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TROPE AND TAXONOMY

AN EXAMINATION OF THE CLASSIFICATION AND TREATMENT OF ILLNESS IN TRADITIONAL THAI MEDICINE

by

Scott Bamber

A thesis presented for the degree of Doctor of Philosophy of The Australian National University

April 1989
This thesis is the result of my original work as a research student in the Asian History Centre, Faculty of Asian Studies, The Australian National University.
"It is all interwoven," said Mr Pye. "One cannot segregate things in that arbitrary way – words and illnesses, tadpoles and tears, volcanoes and dominoes are all interwoven. What affects one thing affects all the rest."¹

I would like to express my gratitude to Dr A.V.N. Diller and Dr B.J. Terwiel for the generosity with which they gave of their time and knowledge in carrying out their role as supervisors. During the course of this work I was also fortunate in being able to seek the advice of Dr Jean Mulholland, who kindly gave me access to her library and research notes. I am also thankful to Mrs Vacharin McFadden, of the National Library of Australia, for her assistance with materials throughout the course of this study, and to Mr Preecha Juntanamalaga, teacher of Thai in the Faculty of Asian Studies, who helped ease the difficulties I encountered in the interpretation of some Thai sources.

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Lastly I would like to thank my parents, Ken and Glory Bamber, and my sister, Meg, for their encouragement and support, without which I would never have been able to complete this work.
ABSTRACT

This work is an examination of the classification and treatment of illness in traditional Thai medicine.

The study is based on a nineteenth century compilation of Central Thai court medical texts, as published by the Wat Pho Traditional Medical Association under the title Phaisat songkhro. Information from this source is supplemented by a synchronic analysis of illness terms in modern Thai, partly derived from interviews conducted with Thais in several regions of Thailand, as well as studies which have been made of other Tai groups.

Drawing upon recent research on cognition and categorisation, the study explores the role played by imaginative processes such as metaphor and metonymy in Thai illness classification and the selection of materia medica. It is argued that through these processes the classification of illness makes an important contribution to the therapeutic process.

An examination of one representative illness category, krasai, which includes a number of illnesses recognised in modern medicine such as kidney disease and hernia, shows that imaginative processes may be involved in classification in several ways. These include numerical symbolism emphasising form rather than content, flexibility in the semantic range of illness categories, and the identification of illness with familiar aspects of the environment, in particular animals.

These processes are also important in determining the treatment of illness. A brief examination of the ingredients found in prescriptions for the treatment of krasai suggests that, apart from any pharmacological value they might possess, their selection is based on various criteria including taste, analogy, and the depiction of illness as a living entity.

Some of the practical implications these findings have for classification theory and the efficacy of traditional medicine are considered.
TRANSLITERATION SYSTEM FOR THAI WORDS

In general, Thai words appearing in this work have been transliterated according to the Library of Congress System, with slight modifications. The vowels โอะ and ฉะ (ʼ) have been transliterated here as ʼa (rather than ʼiiʼa), and ʼua (rather than ʼiiʼa) respectively; and the final consonant ำ has been transliterated as w (rather than o). Exceptions have also been made in the case of personal names, and where a word has a commonly accepted English spelling. In both these cases the generally accepted form has been followed rather than the Library of Congress transliteration.

An outline of the transliteration system is given below, with consonants listed in the order in which they appear in the Thai dictionary.

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CHAPTER 1

INTRODUCTION

1.1. Aims of the Study

Humans name illnesses. An almost universal response to the symptoms of illness is to attempt to identify the condition and give it a name. This is a process which extends beyond the sufferer, involving family, friends, and, often, the services of experts. It may also involve considerable amounts of time and money. For the identification of illness is a crucial act in the therapeutic process; classifying an illness allows important decisions regarding the further management of the condition to be made. However, although the quest for identification of illness is common to all, the names, the various configurations of symptoms, and their subsequent treatment differ widely between cultures. The form which this classification and treatment takes in traditional Thai medicine is the subject of this work.

A prime motivation for this study was the difficulties encountered in the reading of traditional Thai medical texts. Access to a wealth of information regarding the types, diagnosis, and treatment of illness in traditional Thai culture, including a large pharmacopoeia, was restricted by a system of illness classification which bore little resemblance to that of modern medicine.\(^1\) Not only was there a lack of correspondence between Thai illness categories and those of modern medicine, but the symptomatic descriptions contained in the texts bore little similarity to those considered commonplace in medical science.

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\(^1\) The term "modern medicine" is used here in preference to the term "cosmopolitan medicine" suggested by Dunn ((1976), pp.135-136). While aware of the fact that to some scholars the term "traditional" may evoke a stereotype which includes stasis (Leslie (1976), p.6), I do not agree that its use in contrast to the term "modern" need imply any qualitative judgement. There was a time in Thai history when modern medicine meant Western medicine, and that term will be used where appropriate in the following chapters. However, it is no longer true to attribute modern medicine to any particular part of the world. At the same time, to describe modern medicine as "cosmopolitan" would imply a melange of different medical systems, when the meaning intended here is the highly technological medicine based on scientific investigation which developed from Western medicine.
In addition to their poor fit with the categories of modern medicine, traditional Thai illness categories exhibit other features which prove difficult to interpret. The meaning of certain terms appears, for example, to vary widely in different contexts. The meanings of terms used in the texts also seems to differ markedly from those in modern Thai. Similarly, where names or concepts of Indic origin occur in the texts, their meanings often appear to be at variance with those of their Sanskrit or Pali cognates. A further difficulty is that the relationship between an illness and the substances used in its treatment appears in many cases to be based on its name alone, rather than any pharmacological properties which the substance might possess.

Although some of these problems have been noted in previous studies, there has to date been no attempt to carry out a detailed examination of illness classification and treatment in traditional Thai medicine. Early European accounts were based on a limited exposure to Thai culture, thus while some, in particular that of La Loubère, contain an impressive amount of information relating to medicine, they reveal little relating to illness classification. It was not until the mid-nineteenth century that the first studies of Thai medical theory were made.

The first detailed commentaries on the classification of illness in traditional Thai medicine appear to have been those of the American missionary doctor D.B. Bradley who resided in Siam, as Thailand was then known, for some thirty-eight years from 1835 till his death in 1873. Bradley, who became proficient in spoken and written Thai, was closely acquainted with both court and popular medicine. He wrote a number of articles on traditional Thai medicine for publication, and kept a diary throughout his residence in Siam.

Perhaps the most distinctive feature of Thai medicine, according to Bradley's writings, is the use of a system of illness classification based on Indic theory. At the same time, Bradley also noted a discrepancy between Thai and Indic theory. He observed that of the four elements for which illnesses are named, one, termed *lom* ('wind') was responsible for "nineteen cases out of twenty". Unfortunately, though Bradley's observations are of immense value, they are, at times, coloured by his personal religious convictions and a low regard for local medical practices. Thus he baulks at further analysis of Thai illness classification:

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2 La Loubère (1691).
4 D.B. Bradley (1865a), p.103.
5 In this work single inverted commas are used to indicate English glosses for words in other languages. Double inverted commas indicate quotations.
6 D.B. Bradley (1865a), p.103.
[Siamese medical theory] is a dark maze in which their most learned physicians are swamped, and it would be unsafe for the writer as a matter of fact man, to venture further at present.\(^7\)

Traditional medicine also became a subject of interest and commentary for educated Thais during the latter part of the nineteenth century. This coincided with the establishment of the first Western-style medical school and hospitals, and a decline in traditional-style court medicine.\(^8\) It was perhaps an awareness of the passing of the tradition that prompted prominent literary figures of the time to write historical accounts of certain aspects of traditional Thai medicine. One such person was Sri Sawaphang, head of the Hospitals Department (Krom phayābān) and a noted poet.\(^9\) His Ru’ang wichāphāet Thai ('The Story of Thai Medicine') was written in 1888 at the time of the completion of Sirirat Hospital (Wang Lang), the first Siamese hospital to be designed and built along Western lines.\(^10\)

While Sri Sawaphang did not specifically address the question of illness classification, his work gives some important insights into this area of Thai medicine. Like other commentators, he acknowledged the importance of Indic classification, but he also listed a number of Thai names pertaining to illnesses affecting the internal and external parts of the body. Further, he suggested that children's illnesses, though similar in many respects to adult's illnesses, are named differently.\(^11\) It would appear from these remarks that illness classification in traditional Thai medicine was rather more complex than early foreign accounts had indicated.

Although, with the introduction of Western medicine few were privileged to share the same contact with court medicine enjoyed by Bradley, an interest in traditional Thai medicine was nevertheless sustained among the foreign medical community in Siam. A

\(^7\) Ibid., p.106.
\(^8\) The Western-style medical school was opened at Sirirat Hospital in 1890, with T. Heyward Hays as teacher. He was succeeded in this post in 1892 by G.B. McFarland. At first traditional Thai medicine was not a part of the curriculum, however it was added in 1893 as an elective subject, apparently accompanied by some dispute between the foreign and Thai doctors (Yuwadee (1979), pp.199-202). Although often not clear in Western commentaries, such as that of Bradley quoted above, there were differences between traditional court medicine and that practised among other sections of the population, particularly in rural areas. More will be said of the distinction between these two traditions in Chapter 2.

\(^9\) Damrong (1918), p.213.

