others. What is *yin* becomes *yang*, 'fire' may become 'soil' and so on. As a result, TCM categories are far removed from the static sets of 'objects' defined by binary features in the classical linguistic view of a category. The very phenomenon of polarity or opposition is structured according to the *yin yang* model of cyclical transformation.

The dense network of semantic relations in TCM helps to explain the high levels of polysemy in this traditional medical system. TCM terms do not refer to discrete 'objects' in the classical linguistic sense but rather objects or aspects of processes related (1) to the other objects or processes belonging to the same TCM category and (2) to the objects or processes in the other TCM categories related in the models of transformation. The semantic complexity of this synthetic, holistic and dynamic system is entirely different from the semantic complexity of biomedicine. The TCM system results in a proliferation of semantic relations referring to non-discrete subjectively identified objects and processes while the ongoing analysis of biomedical research results in a proliferation of terms referring to discrete objectively identified objects or processes. Moreover, a TCM 'object', such as a TCM 'organ', tends to be a functional entity which plays a role in various processes, whereas a biomedical 'process' tends to be a descriptive script interrelating a number of objectively observable and clearly definable 'objects'.

While the details of this more theoretical cognitive semantic analysis might not be directly relevant to the TCM student, it could be helpful for the educator to understand the way in which underlying schemas

and semantic processes produce dense semantic networks. In Sections 4.2 and 4.3, I argued that the holistic and synthetic epistemology of TCM affects the nature of the terminology used in the system. The analyses of *qi yin yang* and *wu xing* appear to support this contention. If the TCM student is not aware of the epistemological and terminological differences between TCM and biomedicine, he is likely to measure the one against the standards and expectations of the other. An unfortunate outcome might be the (not uncommon) conclusion that this traditional medical system is vague and lacking in precise reference. A biomedical diagnosis or description lacking specific reference to observable and objectively definable phenomena is unacceptable. By contrast, in TCM it is 'subjective' skill, the TCM physician's ability to perceive and interpret his perceptions and those of the patient, which results in a good diagnosis or description.

Eleanor Rosch (1997) has suggested we look at a new model of cognitive science in which the supposed "separated and needy information processor is transformed into the integrated knower". Certainly, the goal of the TCM physician is precisely to become an 'integrated knower' who can perceive, experience and interact with the patient. As discussed in the Section 2.1, the cognitive linguistic view suggests that human conceptualisations are both motivated and constrained by our experiential-perceptual and cognitive nature as human beings: It is the nature of the knower which allows for knowing in the first place; for human beings, knowledge of the world cannot be separated from their ontology. The idealised 'objective' view of the 'Olympian observer' makes no sense – knowledge is structured by and based in subjective experience. This view appears to have much in common with the TCM view that the same principles govern the 'observer' and the 'observed'; we are able to 'make sense' of the world precisely because we are part of it and function according to the same principles. Like other traditional medical and knowledge systems, TCM appears to originate from a world view in which epistemology and ontology are inextricably linked. In fact, in these traditional systems the symmetry extends further: man can influence the cosmic patterns because he exemplifies and participates in them.

Chapter 5: SUMMARY, CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

In this final chapter I review the dissertation findings and conclusions as well as the limitations of the current research. I give particular attention to the pedagogical implications of this research for new approaches to understanding TCM and traditional medical systems more generally. I also outline some possible directions for further research using the cognitive semantic approach to traditional medical systems.

5.1 Summary of findings

In Chapter 1 I outlined the research problem of this dissertation as ‘how to make sense of a different knowledge system’ – more specifically how to make sense of TCM, a systematised traditional medical system. I suggested that this could be considered as an applied linguistic problem. Applied linguists are aware that successful learning of an additional language (AL) requires an understanding of that language’s cultural context, while knowledge of a ‘language for specific purposes’ (LSP) requires insight into the particular discourse types, central models or theories and specialised terminology of the discipline. I noted that TCM could be considered as both an AL, because it is expressed in classical and modern Mandarin, and as an LSP, because it is a medical language. I recommended that TCM be considered an ‘additional medical language’ with the term ‘language’ also indicating that TCM is a system of thought, a way of understanding and talking about the world. I concluded that the primary focus for the English medium TCM student was not to become fluent in Mandarin but rather to ‘make sense’ of TCM as language in this sense: as a way of thinking and talking about the world, man, physiology and disease.

Because the pedagogical goal was to ‘make sense’ of TCM, I recommended a cognitive linguistic, and more specifically, a cognitive semantic approach. The cognitive semantic approach provides a number of tools to understand how and why language ‘makes sense’. In particular, it is concerned with the cognitive structures which motivate linguistic usages. A particularly important issue in regard to TCM is its complex polysemy. A single term may be used in a wide variety of contexts and indicate a wide variety of objects or processes. This is often confusing to the modern English-speaking student familiar with scientific or biomedical terms, which generally refer to objectively observable and well-defined objects or processes. I concluded that the cognitive semantic emphasis on language as a complex system of meaning, in which linguistic forms are meaningful by virtue of underlying conceptual coherence, was particularly appropriate to the complex holistic TCM system

The cognitive semantic approach emphasises the importance not only of linguistic but also of cultural context in the construction of meaning. TCM has a long and rich history and many of the key terms and models used by practitioners today were developed thousands of years ago. In Chapter 3, I looked briefly at the world view and cultural context of TCM from its shamanic roots through to the modern period. Despite the many diverse philosophical, religious, intellectual, social and political influences, I concluded that TCM has maintained its holistic outlook. I also traced the historical development of some central TCM concepts and terms which demonstrate the high degree of conceptual coherence in the system. The historical review both illustrated the pedagogical importance of background knowledge for the western oriented English-speaking student of TCM and provided the background needed for the discussion in Chapter 4.

Chapter 4 took on the challenge of analysing TCM models and terminology using the cognitive semantic approach introduced in Chapter 2. I began with an analysis of *qi*, a concept encountered in Chapter 3 where it was related to a number of other historically important concepts, in particular, *gui* ('ghost, spirit') and *feng* ('wind, climactic influence'). I argued that this largely diachronic conceptual polysemy is matched by the high levels of synchronic lexical polysemy of the term *qi* in both ancient and modern TCM theory. I suggested that the complex polysemy of *qi* is underpinned by the FORCE and related schemas. The discussion of the FORCE schema underpinning the TCM conceptualisation of *qi* showed that a schema familiar to English speakers can also structure a concept which has no English equivalent. However, I also noted differences between the western and TCM FORCE schemas. The FORCE schema which underpins the conceptualisation of *qi* appears to be structured by a dynamic CYCLE schema. This dynamic CYCLE schema, rooted in the Chinese cosmology discussed at the beginning of Chapter 4, underpins what is arguably the most important TCM model, *yin yang*. The discussion was intended to illustrate the enormous importance of schemas in structuring a conceptual system and their pedagogical value. I suggest that an explicit discussion of prevalent TCM schemas as well as specific differences with western counterparts can help students clarify the conceptual structure of the 'additional medical language'.

In my discussion of *yin yang* as a meta-categorisation system, I emphasised the fact that the *yin* and *yang* categories function across-domains. While emphasising that *yin yang* is a uniquely Chinese notion, I gave many examples of English usages which reflect the same kind of inter-domain associations, for instance associations between parameters from the different domains of temperature, emotion and colour. The discussion of cross-domain associations led to a discussion of the *wu xing* model. I suggested that 'correspondences' within the various *xing* ('elements, phases') could be considered as semantic networks and offered a possible diagrammatic interpretation of a semantic network for each of the *xing*. I discussed how the various *xing* are interrelated through a number of cyclical schemas. The semantic links within and between the various *xing* result in a dense semantic network. I looked at metaphor and metonymy as cognitive processes contributing to this semantic network, concluding that because the categories of TCM intersect with a variety of domains, the same terms may be related both metaphorically and metonymically. However, I suggested that the complex categorisation system in TCM means that any term can 'stand for' a very large number of processes or functions, making metonymy a key factor in TCM semantic networks.