\(^10\) Ibid. Sri Sawaphang was also a member of the committee convened to establish the hospital (Sanguan (1971), vol. 3, p.336).

\(^11\) Sri Sawaphang (1918), pp.233-234.
short paper presented by Dr Beyer at a meeting of the Siam Society in 1907 was attended by some of the more noted Western doctors in Bangkok at the time, including G.B. McFarland and H. Campbell Highet. While it did not address the subject of illness classification in particular, the paper, and subsequent discussion, both published in the Society's journal, confirmed the apparent discrepancies between Thai practice and Indic theory which had been noted by Bradley some forty years earlier.12

Like Bradley, Beyer acknowledged the importance of the Indic theory of the four elements in Thai medicine, as well as the prominence of the illness category *lom* among the Thai patients he treated, remarking that the idea was "not particularly clear".13 He also failed to find any systematic descriptions of illnesses, noting that "they are satisfied to give the names of diseases without symptomatic or diagnostic remarks."14 Concluding that "everything in Siam is Indian culture", Beyer saw in Thai medicine evidence that the mix of philosophy and medicine is difficult to reconcile.15

Further testimony to the complexities of Thai illness classification is found in a later article on medical inscriptions. According to the author, Dr Rudolf Hofbauer, he found it impossible to write about the old medicine in Thailand because of the many "insurmountable" difficulties involved in the translation of the Pali, Sanskrit, and old Thai words into English.16 Nevertheless, Hofbauer's paper contains some important observations. Like previous commentators he testifies to the importance of Indic theory in Thai illness classification, but he also notes the depiction in a text of a "devil" which is said to personify a boil.17 Little more information is, however, provided on this indication that beliefs in the spirit world are mixed with Indic illness classification in Thai medicine.

Aside from various studies which focussed on beliefs and practices for the most part tangentially associated with traditional medicine,18 it is only in recent years that attention has been paid to the subject of illness classification. Of the number of recent studies of Thai medicine,19 those of Mulholland were the first in which a rigorous attempt was made to examine the bases of Central Thai illness classification. Using mainly textual sources, Mulholland showed how Thai medicine is pervaded by features characteristic of

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12 Beyer (1907), pp.4, 13.
13 Ibid., p.4.
14 Ibid.
15 Ibid.
16 Hofbauer (1943), pp.183, 190.
17 Ibid., p.190.
18 See for example Anuman (1962a) and Hanks (1963).
19 See for example Benja (1974) and Golomb (1985). A well-researched history of Thai medicine has also been written by Yuwadee (1979).
Indic medicine. In particular she demonstrated the importance of the Indic theories involving the "four elements" and the "three humours" in Thai illness classification. In a recent major work, Mulholland examined the diagnosis and treatment of the illness sāng ("children's diseases") which is described in one important text, the Khamphī prathom čhindā. Her conclusions are worth quoting here:

This very complex system of traditional medicine practised in Thailand is thus shown to comprise at least three systematic methods of medical diagnosis and treatment. On the one hand, there is an elaborate, but impractical system based on a calendrical association of disease with the week-day of birth; on the other, an adaptation of Āyurvedic medicine; alongside these two extremes, is a simple system relying on observation and experience, and symptomatic treatment.

These conclusions represent a significant advance on any of the previous studies of traditional Thai medicine, and make a substantial contribution to our understanding of the general bases for illness classification. They also raise some important questions concerning the validity of these classificatory principles for the remainder of the wide range of Thai illness categories, and the processes which have enabled the various systems of diagnosis to persist alongside one another. We might ask, for example, how it is that an "impractical" calendrical system continued to be employed long after the introduction of the other exotic systems.

Mulholland's study of sāng also raises questions of context and usage. Thus although recognising that the meaning of sāng may vary in certain situations, from the specific ("oral diseases") to the general ("children's diseases"), little is said of the processes involved in this polysemy. Furthermore, while acknowledging the importance of ancient Tai beliefs regarding magical power and the spirit world, no attempt was made to relate these beliefs to the classification of illnesses, and the selection of the materia medica.

Since the commencement of the present work two other works have appeared in which the subject of illness classification in traditional Thai medicine is addressed at length. The first of these is the thesis by Somchintana which examines the principles and

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20 Mulholland (1979a).
21 Mulholland (1979b).
23 The term "Tai" as used in this work refers to the various peoples who are speakers of languages belonging to the Tai group (see Li (1960)). The term "Thai" is used to refer to the Tai peoples within what is now Thailand. See Lévy (1972), pp.98-100, for a review of some of the major classifications of Tai dialects.
concepts of Thai classical medicine. Though limited in its coverage of historical sources and comparative Tai material, this study provides a considerable amount of detailed information on Thai illness categories. In particular, recognition is given to the disparity between Thai illness categories and those of modern medicine, as well as to the importance of metaphor and culture-specific associations in the naming of illness. The study stops short, however, of a full examination of illness classification.

A fuller examination of illness classification is provided in the recent work by Brun and Schumacher on traditional Northern Thai medicine. In contrast to the mainly text-based studies of Mulholland and Somchintana, Brun and Schumacher derived their information mainly from present-day practitioners, which was supplemented by texts. Through this process it was possible to isolate a considerable number of important "disease concepts" (in our terms "illness categories").

Though the illness categories of Northern Thai medicine are not identical with those of the Central tradition, it is apparent that the two systems are closely related. Thus Brun and Schumacher's conclusions that the Northern Thai illness classification "is a flat one - lacking the depth of taxonomies and hierarchies", and revealing no "underlying principle ... of theoretical interest", would appear to gloss over certain features common to both systems. The question of the polysemy of certain illness categories is, for example not addressed. Similarly, the complexity of such terms such as lom is disregarded. The information which the study provides about the processes involved in classification, and its relationship to treatment is consequently limited.

In addition to the studies described above, some problematic illness terms have also been examined in a case by case fashion. This has been done, for example, in respect to the illness category lom. However, while it may serve to illuminate some aspects of the meaning and usage of particular illness terms, the disadvantage of this approach is that it tends not to reveal more widely occurring processes involved in classification. Thus the indication that, under some circumstances, lom may function as a general term for illness remains unsubstantiated through the lack of an understanding of its place in the wider context of illness terminology.

24 Somchintana (1986).
25 Ibid., pp.63, 123.
27 Ibid., pp.53-196.
28 See Dunn (1976) for a definition of "medical systems" (p.135).
30 See Muecke (1979); Bamber (1982).
31 Bamber (1982), p.56.
Although the studies described above have gone far towards mapping out the concepts and terminology of traditional Thai medicine, it is apparent that important questions relating to illness classification and treatment remain unanswered. The interpretation of terms occurring in traditional texts, and in usage among present-day practitioners of traditional Thai medicine, still presents major difficulties. There is clearly a need for a study of traditional Thai illness classification in its own right. The aim of this work, then, will be to examine the classification of illness and its relationship to treatment in Thai medicine as it was in the mid nineteenth century, prior to the widespread introduction of Western medicine.

While there has been no previous study of Thai illness classification, this area has been the focus of several important studies concerning the medical systems of other Asian cultures. The study of illness classification in cross-cultural perspective has, in fact, made a significant contribution to our understanding of human classification. One study in particular, that of Frake on Subanun illness classification, has achieved something of the status of a classic on "folk taxonomy" in the literature of the so-called "ethno-semantic" school of anthropology. However, as subsequent studies have shown, taxonomies can only offer certain types of information. Much of the criticism which has been directed at ethno-semantics has focussed on its failure to account for the prominence of imaginative processes, such as polysemy and metaphor. Recent studies, such as those by Ohnuki-Tierney on the Sakhalin Ainu also indicate that the important symbols in a given culture may play a very basic role in illness classification.

These studies may provide an initial basis for the examination of illness classification in Thai medicine. As we have seen, some of the issues raised above concerning the part played by imaginative processes in taxonomies are also common to the field of Thai illness classification. A further review of research developments in the area of human classification may thus have an application in resolving some of the difficulties encountered in the Thai case. Through a critical appraisal of the findings of other studies of illness classification in the light of the Thai evidence, it may also be possible to make a contribution to the wider subject of human classification.

1.2. Methods

Since, as already noted, medical texts represent the most substantial body of information available on traditional Thai medicine, they will largely provide the basis for

32 Frake (1961).
33 Keesing (1972).
34 Ohnuki-Tierney (1981a).
the present study. These works contained detailed information on illnesses, their
descriptions, and treatment. However, the interpretation of this information presents
difficulties, since the society into which they fitted no longer exists. Since few other
detailed records are available of medical practice as it was in the past, it is hard to gauge
how the information contained in traditional texts related to thought and actual practice.
There are other avenues by which some understanding of these aspects may be obtained.

One of these consists of the people, both patients and practitioners, for whom
traditional medicine still remains an important alternative to the modern health care system
widely available in Thailand today. By observation and questioning of members of this
sizeable part of the Thai population it is possible to learn a great deal about illness
classification and treatment.

As with the interpretation of textual sources, there are certain difficulties associated
with information obtained from present-day sources. One of these is that the majority of
those still relying on traditional medicine live in rural areas. The rural or "folk" tradition,
whether today or in the past, is likely to have differed significantly from the court medical
tradition. Some of these differences will be examined in the following chapter. Also,
many of the areas where the use of traditional medicine is strongest are located in regions
of the country which in other respects exhibit marked differences from Central Thailand.
Even with the increased exposure to Central Thai language and culture through the mass
media and education strong regional differences remain.