Chapter 4 not only presented an application of the cognitive semantic approach to TCM, but also offered some insight into the pedagogical value of this application. I suggested that an approach which emphasises meaning as motivated is likely to help students make sense of the underlying conceptual

structure as well as the new lexical content of the 'target' language. The analysis suggested that the apparently archaic and 'foreign' conceptualisations, metaphors and metonymies of TCM are based on schemas, categorisations and semantic links that can be understood by the English speaker. Kövecses (2001) has proposed that the cognitive semantic approach not only helps students to acquire difficult usages in the target language, it also helps them develop learning strategies which can be applied to new material. It appears that once the student realises that (1) meaning is motivated and (2) it is possible to make sense of these motivations even where specific conceptualisations differ from those of the first language, he is better able to decode the underlying conceptualisations. If this finding holds true for the cognitive semantic approach to TCM suggested in this dissertation, it suggests that a simple introduction to basic TCM concepts and terms using a cognitive semantic approach could make a difference to learning outcomes. A fairly brief introduction as outlined in Chapter 4 might enable English-speaking TCM students to continue to 'make sense' of the larger body of TCM theory, terminology and texts that would be included in a full degree course. The structured introduction, from the concept of *qi* to the FORCE and related dynamic CYCLE schema to the *yin yang* and *wu xing* models, should also help to demonstrate the holistic and integrated nature of the TCM system.

Chapter 4 also included a number of pedagogical materials which could be integrated into an introductory course on TCM. These include the identification and diagrammatic representations of schemas postulated to underpin the *qi*, *yin yang* and *wu xing* cycles, the various examples of English expressions which should help students relate the unfamiliar categorisations of TCM to familiar knowledge in English, the diagrams of semantic networks for the *wu xing* and the analysis of some TCM 'maxims' and short texts. A full introduction to TCM using a cognitive semantic approach would require an expansion of these kinds of materials. Ideally, students would be able to 'discover' much of this material themselves by applying the approaches outlined in this dissertation.

As noted in Chapter 2, the cognitive semantic approach posits that "there is no aspect of our understanding that is independent of the nature of the human organism" (Johnson, 1987:209). In other words, 'what is' (ontology) is not independent of 'how we know' (epistemology) or *vice versa*. This dissertation indicates that the cognitive semantic approach is well suited to an understanding of the TCM conceptualisation of our interlinked physiology and psychology. By exploring the differences between TCM epistemologies and terminologies, the cognitive semantic approach also helps the educator and student avoid the common mistake of attempting to understand the TCM system using inappropriate assumptions borrowed from the biomedical model. Instead, this approach recommends understanding the system as a complex and integrated conceptual whole. Unschuld (no date) has noted that "there is no choice but to prepare a most etymologically faithful rendering [...] if one is to recreate, in the target

language, as many images of the source language as possible”. The cognitive semantic approach goes beyond etymology in terms of historical derivations to include conceptual origins, evolutions and associations.

While this dissertation represents an initial exploration of a complex topic, I believe it has demonstrated that a cognitive semantic approach to TCM as an ‘additional medical language’ has considerable potential both from a theoretical and from a pedagogical perspective.

5.2 Some pedagogical conclusions

TCM will certainly be a ‘foreign language’ for most students in a South African or any western-oriented educational institution, particularly for those students in the scientific or biomedical disciplines. Despite the growing interest in the social, economic, legal, ethical and political aspects of medicine and medical delivery systems, biomedicine is largely associated with scientific approaches and research. This predominantly scientific orientation has had consequences for the type of knowledge and the transmission practices associated with medical studies. Scientific research requires consistent and generally acceptable theoretical premises, controlled conditions, clear definition of relevant variables and standardised terminology. Scientists contribute to a growing and shared body of knowledge which is continuously updated. Scientific results must be verifiable and replicable and are subject to peer review. The practical components of biomedical education also take place under highly regulated and technologically advanced environments. The institutionalised educational model with its standardised and continuously upgraded curricula, entry and exit requirements and criteria for professional acceptance is generally well suited to transmission of biomedicine.

As discussed in Section 3.6, TCM was traditionally passed on in families, small schools or directly from the master to a chosen student. Wiseman (1995) has noted that:

Chinese diagnosis requires the identification of subtle variations and assessment of their significance in relation to each other. This is usually done by an act of synthesis, rather than analytical reasoning [...] This is holistic observation, observing all the parts in relationship to the whole. Although this ability cannot be transmitted from teacher to student in the form of information, it can be achieved through careful observation and practice.

In place of theoretical consistency, TCM relies on a number of key models which facilitate understanding and explanation – again, as deemed appropriate by the individual physician or school, perhaps with reference to their particular interpretations of classical texts.

5.2.1 The additive bilingual approach

It appears that, at least to some extent, biomedicine and TCM develop different skills and require different modes of transmission. In this dissertation, I aimed to develop an approach to TCM which could be adapted to an institutional environment such as a biomedical school with respect for the differences discussed above. These differences are easily obscured, particularly when TCM education is standardised and institutionalised and particularly when it is taught in the biomedical context. The influence of biomedicine on both the curricula and the viewpoint of educators and students may be considerable. In such cases, traditional disease patterns and therapies are often described using biomedical categories and terminology while traditional formulas are often explained in terms of biomedical constituents and effects. Traditional physiology, models and terminology may be introduced but often will not receive the level of attention, status and explanation accorded their biomedical counterparts. Under these constraints, the characteristic qualities and integrity of traditional medical transmission are challenged. This can be considered a situation of 'subtractive bilingualism', in which one language and culture, in this case the biomedical language and culture, is more 'powerful' and dominates the other.

By contrast, the 'additive bilingual' approach recommended in this dissertation would entail analysis, comparison and contrast between both 'medical languages' that students are acquiring with the aim of maintaining the integrity of both. Note that it is not essential that both medical languages serve *identical* functions, but rather that they both be fully functional and developed to their greatest potential. Ideally, the student will become 'bilingual' – familiar with the discourses and practices of both the biomedical and TCM disciplines.

From an educational perspective, this may require different approaches in both the practical and theoretical components. On the practical side, the TCM student will require personal contact with TCM practitioners who demonstrate the understanding of TCM models and the observational skills essential to TCM diagnosis. On the theoretical side, the TCM student will require sufficient background on historical and cultural context of TCM, an understanding of epistemological and terminological issues and exposure to a wide range of discourses and texts in both the classroom and the clinic.

Advocates of 'additive bilingualism' such as Bialystok have noted that bilingual students have better 'metalinguistic abilities' (Gass 1988). This includes both (1) the ability to discriminate between concepts and linguistic terms and (2) the ability to discriminate between syntactic (formal) and semantic (content-related) aspects of language. If the analogy holds, the 'bilingual' medical practitioner may be better able to move between medical models. This should enable what is termed an 'integrative' medical approach in

which the student, appreciating the differences between the two 'medical languages' is able to use each appropriately in terms of integrated diagnoses and treatment plans. On a practical level, students could undertake case studies using diagnoses and treatments from either or both the traditional and biomedical systems and report back to the class building a new database of information on integrative medicine. This approach could well lead to new research questions and treatment designs. Finally, an additive bilingual approach would allow new research areas to be defined and investigated, taking into account the different approaches and expected outcomes defined by each medical system. Just one example would be new research protocols for clinical trials which take into account the complex and holistic diagnoses, treatments and expected outcomes of traditional medical systems.

Many western medical schools are adopting a modular 'problem-based' approach in which specific diseases are examined in depth and contextualised (1) through study of the relevant theory such as anatomy, physiology and biochemistry and (2) through relevant exposure to real situations in a clinical setting. This format makes it possible to introduce alternative and comparative approaches from TCM or other traditional systems both in terms of diagnosis and interpretation and in terms of treatment. The problem-based approach also involves a 'hands-on' orientation in which the medical student seamlessly becomes a medical practitioner under the guidance of experts in his field. If TCM studies were integrated into this problem-based approach it would accommodate Wiseman's (1995) caution that TCM is better transmitted "through careful observation and practice" rather than in the "form of information".

5.2.2 Applying cognitive semantics to the acquisition of complex terms

TCM and biomedicine share a similar objective, that is, health and the reduction of disease, and each system will have effects that are measurable by the other. However, I believe this dissertation has shown that each must be understood on its own terms. An approach which attempts a word for word 'translation' between systems, assuming that terms in one system refer to the same 'objects' or 'processes' as terms in the other, will lead to considerable misunderstandings. The cognitive semantic approach recommended in this dissertation emphasises an understanding of cultural background, underlying models, schemas and semantic relations. Coady (1993:21), discussing the second language learner, has noted that schemata, which he describes (following Rumelhart and Ortony) as "interacting knowledge structures", are essential to "the psychological processes involved in comprehension".