A further difficulty with the use of contemporary sources comes through
development. With the increased availability of modern medicine and public health,
dietary, and socio-economic changes, there have been significant changes in the patterns
of illness, treatment, and medical vocabulary. The number of people familiar with
traditional medical practices and terms has also declined in recent years.

In this study a conscious attempt was made to focus on village practitioners and
their patients, rather than those associated with urban practices. The reason for this
emphasis was to increase the likelihood of contact with people who were familiar with old
traditions, and thus in a position to shed light on medicine as it was in the past. It was also
hoped by this means to gain some insight into the health-related behaviour of people who
for various reasons did not have ready access to modern medicine.

Information from these sources was collected during two periods of fieldwork in
Thailand, conducted from May to September 1984, and from March to December 1986.
During the first period data was collected in Central Thailand (Ratburi and Nakhon
Pathom provinces), Northern Thailand (Chiangmai province), and Southern Thailand
(Songkhla province). During the second period, data was collected in Central Thailand
(Bangkok), Southern Thailand (Songkhla), and Northeastern Thailand (Khon Kaen and
Udon Thani provinces).
In gathering information no attempt was made to employ quantitative methods. One reason for this decision was that in the course of trial testing the formal nature of a questionnaire approach was found to be inappropriate for the groups under study. In the mainly rural setting informants were reluctant to disclose certain details regarding illness, except on an informal basis of personal acquaintance and trust. Furthermore, qualitative methods did not allow sufficiently for the assessment of the role of more subtle factors such as subjective experience and interpersonal relations on the choice of illness terms. In view of these considerations information was obtained by means of informal interviews and participant observation.

No attempt was made to conduct clinical examinations, or incorporate case studies of particular patients, by practitioners of either traditional or modern medicine, into the study. Outside the area of oral disease, this would have been, at any rate, beyond the expertise of the investigator. Moreover, it was not the intention of the present study to compare the present-day management of illness according to traditional and modern medicine, but to focus on sources which could contribute to the explication of processes of classification in nineteenth century Thai medicine. For this reason the detailed descriptions of illnesses used in this work are, in the main, those appearing in traditional medical texts. Where necessary the comments of present-day practitioners of modern and traditional medicine on these descriptions have been included.

Another important source of information is that related to the medical practices of the other Tai peoples, who are distributed across mainland Southeast Asia, from Assam in the west, to northern Vietnam and south-eastern China in the east. To this information may be added that concerning the medical practices and terminology of peoples with whom Tai have been in close contact, such as the Cambodians, Mons, and Malays, or the less geographically proximate Indic and Chinese peoples. As well as a number of studies specifically related to the medical systems of these groups, information on medical practices and illness classification is also available in the form of lexicons, dictionaries, and accounts of an ethnographic or historical nature.

None of the sources discussed above can be assumed to be reliable in isolation. Information from any of these areas must be weighed carefully against that from other sources in order to account for regional or idiosyncratic usage or practice. Each has its limitations, which will be discussed more fully in the course of this work. Nevertheless, by comparing the various types of information they provide, it is possible to understand the main features of traditional Thai illness classification. While the picture which results may not always be accurate in terms of some details, or of the relative importance of certain aspects, it may still be sufficient to give some insight into the processes which are involved in Thai classification and treatment of illness.
1.3. Outline

In the following chapter some of the background information necessary to place this study in historical and cultural context will be presented. Apart from some further general information on traditional Thai medicine, this will include a brief description of concepts related to the cause of illness, types of practitioners, and the role of texts in the medical tradition. Some discussion of the structure and function of the Court doctors and the official editions of medical texts will also be included.

In Chapter 3 consideration is given to the classification of illnesses in the general context of human cognition. The application of the "taxonomic approach" of Berlin et al. to the domain of illness is examined, along with recent critiques of this method. The role of imaginative processes, including symbolism, and metaphor, in illness classification, and their links to certain aspects of the body's physiology is also reviewed. From this discussion, an approach is developed which can be applied in the examination of Thai illness classification. In brief, this approach is based on the hypothesis that the classification of illness may in itself be a therapeutic act, which is often achieved by the identification of illness in terms of the familiar.

With this hypothesis in mind, Chapter 4 addresses general aspects of the classification of illness in traditional Thai medicine. The illness categories appearing in a major collection of Thai medical texts, Phāetsūt songkhroy ("The Study of Medicine"), are described, a full list being included as an appendix to this work. A comparison of these illness categories with those in a number of other Tai dialects is also made.

In Chapters 5 and 6 the focus of the study is narrowed to examine the symptomatic descriptions of illness categories in close detail. Clearly, owing to the constraints imposed by time and the length of this work, it is not be feasible to cover all of the illness categories appearing in the texts. For this reason one representative illness category, krasai, was selected and its description in the texts of traditional medicine examined in detail and analysed in terms of the discussion in Chapter 3.

Chapter 7 deals with the relationship between illness classification and treatment. Aspects considered are connections between naming and choice of materia medica, therapeutic rituals, medicine, food, and dietary regulations, and the composition of prescriptions. For similar reasons to those given above, the detailed analysis of prescriptions is largely confined to those used in the treatment of the illness krasai.

A summary of findings and concluding remarks are presented in Chapter 8.
CHAPTER 2

TRADITIONAL THAI MEDICINE

2.1. Introduction

In this chapter some background information relating to traditional Thai medicine will be briefly presented. To begin, the meaning of certain terms to be used in this work will be considered, including what is meant by "traditional Thai medicine" and the relationship between the medical terms and practices of the various Thai dialect groups within Thailand. Following sections will examine general concepts relating to the cause of illness, types of doctors, the role of texts, court medicine, and the significance of the fall of Ayuthaya for the court medical tradition. In the final section of the chapter something will be said, in the light of the foregoing information, of the source materials on which the discussion of illness classification in later chapters will be based.

2.2. "Traditional Thai Medicine"

The expression "traditional Thai medicine" has two meanings in this work. Firstly it is used to refer to the body of medical practices and terminology employed prior to the introduction of Western, or modern, medicine by Thais. That is, it serves to differentiate the medical practices of Thais from those of the remainder of the Tai language group, and other peoples with whom they have been in contact. In addition to this general sense, the term "traditional Thai medicine" is also used here in a more specific sense to refer to the medicine of Central Thais,1 or Siamese, as contrasted with that of the other major Thai dialect regions of Northern, Southern, and Northeastern Thailand. In most cases the distinction between these two meanings will be apparent from the context, but where the meaning is not clear the specific terms "Central Thai medicine", "Northern Thai medicine" etc. will be used.

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1 This usage follows that of Brown (1965), p.13, and is distinct from the term "Central Tai" used in some classifications of Tai groups, such as that of Li (1960), p.953.
It seems likely that Tai peoples came to inhabit the area of present-day Thailand from around the mid-eleventh century A.D. Prior to that time little is known of their origins, history, and culture, however, to judge from the similarities in the medical practices of widespread Tai groups today, it is probable that their medical system had already reached a complex state of development.

In the course of moving southwards into the Chaophraya River valley, Tai peoples came into close contact with the medical systems of other ethnic groups, some highly complex. But rather than the wholesale adoption of features of other medical systems, it is likely that they were reinterpreted in terms of the existing Tai system. This restatement of cultural characteristics of other civilisations, termed "localisation" by Wolters, appears to have continued through the history of Thai medicine, even to the present day. The discussion of Thai medicine which follows should be read with this in mind.

Most of the prominent mainland Southeast Asian cultures adjacent to Thailand, including the Burmese, Malay, Khmer and Vietnamese, have distinctive systems of traditional medicine. Like the Thai, these cultures have, to a greater or lesser degree, also come into contact with Indic and Chinese culture, both of which have very sophisticated medical systems. Of these two, it was the features of Indic culture which came to be most prominent in the medical systems of the Thai and other peoples of the Chaophraya River valley.

Features characteristic of Indic culture were already well-established among the inhabitants of the Chaophraya River valley prior to the arrival of Tai peoples in the region. During the period between the sixth and ninth centuries A.D. a major Buddhist culture, commonly known as the Dvaravati, was associated with the Mon who inhabited the region. After the ninth century, the Khmer civilisation of Angkor, also strongly-influenced by Indic culture, having features of both Mahayana Buddhism and Brahmanism, began to dominate the region. It is likely that even before Tai peoples became established in the area they had already come into contact with Indic culture.

Contact with Indic culture continued with the development of the major Thai kingdoms in the Chaophraya River valley. Theravada Buddhism became the dominant

4 For an account of Vietnamese medicine see Marr (1987); for Khmer medicine, Martin (1983); Burmese medicine, Report of the Committee of Inquiry into the Indigenous System of Medicine (1931); for descriptions of traditional Malay medicine, see Gimlette (1939) and Laderman (1983).
6 Ibid., pp.25-27.
7 Ibid., pp.27-28.
form practised in the region, but Brahmanic beliefs were also important, and elements characteristic of Mahayana Buddhism were probably retained, along with indigenous magico-religious practices and beliefs. With the increasing importance of Thai kingdoms, contact with Indic culture became more direct and formal, trade and other commercial activities also being a significant.