Encouraging a thorough understanding of contextual factors in interpreting the additional language, helps avoid the common problem of 'translating' in a piecemeal fashion from one language (or medical system) to another. Applied linguists are particularly familiar with the complexity of learning new vocabulary. Consider the following description of the 'ideational function' in Hallidayan functional grammar.

“The ideational function serves to represent the categories of our interpretation of experience. From this viewpoint, vocabulary learning and teaching has to do with learners categorising the world around them, understanding the ways words are grouped together in sets or semantic fields, learning to name objects and experience, describing actions, participants, learning the vocabulary of a specific subject area, and so on.

Pedagogically, this kind of learning has to come first, because it helps learners to identify the meaning of words belonging to particular frames of reference, and constitutes the basis for developing learners’ individual lexical networks.” (Geslin 1992:43)

The student of TCM will need to understand traditional medical language in the ‘frames of reference’ and ‘lexical networks’ where it occurs. In Section 4.9, I analysed the five *xing* (‘phases’), using simple diagrams of semantic relations. Similar diagrams can be developed by students for key terms, allowing them to slowly build semantic networks for new TCM terms and inculcating the habit of contextualising new information. As these semantic networks are developed, they also enrich the student’s understanding of central models. While a full discussion of metaphor and metonymy may be beyond the interests or needs of most TCM students, I believe understanding the important cognitive principles of association and similarity (as outlined by Jakobson 2002) can be very useful. In Section 4.7, I also analysed the schemas which underpin the concept of *qi*. The advantage of this approach is that it not only gives insight into the concept but also helps explain why it is so ubiquitous and polysemous - a fact which may easily confuse the western (medical) student accustomed to terminology which is highly specific and more narrowly defined.

The highly polysemous nature of TCM terminology also means that key terms are used in a large variety of collocations which the student should be able to interpret correctly. Once underlying models and semantic networks have been explored, such collocations should be easier to acquire. Learning a new vocabulary is not simply about learning a new list of words but about coming to understand the networks of meaning which link these words. A grasp of this network is what gives the student insight into the discourse of the target language and culture. Coady (1993:11) concludes that:

An important part of teaching an academic subject is teaching the vocabulary related to it, and, conversely, teaching vocabulary means teaching concepts, new knowledge. Knowledge of vocabulary therefore entails knowledge of the schemata in which the concept participates, and knowledge of the networks in which that word participates, as well as any associated words and concepts.

The approach and materials outlined in Chapter 4 would familiarise the student with the relevant schemas and networks as well as both lexical and conceptual associations. At the same time, they would familiarise the student with key Mandarin terms. Coady (1997:287) has recommended “multiple exposures” to new vocabulary and insisted that they must involve “meaningful cognitive processing” (Coady 1997:12). This

is also achieved by the cognitive semantic approach outlined in Chapter 4, particularly the way in which each model has been related to the others.

In Chapter 4, I explored the complex semantic networks which characterise the medicine of 'systematic correspondence'. The data suggests that TCM models structure the conceptual and linguistic categories of TCM and this information can be made available to the student. Explanations of structures or patterns in the target language are generally judged to be of considerable benefit to the language learner (Coady 1997; Kövecses 2001). Many applied linguists (see, for example, Anderson 2002) are in favour of meta-cognitive strategies which both help the student learn and help his 'learn how to learn'.

Understanding the structure of TCM models also goes some way towards addressing the problematic relationship between theory and practice noted by some TCM scholars and the criticism that TCM 'theory' is not really theory at all. For instance, Hsu's (1999) claim that TCM 'theory' acts simply as a set of 'maxims for practice'. The cognitive semantic approach would suggest that such 'maxims' are not merely linguistic conveniences but incorporate or reference the relevant conceptualisations and ICMs which the doctor uses to make sense of practice and thus do constitute a theoretical or conceptual foundation of considerable importance.