Proximity to Mon and Khmer civilisation was, in itself, also likely to have had important consequences for Central Thai medicine. Not only would itinerant contact, such as through trade, have been a medium for change, but relationships which were more formal, such as marriage alliances, or aggressive, as in the capture and deportation of the enemy in the course of warfare, would also have aided the spread of different practices and ideas. As Golomb has pointed out, the healing arts are, for a number of reasons, well-suited to be a significant force in such cultural interaction. The result of this extended and diverse contact with Indic culture, as well as the Mon and Khmer peoples who already inhabited the Chaophraya River valley, and to a lesser extent, peninsular Malay peoples, was that the Thai medical system which developed was highly diverse in nature.

Clearly, not all Tai groups were exposed to the Indic-influenced civilisations of the Chaophraya Valley to the same degree. This uneven contact is reflected in considerable variation between Tai peoples regarding medical practices. Many features of the medical systems of some Tai groups, such as the Central Thai, are Indic in origin. These include medical theories, texts, and items of the materia medica. For other Tai peoples, such as the Zhuang and other groups in the region of Southern China, who were for the most part isolated from significant Indic influence, features characteristic of Indic medicine are difficult to find. From the little information available, it appears that the medical systems of these groups may incorporate features characteristic of Chinese medicine.

Although the influence of Chinese medicine may also be found in some aspects of traditional Thai medicine, for the most part this appears to be limited in nature and the result of recent contact. The spread of Chinese medicine appears to have largely coincided with the development of the trading economy, and the influx of large numbers of Chinese during the Bangkok period. Features of Chinese medicine are thus more prevalent in coastal regions and the larger urban centres of Central Thailand. There remains the possibility that more significant contact took place in the ancient past, and this will be considered in the course of this work.

In addition to distinctions between Thai medicine and that of the other important cultures in the region, significant differences also exist within the various Tai groups. In

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this regard, some consideration must be given to the question of whether the medical practices of the various main regions within Thailand should be viewed as variants of Central Thai medicine, or as representing the practices of distinct Tai groups. In the past the Northern, Southern, and Northeastern Thai represented separate Tai peoples, some of whom were at times independent mu’ang ("principalities" or "territories"), and at others under the rule of the Central Thai, Burmese, Khmer, Malay, or Lao. These regions, although still characterised by dialects and cultural features which differ from Central Thai, have come to be largely dominated by Central Thai culture. In the process of unification into a single state it is likely that many differences were obscured.

As a whole, little consideration has been given to the question of regional variations in Thai medicine. A notable exception is the recent study by Brun and Schumacher of Northern Thai medicine. Even in this work, however, the Northern tradition is apparently seen as a "rural variant" of a Central Thai "royal" or "urban" tradition. Given the large corpus of Northern Thai medical texts, together with the region's relative independence from the Central Thai (until the 19th century), and its history of Burmese occupation, it may be reasonable to view Northern Thai medicine as a separate tradition from that of Central Thailand. It is also possible that there was an organised body of court doctors similar to that at the Central Thai courts (to be described later in this chapter). Also likely is a degree of intra-regional diversity within these areas, since the Northern region was composed of smaller centres of population which were not necessarily unified. A similar situation may have existed for the Southern and Northeastern regions of Thailand, though few of the studies undertaken to date have focussed on aspects of traditional medicine which could be compared to those discussed above for Central and Northern Thailand.

The Northeastern region also highlights some of the difficulties encountered in the use of the term "Thai medicine". The Northeast is an area in which the population has, until recent years, been more closely related to the Lao than the Central Thai. But even before absorption into the Thai kingdom, its intermediary geographical position between the Lao and Central Thai probably meant that the medical practices of the region showed characteristics of both civilisations. It is thus not possible to characterise the traditional medicine practised in the region as either "Lao" or "Thai".

12 Brun and Schumacher (1987), pp.4-5.
13 The Northern, or Lǎnnāthai, region was, for example, made up of a number of smaller population groups, termed mu’ang, including Nan, Phrae, and Chiangmai (Davis (1984), pp.37-38).
14 From around 1778, when Vientiane fell to the army of Chaophraya Chakri, the future King Rama I (Wyatt (1963), pp.29-31).
The point here is that while "Thai medicine" may serve as a term of convenience for the medical practices of the various Thai groups within modern Thailand, it does not imply a uniform system of medicine. Because of regional differences in history, language, culture, and environment there is the potential for marked variations between these areas in the way illness is classified and treated. The medical practices of each of the three major Thai regions should probably be viewed as distinct systems, and thus comparable to those of the Tai groups outside Thailand, such as the Shan and Lao.

As with other Tai groups, a comparison of the medical systems of Northern, Southern, and Northeastern Thai groups with those of Central Thai medicine may serve to reveal features which have their origins in contact with the medical systems of other cultures. Information derived from these various sources is thus of considerable value in understanding the influences which have helped shape Thai medicine.

2.3. The Causes of Illness

In traditional Thai belief there are several main causes or concepts related to the onset of illness. These include [i] the action of 'spirits', [ii] loss of khwan, [iii] karma, magic, and 'power', [iv] concepts derived from Indic medical theory, and [v] a group of loosely-connected concepts including "hot and cold" theory, and diet. A brief overview of these concepts will be given here as a background to the main discussion of illness classification in later chapters.

2.3.1. Spirits

Common to all Tai groups at one time was the belief that illness may be caused by the malign influence of supernatural entities, or 'spirits', termed, in Central Thai, phet. Even today, many illnesses are still believed by villagers to be 'spirit'-related. As Anuman points out, though in modern Thai belief all phet are generally considered to be malevolent, this was not the case in the past, when the term was used in reference to both

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15 See LeBar (1964), pp.187-239 for a brief overview of Tai beliefs. More detailed descriptions may be found in Anuman (1954), pp.99-124 (Central Thai); Halpern (1963), p.10 (Lao); Macey (1910), p.492; Popp (1904), pp.818-819 (Tho); Lafont (1959), pp.829, 836 (Black Tai); Robert (1941), p.36 (Black Tai, Mu'ang Daeng).

"evil spirits" and deities. Following contact with Indic culture, deities came to be known by the term theśwadā, from the Sanskrit root deva, meaning "divinity".

Nevertheless, certain types of phi were in most circumstances considered to be benign. These include the 'ancestral spirits' of dead relatives, the guardian spirits of towns (phi mu'ang), and those associated with awe-inspiring features of the natural environment such as trees, caves, and mountains. In the event of some offence being made towards these 'spirits', for example the immoral behaviour of the residents of a house, sickness could be brought upon an individual, or the community as a whole.

For this reason shrines are built as places of residence for the 'guardian spirits', and to enable offerings to be made to them. Offerings are usually things which are thought to appeal to the 'spirit', such as sweet smelling things, flowers, food, and liquor. By propitiation it is hoped to ensure the 'spirit's' goodwill and protection.

Other 'spirits', such as the phi krasū and phi pōp (mainly in the Northeast) are regarded as inherently dangerous. These 'spirits' are said to inflict harm on people by various means, including entering the bodies of their victims and eating the internal organs, especially the liver. A related class of phi, phi tāi hōng, consists of the 'spirits' of people who have suffered inauspicious deaths, such as women who die during pregnancy or childbirth, known as phi tāi thang klom. These 'spirits' are believed to be particularly malevolent.

In general the protection or removal of malevolent 'spirits' requires more powerful means than propitiation. Various means which are likely to be disagreeable to the 'spirit' (and to humans), such as loud noise, pungent-smelling substances, and things believed to be invested with supernatural power (rit) may be employed to this end. Thus, a feature of the ceremonies held to mark the new year in Bangkok was the firing off of cannons to dispel malevolent 'spirits' which might cause harm to the population. Cannons were also fired at times when outbreaks of epidemic diseases occurred. At a more local level,
Anuman describes the placement of thorny bushes underneath a house during childbirth to prevent the entry of phi which, attracted by the smell of blood, might possess the newborn baby or the mother and devour their entrails.  \(^{24}\)

It may be seen from the examples above that there remains a good deal of ambiguity in the classification of 'spirits'.  \(^{25}\) As Van Esterik has observed, 'guardian spirits' may be interpreted by Thai villagers as either phi or thāwādā, and neither class need be seen as absolutely benign or malevolent.  \(^{26}\) The classes may also not be fixed, and it is possible, for example, for a free-roaming 'spirit' to be ritually converted to a 'guardian spirit' associated with a specific locality.  \(^{27}\) As will become evident in Chapter 7, this ambiguity in the classification of 'spirits' has important implications for the treatment of illness.

### 2.3.2. Khwan Loss

Apart from the actions of 'spirits', there is a belief held by many Tai peoples that illness may result from the loss of one's khwan.  \(^{28}\) It is difficult to find an equivalent term for khwan in English, but its meaning is probably something like "life-force" or "vitality".  \(^{29}\) In former times it was widely believed among Central Thais that in times of severe trauma or stress the khwan could be diminished or lost from the body, resulting in sickness or even death.  \(^{30}\) The likelihood of this occurring was greater in young children, in whom the khwan was believed not to be well-attached, or "tender".  \(^{31}\) With maturity of the individual, the khwan was thought to grow stronger, and less susceptible to loss.  \(^{32}\)
Following traumatic events it was common to perform a ceremony (tham khwan) to re-establish or secure the khwan within the body. Such events might include severe fright, as through exposure to loud noise or danger, and childbirth. It is also possible that 'spirits' might cause khwan to be lost from the body.