Taylor (1993:201) remarks that the purpose of a 'pedagogical grammar' is "to promote insight into, and thereby to facilitate the acquisition of, the foreign language". In his view, a pedagogical grammar will "focus of necessity on learning problems, i.e. in the main on what is 'idiosyncratic' in a language" (Taylor 1993:202). In a sense, what I have proposed in this dissertation is the development of a cognitive semantic pedagogical grammar of TCM – remembering that in cognitive semantic terms grammar is always 'meaningful', not arbitrary. Taylor (1993:216) also posits that those elements of a new language which exhibit "cognitive naturalness" may be easier to acquire. 'Cognitive naturalness' is proposed to stem from 'universal' aspects of concept formation and the environment. In this dissertation, I have indicated that TCM terminology has a great deal more in common with everyday language, specifically everyday English, than might be expected. The culture and cosmology of the ancient Chinese was far removed from our modern cultural and scientific beliefs, and therefore most TCM terms have no biomedical or English equivalents. However, the language of TCM makes use of schemas and even basic level concepts that are accessible to most people. Scaffolding, or building an ever more complex picture of a new domain of knowledge, is facilitated by starting with what we already know, with familiar conceptual associations and structural relations and then building connections to the unfamiliar. I make use of this principle in Chapter 4 by giving examples of English usages which relate temperature, colour and emotion, revealing striking similarities to the *yin yang* cross-domain categorisations of the Chinese. Considerably more research would be needed to establish the extent to which the underlying

conceptualisations of TCM are common or 'universal', but I hope that I have shown this research is worthwhile and may have pedagogical benefits.

5.2.3 Making current English literature on TCM more accessible

The approach and materials described in this work should also help the student access the available English literature on TCM. Despite some very insightful discussion of terminology by translators (unfortunately usually limited to introductions and commentaries) there is insufficient attention to conceptual and linguistic issues in many English textbooks on TCM. The bias in favour of 'scientific' or even biomedically styled presentations of TCM in English language textbooks and the lack of or under-utilisation of well-glossed translations of original and historic Chinese texts results in a dearth of appropriate 'inputs'. Furthermore, scaffolding or 'n+1' materials design, in which the learner is continuously challenged by linguistic or conceptual materials just above his competence level, is not usually considered in material design. This type of scaffolding could be very helpful in terms of gradually exposing students to usages in the original Mandarin and building a basic but well understood vocabulary.

Fortunately, the situation is steadily improving in terms of resources, stimulated both by the increasing number of TCM practitioners in the west, and the increasingly open policies in China in the last decade. Cross-cultural exchange has also brought new vitality to a number of related disciplines. There are some excellent texts which could be used by TCM schools and students written by sinologists, linguists, medical historians and anthropologists, including dictionaries of medical terminology, ethnographies and even primers in Chinese medical language for English speaking students. Some of these books contain glosses and explanations which encourage students to develop their own understanding of key concepts and terminology rather than relying on the varied and sometimes inaccurate renderings in translations and secondary texts. However, these resources are still under utilised by many TCM schools. Encouraging students to make better use of such resources should be a consideration in curriculum development.

Depending on the level (undergraduate, postgraduate) and length of a specific TCM programme, a variety of cross-disciplinary approaches from language studies, anthropology, philosophy and history could be integrated with the 'medical' components, using the conceptual approaches outlined in this dissertation. This would encourage teachers and students alike to make better use of available resources. Some applied linguists recommend the use of an 'advance organiser' (Ausubel 1963) for language learners, particularly those who are learning languages where there are significant cultural and linguistic differences. The advance organiser gives the student 'superordinate' historical, cultural or discipline-specific background information which helps contextualise 'subordinate' linguistic usages. For postgraduate students, the advance organiser could be augmented or replaced by a wide selection of readings, research projects,

discussions and seminars. It is important to recognise that most medical students will prefer an applied as contrasted to a primarily theoretical orientation.

Another practical consideration in relation to transmission is that many English speaking TCM teachers have little or no knowledge of Chinese and lack sufficient understanding of important conceptual and terminological issues. Conversely, Chinese teachers, who understand the Chinese language and conceptual structures, often have a minimal command of the English language. This restricts their ability to 'explain' concepts or terminology both in the classroom and in the clinic. In many instances, the Chinese teachers are also unaware of the conceptual hurdles faced by English speaking students and overlook their importance. Because TCM is regarded as a medical, not a linguistic system the focus is generally on learning strictly medical information – the acupoints, *materia medica* and formulae, the 'patterns of disease' and standard treatments. Explicit instruction on concepts and terms would enable the student to make better sense of the translations used by the English speaking teachers as well as the clinical and classroom discourse of Chinese teachers.

5.2.4 Understanding clinical language

The student also needs to understand the communicative intent or pragmatic value of TCM language in the clinic or related environments. The TCM practitioner uses TCM models to highlight the relevant factors in any pattern of disease and to select his treatment plan. In any medical practice, there is a wealth of available information on any patient and the physician or medical student needs to be able to discriminate between factors which are essential to diagnosis and those which are secondary or irrelevant. A key function of language may be to profile or highlight those features of any situation or domain which are most important as well as to indicate the way in which a situation should be interpreted (see Taylor 1991:84). This may be a chief function of what Hsu (1999) has called the 'maxims of practice' (see examples 89 to 93 in Chapter 4) used by TCM doctors. Gibbs (1999) has also noted psycholinguistic evidence suggesting that metaphoric usages evoke associations which influence our interpretation of the 'target' situation. Identifying these implicit linguistic cues is particularly challenging for the western English speaking student.

Asking what it means 'to know' in the TCM sense of knowing allows the student to develop and use appropriate strategies for making sense of TCM both in theory and practice. An additional benefit of developing this meta-cognitive perspective is that it can help the student see the underlying assumptions of other medical systems he knows or may encounter, whether they are other traditional or 'alternative' approaches or the biomedical approach itself. Dacher (1995:187) has noted that it is particularly important for the biomedical student to be aware of the extent to which the "underlying, yet untested,

assumptions” of objectivism, determinism and positivism underpin biomedical models. This is analogous to the way in which learning about a foreign language grammar helps the student become aware of grammar in his first language. It is difficult to see the grammatical usages of a first language precisely because they are transparent and automatic; in a foreign language, the grammatical features are far from automatic and have to be learned. In the process of learning the new grammar, the student may also be made aware that all languages need grammars: a set of complex rules which set the parameters for language use and which are utilised in accordance with specific communicative needs.

5.3 Limitations of the research and areas for further research

This dissertation constitutes an initial exploration of TCM using a cognitive semantic approach. I believe the research suggests that such approaches have value in explaining some of the central models and terminology of TCM. However, the research has been limited in terms of both breadth and depth. While I have emphasised the high level of polysemy in TCM, and the manner in which a single term such as *qi* can be used in a wide variety of medical contexts, I have not been able to explore what is in fact a very substantial medical lexicon. I believe further research exploring this lexicon in greater detail could make a valuable contribution to both TCM and cognitive semantics.

On the TCM side, further cognitive semantic and applied linguistic research on the texts and practice of TCM would be valuable from a number of standpoints. Firstly, it would be valuable because translation of TCM texts (particularly ancient texts) is challenging. The cognitive semantic approach could contribute to the debate on authenticity and standardisation of TCM translations as well as help in the development of new approaches to learning terminology. Flaws (no date) has cautioned that “the single biggest hindrance to teaching, learning, and up-grading our knowledge of Chinese medicine here in the U.S. is the lack of an etymologically and philologically accurate, standardized technical vocabulary”. This dissertation has demonstrated some of the difficulties in standardising polysemous terminology and could offer some alternatives to traditional one-to-one translation. Secondly, the cognitive semantic approach to ‘making sense’ of complex semantic models should have pedagogical benefit. This dissertation explored some possible approaches; further research should aim to develop a coherent strategy, materials and could even include TCM or an integrative medical curriculum. Proper trialing and evaluation would constitute a considerable but valuable undertaking. From the applied linguistic perspective, research on TCM texts should be complemented by research on TCM discourse. How do TCM models inform clinical practice and what is the performative value of TCM discourse? Maciocia (no date) (in contrast to Flaws and Wiseman) has insisted that “the most important issue facing practitioners is not how to transmit the *language* of Chinese medicine (an impossible task given the differences between Chinese and

other languages) but how to transmit the *clinical skills* of Chinese medicine”. An applied cognitive linguistic approach promises to help bridge the gap between language as theory and language as practice.