2.3.3. Karma, Magic, and 'Power'

Allied to the concept of khwan is that of winyān, or 'soul', which is that part of the life force which, according to Buddhist doctrine, undergoes rebirth. Depending on kam ('past actions'), an individual winyān may be subject to varying degrees of fortune or misfortune. The amount of sickness and health which are experienced in life are thus largely determined by the good deeds (bun) and misdeeds (bāp) performed in previous existences. Nevertheless, though kam is a major determinant of the adversities suffered by an individual, it is believed that by certain means the course of events in life may be altered.

One means by which control may be gained over sickness is through the use of magical practices. Integral to the efficacy of such techniques is the belief that certain things, acts, or persons may be imbued with a supernatural 'power' (rit) which can effect the behaviour of other people or aspects of the environment. Such 'power' can be used to protect from or heal illness, and to ward off 'spirits'. Magical 'power' can also be used in sorcery (sayasāt) to inflict harm or sickness on others, use being made of a range of devices, such as items of the victim's clothing, hair and nail clippings, to "invisible missiles" planted in the person's body, in order to cause suffering.

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33 Ibid., pp.206, 213-214. The tham khwan is described in Heinze (1982).
35 This is the case among other Tai groups such as the Black Tai (Lafont (1959), pp.831-832).
36 Terwiel (1978), p.45. As Wilaiwan and Placzek (1986) have shown, the introduction of the term winyān, which is of Indic origin, into Thai probably resulted in a narrowing of the semantic range of khwan, a word of Tai origin. In other Tai dialects khwan may also refer to part of the "vital spirit" of a person which survives death (pp.159-160).
37 From the Sanskrit karma, meaning "work" or "action" (MMW, p.258).
40 Anuman (1965a); Golomb (1985), pp.136-137. The use of similar techniques was noted as early as the seventeenth century by La Loubère, who wrote:

they [the Siamese] allege that they sometimes find in the Stomach of the dead, great pieces of fresh Pig's flesh, or some other Animal, about eight or ten pound in weight:
The eating of some foods, or the occurrence of certain phenomena are, at times, also believed to have adverse effects on the human body. Many of these are related to risky or dangerous situations, such as in pregnancy and childbirth. For example, during pregnancy in Northern Thailand, "fat-looking" foods are avoided since they are believed to cause a baby to become fat and make delivery difficult.\textsuperscript{41} In Southern Thailand the eating of certain foods, such as fruits or vegetables whose names contain the word lik (literally 'child'), as well as others which have a rounded or child-like shape are avoided post-partum.\textsuperscript{42} This probably arises from a fear such as symbolic "eating of the child" may have adverse effects on the newborn baby or the mother.

These effects also extend to other phenomena. For example in the past, during childbirth, considerable care was taken not to lock or obstruct any doorways, or say words such as "stuck", for fear that these things might serve to impede or complicate delivery.\textsuperscript{43} Such "magic by analogy" may also play an important role in the treatment of illness, especially in the selection of ingredients in prescriptions. These aspects of treatment will be considered in some detail in Chapter 7 of this work.

Certain objects are believed to inherently possess magical 'power'. These are usually things which have some unusual natural property, and include fragments of meteorite, certain plants or seeds, and precious or semi-precious stones such as "cat's eyes".\textsuperscript{44} Other objects may be invested with 'power' through special procedures, for example the pluksēk or "blessing" where magical words are used to arouse potency.\textsuperscript{45} These 'powerful' objects are often made into amulets and are commonly carried or worn on a person's body.

Features derived from Indic culture play a prominent role in magical power, although their meaning is apparently reinterpreted in accordance with Tai beliefs.\textsuperscript{46} The magical words used in pluksēk are of Sanskrit or Pali origin, in the form of khāṭhā or mon.\textsuperscript{47} Buddhist figurines (phrakhru'ang) are often used as amulets, and the yan, which are designs or patterns invested with magical power and hung across entranceways to

\textsuperscript{41} Mougne (1978), pp.72-73.
\textsuperscript{42} Mr Jaroon Kanjanaphen, personal communication, October 1986.
\textsuperscript{43} Anuman (1961), pp.120-121.
\textsuperscript{44} See Textor (1973).
\textsuperscript{45} Anuman (1965b), p.289; Terwiel (1979), pp.77-78.
\textsuperscript{46} See also Wolters (1982), pp.57-58.
\textsuperscript{47} From the Pali gāṭhā, meaning "verse" (Rhys-Davids (1921-25) (henceforth PTS), p.248) and manta, "magic charm, spell" (ibid., p.522).
ward off 'spirits', are also of Indic origin.\textsuperscript{48} The value placed on things Indic also extends to language and things with which it is associated. Thus Indic writing and texts are also held to possess magical power.

Objects and words are not the only things which can be invested with 'power': it may also acquired by people. The means by which this is accomplished varies from the tattooing of magical designs on the body, to learning and study, especially of Indic subjects, and to entry into the Buddhist monkhood.\textsuperscript{49}

In this regard 'power' fits into a complex of apparently binary divisions prevalent in Thai culture. These include oppositions between high and low, male and female, right and left, and clean and dirty.\textsuperscript{50} Generally speaking, 'power' (rit) is associated with things which are high, male, right-handed and clean. Conversely, things which are low, female, left-handed and unclean are considered to be antagonistic to 'power'.\textsuperscript{51} These divisions play an important role in the classification and treatment of illness, of which more will be said later in this work.

2.3.4. Indic Medical Theory

In addition to the concepts described above, traditional Thai belief also incorporates a complex theory of illness causation which is derived from Indic humoral theory. As this theory has been described in detail by Mulholland, and will be discussed at length later in this work, in relation to illness classification, only some general comments need be made here.

Briefly, in the Thai system based on Indic medicine, the main causal factors of illness consist of: the elements (thát) of which the body is made up, the seasons, age, time, place, and behavioural factors.\textsuperscript{52} The first of these is of greatest relevance for the present work.

According to the theory of the elements, the body was believed to be composed of forty two organs classified into four main divisions corresponding to the elements of earth (pathawithát), water (āpóthát), wind (wáyóthát), and fire (těchóthát). Thus the twenty "hard" organs such as bone and skin are classified as "earth", the twelve "liquid" elements including blood, mucus, and tears, are classified as "water", the six types of bodily

\textsuperscript{48} Described in Anuman (1965b), pp.281-285.
\textsuperscript{49} Terwiel (1979), pp.82-95.
\textsuperscript{50} See Davis (1984), pp.65-71, 79-85, 96-98.
\textsuperscript{51} Terwiel (1979), pp.93-94.
\textsuperscript{52} Mulholland (1979a), p.85.
"wind" are grouped together, and the four types of bodily "heat" are classed as "fire".53 These elements are believed to exist in a state of equilibrium. A change in the function of any of the elements, disturbing the harmony of the whole, results in illness.

Changes in the behaviour of the elements are related to the other factors listed above. Thus variations in climate, associated with the different seasons (utu)54, and with changes in habitat (prathēt), can cause illness to occur.55 Different stages of life (āyu), or times of the day (kāla), may also cause certain elements to behave abnormally. Lastly an individual's own behaviour (mūnhēt) may affect the function of the elements. Illness can result from demands which exceed the body's capabilities, indulgence, deprivation, or suppression of its functions. Thus such behaviour as over-eating, poor posture, lack of sleep, grief, anger, and overwork can all lead to sickness.56

2.3.5. "Hot and Cold" Theory and Diet

There are a two other important traditional Thai beliefs regarding illness causation which should be briefly mentioned here. These beliefs consist of what has been termed the "hot-cold" principle,57 and dietary proscriptions. They have been closely linked to Indic humoral theory in descriptions of Thai medicine, and also bear some associations with the beliefs regarding magic described above.

According to the "hot-cold" theory, which is prevalent in the Americas and in a number of Southeast Asian cultures in close proximity to Thailand, including the Chinese, Malay, and Burmese, it is believed that excessive hotness or coldness of the body may result in illness.58 Evidence for the occurrence of this belief in Thai culture comes mainly

53 See ibid., pp.90-95 for a detailed description of these elements.
54 Mulholland (1979a) describes three different systems of calculating the seasons: based on 3, 4, and 2 seasons per year (pp.98-99).
56 Ibid., pp.101-102.
58 Ibid.; Manderson (1986); Laderman (1981); Nash (1965), pp.194-196. It has been argued that the "hot-cold" theory is derived from humoral theory which was taken by Europeans to the New World, and to Southeast Asia with Indic and Arabic culture (Hart (1969), p.5). According to some sources the belief may have also existed among some of the indigenous peoples of the Southeast Asian region (Manderson (1986)). But although the "hot-cold" theory is certainly widespread throughout Southeast Asia, there is little evidence which would link its modern expression with its indigenous form.
from interpretations of practices observed in connection with childbirth, and certain dietary proscriptions.

As with peoples in other areas of Southeast Asia, the custom of "roasting" the mother during confinement (yū fai) was practised by Thais.59 During this period of lying by the fire it was common for "hot" medicines to be consumed.60 The body of the mother might also be painted with fire-coloured substances such as turmeric and red lime during confinement, which was said to 'quench the poison of the heat' (dap phit rōn).61 The general interpretation placed on these practices is that childbirth was believed to result in an excessive loss of heat from the body which, if not replaced, could result in illness.62

During pregnancy, following childbirth, and in times of illness, it is also common for dietary proscriptions to be observed, among which traces of a "hot-cold" theory can be seen. As Hanks observed in her examination of beliefs associated with childbirth, "every food had known properties for heating and cooling".63 A variant of the "hot-cold" theory may be seen in modern Thai explanations for certain illnesses including ulcers, particularly of the oral region, and systemic illnesses such as colds and fevers. The onset of such illnesses is frequently attributed to rōn nai, literally 'internal heat'. Rōn nai is said to result from the overindulgence in foods which are salāeng ('proscribed under certain circumstances') Among Central Thais the quintessential salāeng foods are durian, sticky rice, and lamyai,64 all of which are highly calorific and may be described by Thais as "heating".

Although this evidence appears to lend some support to the existence of a "hot-cold" theory of illness causation in traditional Thai medical belief, there are some doubts regarding its prevalence. Among Thais there appears to be considerable regional variation in food proscriptions.65 Some of these are in direct opposition to those which would

[59] For a description see Anuman (1965a).
[64] Dimocarpus longan Lour., Sapindaceae (Sa'at (1982), p.485). Sometimes known in English as longan, a fruit similar to a lychee but somewhat smaller in size. The symptoms resulting from overeating of lamyai are usually described as an extreme itchiness of the throat, followed by soreness.
[65] With illness, as in the case of food restrictions associated with pregnancy, there is a considerable amount of regional variation in the determination of salāeng foods. One important factor affecting the designation of foods as salāeng is the significance of particular foods in terms of the staple diet. Thus in Southern Thailand glutinous rice, which does not constitute a central part of the diet, is
follow "hot-cold" theory. Although it is not possible to examine the subject in depth here, it would appear that the "hot-cold" theory is much stronger among neighbouring peoples, notably the Chinese, than it is in Thai culture.

The lack of consistency between "hot and cold" humoral theory and food prohibitions observed here has also been noted in peninsula Malaysia. According to Manderson humoral theory may in fact provide a rationalisation for traditional practices. In the case of childbirth the application of such classifications may have more to do with marking the event of childbirth and the state of womanhood than it does to the properties of foods viewed from a scientific perspective.

This is consistent with the Thai data. Those areas, such as Central Thailand and the far south, where "hot-cold" theory appears to be most evident, happen to be those where there has been the potential for contact with cultures in which these beliefs are pronounced. However, in addition to this explanation, especially in more "remote" regions, quite different rationales may be given for the practices and dietary prohibitions following childbirth. These include "drying out the womb" and the resumption of a regular menstrual cycle, the limitation of further pregnancies, and purification.

often considered lāeng (Golomb (1985), p.142). By way of contrast, in the Northeast, where glutinous rice forms a central part of the diet, it is generally not considered salāeng. However both Northeastern villagers and coastal dwellers appear to consider durian and seafood to be salāeng for a number of illnesses (Mr Jaroon Kanjanaphen, personal communication, October 1986). In the case of seafood the avoidance seems to be general in the Northeast, whereas in the South where it constitutes a significant proportion of the diet in coastal villages, distinctions are likely to be made between various types of seafood.

Hanks (1963) notes, for example, the consumption of "hot" Chinese medicines before delivery (p.38).


Ibid., 517. This is also supported by studies on the actual diet during pregnancy, such as that by Hull (1986) on Javanese women, who pointed out that food prohibitions which are publicly expressed tend to be transgressed in practice (pp.249-250).

Hanks (1963), p.57; Anuman (1965a), p.153. "Drying out the womb" and "making the blood rise" (hai lu'at khu'n) were variants of these explanations offered in the course of interviews in Southern Thailand (Songkhla). The period of yū fai was given as seven days, employing hot stones wrapped in cloth and held against the belly, a method similar to that described by Mougne (1978) in
2.4. Types of Traditional Treatment

It is important to recognise that in traditional Thai society, as elsewhere, a considerable part of the diagnosis and treatment of illness was carried out in the home. Such domestic medicine would have been largely family-mediated and have drawn on knowledge which was transmitted orally, probably taking place prior, or in addition, to consultation with experts. It is likely to have involved a range of activities, ranging from the initial recognition of the symptoms of illness to a variety of therapeutic practices. Though this type of knowledge remains largely undocumented, it is nevertheless a significant phase of illness classification and treatment.  

Some idea of the types of domestic medicine practised by Central Thais is available from historical accounts. One of the most common forms of treatment reported was bathing, which was carried out in the Thai style of ladling water over the body. The high frequency of bathing during bouts of illness was noted in the seventeenth century by La Loubère, and confirmed in another account from that era by Gervaise, who observed that it was continued for several days in the case of fever. Accounts from the nineteenth century also commented on the custom of bathing the sick, sometimes three or four times daily.  

A related practice was the spraying of water over the body. Pallegoix describes the showering of the body by a nurse, who takes in mouthfuls of water in which medicinal plants have been infused, then violently sprays them over the patient as a fine mist. The practice was also observed in the nineteenth century by Bradley. This practice has also been continued into recent times, usually being performed by monks or specialists (mō), often using sacralised water (nām mon) or spirits. Sacralised water may also be

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Northern Thailand (p.81), and Chen (1973) for rural Malays (p.197). It was not possible to determine if this practice is still performed in Southern Thailand.

74 La Loubère (1691), p.63.
75 Gervaise (1688), p.138.
76 Bruguière (1831), pp.169-170; Pallegoix (1854), p.343.
77 Pallegoix (1854), p.343.
78 Bradley (1865b), p.85.
sprinkled over a patient, a practice which appears to be related to its curative value as a "powerful" substance.

Massage is also a technique which was widely used in the treatment of illness. It was described by La Loubère who wrote that the "whole body was caused to be moulded by one that is skilful herein, who gets upon the body of the sick person, and tramples him under his feet." The importance of massage was also observed by Gervaise, who noted its use in the treatment of rheumatism, using small hot stones wrapped in linen.80 According to the report by Pallegoix, it was claimed that by this method the "nerves" could be put back into their natural state.81 Traditional massage continues to be popular today, especially in village settings, where the technique is taught informally to children in the home.

Another common form of treatment prominent in early European accounts involved food. Generally the diet during illness appears to have consisted of those foods which were the staple, such as rice and fish, or accorded special value, such as pork.82 La Loubère remarked on the feeding of the sick person with a rice gruel, and the preference for pork over other flesh during recovery.83 Bruguière stressed the importance placed by the Siamese on making the patient eat, even in the case of severe illness. In addition to recognising the value placed on eating pork during recovery, he also noted the consumption of dried and salted fish, and salted eggs.84 Dried fish and thin rice soup are also specified by Pallegoix as foods fed to the sick.85

Bearing in mind that statements regarding dietary observances might not be matched by actual practice,86 it is clear from the information in these accounts, as well as that relating to food proscriptions discussed above, that the state of illness is accompanied by significant changes in diet. Whether these changes serve to overtly mark the state of illness as different from that of health,87 or are related to other factors such as the nutritional value of the foods involved is problematic.88 The issue is further complicated by the sometimes ambiguous relationship between medicine and food.

81 Pallegoix (1854), p.343.
82 Pork occupies an important place in the rituals of the Thai, as well as most other Tai groups (see Van Esterik (1986), pp.206-207; Terwiel (1980-81), vol.2).
83 La Loubère (1691), p.63.
84 Bruguière (1831), pp.169-170.
85 Pallegoix (1854), p.343.
The administration of medicines (ya) plays a very important part in the treatment of illness in traditional Thai medicine, and in that of most other Tai peoples. Among the Central Thai, ya may be administered orally, or in the form of compresses or inhalations, and knowledge about its use is widely distributed. As Bishop Bruguière observed during the early nineteenth century:

almost every Siamese dabbles in medicine, but almost no-one studies this science; it is not necessary to take courses in a college nor to undergo exams; it is sufficient to be equipped with some herbs and prescriptions.\(^89\)

Even today, the extent of villagers' knowledge regarding the medicinal properties of garden or forest plants may be impressive. Many of these plants serve a dual role as foodstuffs as well as medicines, and as a result their contribution to health and healing is often difficult to assess. As Van Esterik points out, it is not possible to simply view food in terms of dietary restrictions and medicine in terms of cures.\(^90\) This is obviously a question which is of considerable importance for the interpretation of the contents of prescriptions, and it will be addressed in greater detail in Chapter 7 of this work in relation to the treatment of specific illnesses.

The lack of a clear distinction between food and materia medica is indicative of a much more general overlap between medicine and other aspects of everyday life which is also seen in the performance of certain rituals to treat illness.\(^91\) In particular, the belief in 'spirits' is related to a wide variety of agricultural and calendrical rites, in addition to the medical role described above. Such was the importance of 'spirit' belief in everyday life that in times past most villagers, of necessity, probably had some familiarity with propitiatory or preventive practices.

Apart from practices associated with the propitiation or warding off of spirits, two important rituals, the tham khwan and sia kraban, both served in the treatment of illness as well as for other more general therapeutic purposes. The tham khwan ceremony, variants of which are common to most Tai peoples, was performed as a "rite of passage", as well as to prevent illness in cases where a person had undergone some traumatic experience.\(^92\) The sia kraban, as will be seen in Chapter 7 where this ritual is examined in detail, was employed to dispel misfortune in general, as well as in particular episodes of illness.