From the cognitive semantic side, further study of TCM also appears to be promising. While this dissertation ultimately had an applied focus, it raised some intriguing theoretical questions. The analysis of TCM terms and concepts has proved to be interesting in terms of the cognitive processes which underpin categorisation, polysemy and semantic chaining. The analysis in Chapter 4 demonstrates the prevalence of basic schemas in the concepts of *yin yang qi*, the *jing* ('channels') and more generally in TCM physiology, or what is sometimes referred to as TCM 'energetics'. The fact that some of these schemas are used in other traditional medical systems suggests that they may constitute more universal conceptualisations. If so, this would make TCM and other traditional medical systems a rich source of data for the further study of schemas, including schemas that underpin modern linguistic usages. I have also emphasised the role of metaphor and metonymy in the semantic networks and conceptual models of TCM demonstrating that the relationship between metaphor and metonymy is very close in the 'medicine of systematic correspondence'. I believe further research in this area might inform the debate on the relationship between metaphor and metonymy. The fact that what appear to be highly 'metaphorical' usages are often considered literal descriptions in TCM is also particularly interesting. Further investigation promises to contribute to current debate on the relationships between 1) cultural and cognitive models and, 2) bodily experience and cognitive models.

TCM conceptualisations of physiology are of special relevance to the cognitive semantic researcher. Kövecses (2001:89) has estimated that one-sixth of approximately 12,000 common English idioms are related to the human body. Aitchison (in Kövecses 2001:89) reports that an "analysis of figurative language between 1675 and 1975 showed that the human body had consistently been the highest source of metaphor for these 300 years, and that the subject of the metaphor was most often a human's psychological processes". The analysis in this dissertation has shown that in TCM physiological and psychological processes are closely linked. Further research would be needed to establish the extent to which the associations made between physiological and emotional (as well as mental and 'spiritual') states in TCM are shared by other traditional medical systems. My initial investigations of other systematised traditional medical systems such as Ayurveda (Indian), Unani-Tibb (Greco-Arabic) and Sowa Rigpa (Tibetan) have revealed striking similarities with the TCM theory discussed in this work, including the use of similar schemas and categorisation networks. There is a considerable body of literature in the cognitive semantic field discussing the body as a source for metaphors describing emotional and mental states which could be compared with the data from these traditional medical systems. Further research could consider whether the correlations of TCM psychophysiology are 1) similar to correlations made in other

traditional medical systems (both the systematised as well as the largely oral traditions) and, 2) similar to correlations found in metaphors used in modern languages. Such research could shed some light on the 'universality' of traditional models of psychophysiology and the extent to which such models still inform modern language usage. The 'body in the mind' of the cognitive semanticist may well be illuminated by the 'mind in the body' of TCM psychophysiology.

In Chapter 1, I differentiated between traditional systems which are systematised and those which are based on oral traditions (see Figure 1). This distinction was made because (1) the two approaches represent different challenges for the modern educational institution, and (2) they may differ in regard to levels of internal cohesion and structure. The extensive textual basis of systematised medical traditions makes their theory more accessible but it is also possible that textualisation has encouraged a higher level of systematisation. Further research would be needed to ascertain the similarities and differences between the text-based systematised and the oral traditional medical systems. The approaches outlined in this work offer some techniques for analysis of the apparently more diverse oral systems. If these prove to be useful, it would be of great benefit to educators and students who need to gain a better understanding of local oral traditional practices. From an educational perspective, integrating teaching of largely oral traditions, in which knowledge has been passed on through discipleships, with the institutional approach of the tertiary education system is a particularly challenging issue which might benefit from the cognitive semantic approach discussed in this work. This kind of research into local traditional medical practices could also enhance efforts to encourage an informed attitude of respect for diverse cultural perspectives and integrated medical approaches. This is particularly urgent in societies such as South Africa where traditional and modern medical approaches operate side by side but are not always mutually intelligible to practitioners, students or patients.



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