\(^89\) Bruguière (1831), pp.169-170. See also Beyer (1907), p.7.
\(^91\) The usage of the terms "ritual" and "ceremony" follows that of La Fontaine (1972), pp.159-160.
2.5. Doctors

The lack of a rigid distinction between medical practices and those which serve other purposes in the village context is also reflected in an overlap between the practice of medicine and the pursuit of other occupations. A number of the forms of treatment described above involve complex procedures or specialised knowledge, and were thus amenable to performance by experts, termed mő in Thai.

Although glossed here as 'doctor', the meaning of the term mő is, however, somewhat wider than the range of that term in English, being more akin to "a practitioner of certain procedures requiring special knowledge for their performance".93 The term mő thus also occurs in reference to people responsible for the handling of elephants (mő chāng), snake handlers (mő ngū),94 and to singers of a certain Northeastern style of music, known as mő lam.95

Mő are usually named for the technique in which they are proficient. Thus there are mő yā ('doctors who prescribe medicines'), mő nuat ('massage doctors'), and mő phi ('spirit doctors'). There is also an additional type of 'doctor', the mő tam yāe, specialising in midwifery. Although today these specialties may be full-time occupations, in the past, this was probably not the case. In ancient Thai society it is likely that most 'doctors' occupied the lower social grades and practised medicine in addition to other occupations. The practice of medicine was thus secondary to their obligations towards the regional nobility and the state.96

Apart from the direct restrictions they placed on the accessibility of 'doctors' to patients, the corvée obligations may also have been a factor in restricting the type of medical practice. As La Loubère has suggested, during Ayuthayan times the fear that distinction in an art might lead to a more long-standing period of official duty may have discouraged anything beyond part-time medical practice.97 Later, with the development of monetarisation in the Bangkok period it is likely that the incomes derived by some

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94 Ibid., p.242.
95 As Sri Sawaphang (1918) points out, the term mő may also have a colloquial usage among male friends as a second or third person pronoun, as in the expressions mő nan, or āi mő nan ('that guy') (pp.215-216).
96 In Ayuthayan times commoners (phrai) were obliged to register with leaders (nāī), and perform corvée labour for 6 months in a year (Akin (1969), p.20).
97 La Loubère (1691), p.69.
'doctors' were such that, like other professionals such as artisans and craftsmen, they were able to buy their exemption from official service.98

Part-time practice is still the situation in some rural areas of Thailand, where some forms of traditional medicine are practised by people whose main occupation is farming. Often such 'doctors' will specialise in the treatment of a single illness, such as haemorrhoids. This form of specialisation may reflect the inheritance of skills within families, or even of the basic equipment needed for medical practice, such as prescriptions, texts, special mortars for grinding ingredients, or massage devices such as the mō māi. 99

One important means for the acquisition of knowledge by such practitioners, generally referred to as mō chāw bān ('village doctors'), or mō rātsadōn ('doctors who serve the general public'),100 was through the monkhood. Since almost every male spent time as a monk he had an opportunity to learn to read, as well as contact with practitioners.101 Prior to the nineteenth century monks also appear to have treated illnesses among the general population, a practice which largely ceased following a royal decree issued in the First Reign restricting the treatment given by monks to members of the Sangha.102

2.6. Medical Texts

A further example of the overlap between medicine and other aspects of daily life may be seen in the role played by texts. These held an important place in the traditional medicine of the Thai, as well as most other Tai groups. Their significance was noted in the seventeenth century by La Loubère who wrote:

They trouble not themselves to have any principle of Medicine, but only a number of Receipts, which they have learnt from their Ancestors, and in which they never alter anything.103

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98 Quaritch Wales (1934), p.56.
99 There are several types of mō māi, which literally means 'wooden doctor'. A simple type consists of a piece of wood carved into rounded breast-like protuberances, used for massaging the body. A more elaborate version consists of a rounded piece of wood attached to a longer arm, against which pressure is applied by means of a length of cord (field notes, Rāthburi, May 1984).
102 Yuwadee (1979), pp.53-54.
103 La Loubère (1691), p.62.
As with other types of books, the form of Thai medical texts was largely derived from that of Indic texts.\textsuperscript{104} They were inscribed on palm leaves (bai lan)\textsuperscript{105} or written on khọi paper (samut khọ)\textsuperscript{106} in scripts of Indic origin, often in Pali. In many cases, the content and style also appears to be Indic.\textsuperscript{107}

It seems likely that, along with other aspects of Indic culture, such texts were already well-established among the Mon and Khmer in the Chaophraya River Valley prior to contact with the Thais. It is thus probable that the first Indic medical texts to be acquired by Thais were Mon or Khmer versions.\textsuperscript{108} Further direct contact with India and Sri Lanka after the establishment of the major Thai kingdoms meant that the acquisition of new texts, or of different versions of old texts, was a continuing process.\textsuperscript{109}

This is not to say, however, that the contents of Thai medical texts were entirely Indic in origin. It is very likely that information from a wide variety of sources, including a good deal of "local" content from Thai, Mon, and Khmer sources was also incorporated.

\textsuperscript{104} Guy (1982), pp.11-12. See Terwiel's (1985) study of the incorporation of the "rotating nāga" story into Tai literature. Indic astrological texts were also widely spread through Southeast Asia (Quaritch Wales (1982), pp.vii-x).

\textsuperscript{105} These were leaves of Corypha umbraculifera L., Palmae. It is possible that Borassus flabellifer L., Palmae (Thai tān), was also employed (Agrawal (1982), p.84). The palm leaves were trimmed to size, perforated and strung together with cord. This method necessitated periodic copying of the texts owing to their lack of durability, and it is apparent that this was not always carried out before deterioration had occurred. Should a cord break, it was possible for sections to be replaced in the wrong order, or lost altogether, just as it was possible for new sections to be added. As will be seen, this has important implications for the interpretation of later editions of the medical texts. See Guy (1982) for a brief account of the history of these texts (pp.11-12).

\textsuperscript{106} Samut khọi were books composed of a single strip of pleated paper derived from the bark of Strobulus asper Lour., Moraceae (McF, p.148; Sa'ät (1982), p.87).

\textsuperscript{107} The dialogue style of the Ayurvedic text of Caraka is for example apparent in Thai texts such as the Khamphi chawadan (Samakhom rōngrian phāetsāt phāen bōran Wat Phračhetuphon (1961-76), vol.2, p.144 (hereafter PS, cited in the form: PS : volume no.: page no.)).

\textsuperscript{108} The evidence that the texts came to the Thai via the Khmer is partly based on the fact that many old texts were either partly or entirely written in khọm script. While, as will be seen, this does not in itself constitute proof that the contents came from the Khmer, when coupled with certain linguistic evidence the case appears stronger. For example the initial consonant "v" which occurs in the Pali word vejjja (physician) (PTS, p.646) becomes "ph" in Khmer and "w" in Thai. The appearance of two words derived from vejjja in Thai medical texts, phāet and wēt, both meaning "doctor", suggests acquisition via the Khmer as well as directly from Indic sources.

\textsuperscript{109} Charnvit (1976), pp.100-101, 133-134.
into texts. In certain cases it is even possible that a deliberate attempt might have been made by Thais to compose texts in an Indic or Khmer style.\textsuperscript{110}

It is these features of style and content which make the interpretation of the role played by texts in Thai medicine a difficult task. For, though the possession of texts would have enabled a literate owner to draw upon the information they contained, the value placed upon them probably owed as much to what they represented as it did to their contents. Written in \textit{khôm}, a Khmer script of Indic origin, and drawing heavily on Indic forms, they fitted into the category of "magical objects" described earlier in this chapter. Like other magical objects, texts were believed to confer 'power' on their owner, or the household where they were kept. Thus, in the past it was common for a number of texts to be kept in Thai houses.\textsuperscript{111} In addition to medical works, these "household textbooks" often consisted of works on astrology, or farming rituals copied from texts held in temples\textsuperscript{112} or handed down within a family. They were usually placed in a position of respect, such as above the bedhead in the main bedroom.\textsuperscript{113}

The association between texts and magical power was especially true for texts on medicine, and such beliefs were not confined to village people. The high regard in which medical texts were held by Thai doctors was noted by the missionary doctor D.B. Bradley who lived in Siam during the mid-nineteenth century, who observed that "Nothing astonishes these medical men so much as the sight of a medical library".\textsuperscript{114} Such was the value placed on medical texts that, on occasion, doctors were prepared to risk their lives to keep them.\textsuperscript{115}

In addition to their status as "powerful" objects, medical texts also had to fulfil other functions. Unlike other types of manuals, such as calendrical or astrological texts, which were solely reference works, medical texts probably also served as personal notebooks for doctors. They functioned as both repositories for the knowledge of others, as well as for a doctor's own notes, incorporating such knowledge as might be gleaned from daily experience or obtained from other practitioners. Thus, while La Loubère's comment that

\textsuperscript{110} Quaritch Wales (1983), pp.8, 35.
\textsuperscript{111} Anuman (1961), p.11; Tambiah (1968), p.120; Davis (1984), p.136.
\textsuperscript{112} Anuman (1961), p.11.
\textsuperscript{113} Davis (1984), pp.96, 137.
\textsuperscript{114} D.B. Bradley [journal], 26th July, 1839.
\textsuperscript{115} An item appearing in the \textit{Bangkok Times} of 20th January 1906, for example, records the [fatal] burns suffered by a certain Mły Tà of Prathumthânì who, having escaped with his family from his burning house, returned to rescue his books.
Thai doctors "never alter anything" in their books\textsuperscript{116} may have been true under certain circumstances, it is clear that in some cases additions were made to medical texts.

This process of addition and comment is particularly evident in some of the texts of the court tradition. One notable example of a "compiled" work is the text called Tamrā yā phraʾōsot Phra Narai ("The Royal Medical Text of King Narāi"). This text was compiled between the years of 1651–1661 during the reign of King Narai (1656–1688). It consisted of a compilation of prescriptions presented to the King, which were derived from various sources. Among them was a prescription for the care of cuts and wounds obtained from a European doctor (mō farang).\textsuperscript{117} Included in another major text is a prescription "brought by foreigners" from Jakarta.\textsuperscript{118} These examples indicate that the contents of texts of the court tradition need not have been as static as they might initially appear.

A further issue, closely related to the permanence of the contents of texts, is that of their relationship to actual practice. As Goody has indicated for European culture, there are strong parallels between medical prescriptions and recipes for food.\textsuperscript{119} In both cases the written word fits into a tradition which in the past was largely transmitted orally, much knowledge being assumed on the part of the reader. A similar situation is likely to have prevailed in Thai culture, a possibility which must be considered in interpreting the contents of texts. It may be that the information which was recorded in texts was mainly that which was hard to remember, or pertained to rare or difficult cases, as suggested by Macey with regard to Lao texts.\textsuperscript{120} The texts may thus have served as a body of material intended to complement knowledge which was primarily oral in transmission.

For these reasons, it is difficult to determine the exact nature of the role texts played in the traditional medical context. Their value would appear to reside in the tension between the two forces of conservatism and practical function. Thus in some situations, such as in the village context, medical texts may have simply represented "certificates", used to establish the credentials of practitioners as "powerful" people. In other cases they may have served as useful adjuncts to medical practice. The extent to which their content reflects actual practice is a complex question which will be given further consideration in the course of this work. In any event, the information contained in texts represents the

\textsuperscript{116} La Loubère (1691), p.62, quoted above.
\textsuperscript{117} Damrong (1918), p.2. As will be seen later in this chapter, the expression mō farang is in fact slightly ambiguous, and can mean "a European-style doctor".
\textsuperscript{118} PS:2:177.
\textsuperscript{119} Goody (1977), p.136-144. See also Van Esterik (1988), p.756, for comparisons with Thai prescriptions.
\textsuperscript{120} Macey (1910), p.489.
single most important source of knowledge traditional Thai medicine prior to the modern era.

2.7. The Court Doctors

From ancient times it is likely that 'doctors' of certain specialties were permanently attached to the courts of the king and the various princes or important nobles in the capital and provinces. The official sponsorship of these mį̄ luang ('court physicians') probably encouraged organisation and uniformity within the various disciplines, as well as mediating the introduction of foreign medical practices. Thus by Ayuthayan times (c. 14th century–1767) the court physicians appear to have become established as a department within the Court administration, the Krom mį̄, or Krom pʰāet (the more formal title) to which was attached a substantial library of medical texts.

The Krom mį̄ seems to have been part of a larger department, the Krom lymoonphaet (Department of the Palace Guards). Although this may have reflected a common function in the protection of the King's person, it is likely that the reason for the association between the two departments was more complex. One of the responsibilities of the Palace Guards was to discharge the signal guns to scare off malign spirits from the city at New Year. As noted earlier, ceremonies involving the discharge of guns were also held during plagues to drive off the evil spirits held to be responsible. Both departments thus had a role in the prevention and treatment of illness.

In common with officials in other departments, the court Physicians were ranked and given titles which indicated their position and status (sakdina). In general these positions were passed on by inheritance, although it was possible for common doctors to gain appointment. Details of the positions and ranks within the Krom mį̄ are specified

121 Quaritch Wales (1934), pp.98-99.
122 Ibid.
123 See above, p.16.
124 According to the laws issued by the Ayuthayan king Borommatrailokanat (1448-88) everyone in the kingdom was assigned a number of units of sakdina (literally "field power"). Although it may have originally represented numbers of rai, the unit of measurement for rice fields, by the time of Borommatrailokanat 's legislation sakdina had come to be a purely symbolic indication of differences in status. His laws specified the sakdina of every occupation or position in society, and was reinforced by a system of fines and punishments which punished transgressions according to the status of the parties involved (Wyatt (1984), p.73).
125 Yuwadee (1979), p.53.
in the Kotmāi trā sām duang, which, though compiled during the early Bangkok period (in 1805), probably reflects the structure of the Krom during late Ayuthayan times.

According to this document, the Krom mǒ was divided into five major sections. The first of these consisted of two branches, the Krom phāetthayā nā ('front doctors department') and the Krom phāetthayā lang ('back doctors department'). Rather than the anatomical specialisations which the terminology might suggest, this section seems to have been devoted to forensic medicine.\(^{126}\) That is, the doctors holding positions in the section had to deal with legal cases involving the presentation of medical evidence, such as in poisoning, sorcery, and abortions.\(^{127}\)

The second division was the Krom mǒ rōng phra'ōsot ('Department of Doctors of the Royal Pharmacy') which was also subdivided, in this case into khwā ('right') and sāi ('left') branches.\(^ {128}\) Unlike the forensic division, the two branches of the Krom mǒ rōng phra'ōsot were united under a single departmental head (Čhaw krom), whose high sakdinā value of two thousand indicates that he was probably also the head of the Department of Royal Physicians as a whole. Each of the right and left subdivisions had their own heads (Čhaw krom mǒ yā khwā, sāi), below which were positions held by doctors of various ranks. Both right and left subdivisions also included positions for the preparation of 'utensils' (khru'ang ton),\(^ {129}\) and paediatrics (mǒ kuman).\(^ {130}\)

The three remaining sections within the Department of Royal Physicians were devoted to the specialties of massage (Krom mǒ nuat), eye afflictions (Krom mǒ yā tā)

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\(^{126}\) The use of a division based on "front" and "back" was common in the Thai administration, being also seen for example in the departments of the Wang nā ('Front Palace') and Wang lang ('Back Palace'). In this case the use of the division is said to have been derived from the positions of these offices in relation to that of the King at Ayuthaya, which in turn corresponded to their function, as the vanguard and rearguard respectively, in battle (Quaritch Wales (1934), pp.26-27; Akin (1969), p.28).

\(^{127}\) Yuwadee (1979), p.55.

\(^{128}\) As Quaritch Wales (1934) points out, this use of a division into right and left was a prominent feature not only of the Thai administrative hierarchy but also of institutions in other parts of the world (pp.81-82). Because of its relevance to other aspects of traditional Thai medicine, the role of right and left divisions in classification will be considered more closely in Chapter 3 of this work.

\(^{129}\) The use of the term khru'ang ton, which usually refers to table utensils or food partaken by the King, is somewhat ambiguous here, and could apply to either instruments used in treatment or medications.

\(^{130}\) Krom Sinlapakôn (1978), pp.135-136; Yuwadee (1979), pp.61-63.
and boils and abscesses (*Krom mŏ wannarōk*).\textsuperscript{131} As with the sections discussed above, they were also divided into right and left branches in which positions were ranked according to the *sakdīnā* system.\textsuperscript{132}

Although no comparable descriptions appear to exist for the Bangkok period (1782–present), it seems from the available sources that by the nineteenth century the structure of the Department of Royal Physicians differed from that described in the *Kotmāi trā sāmduang*. For example, a list of doctors assigned to the army commanded by Čhawphrayā Bodindecha, which marched on the Vietnamese in Cambodia in 1840, indicates the addition of certain positions. These included bone-setters (*mŏ prasān*), and a contingent from the 'foreign doctors section' (*Krom mŏ farang*), which probably referred to treatment in the foreign (that is European) style rather than the employment of foreign doctors.\textsuperscript{133}

Some idea of the structure of the Department of Royal Physicians may also be gained from the list of changes in the titles of official positions announced during the Fourth Reign (1851–1868). Included in this list were midwives (*mŏ tamyāe*), snakebite doctors (*mŏ ngū*), and doctors for the treatment of wounds in the foreign and Thai styles (*mŏ bātphlāe farang, mŏ bātphlāe Thai*, respectively).\textsuperscript{134}

In nineteenth century accounts no mention is made of an attachment of the Department of Royal Physicians to the Department of the Palace Guards. Rather, the Department appears to have operated either as an independent *krom* from which doctors were assigned to other administrative sections, such as to the service of the King (*Wang luang*) and other large departments, such as the 'Front Palace' (*Wang nā*) or to army service as required. Alternatively large departments such as the *Wang nā* may have maintained their own departments of physicians, structured similarly to, but separate from, the Department of Court Physicians in the service of the Crown. The latter structure appears to be indicated in the lists of changes in official positions mentioned above for the 4th Reign where the positions of doctors attached to the *Wang luang* and *Wang nā* are recorded separately.\textsuperscript{135}

Accounts dating from the 19th century also make mention of another classification of doctors not apparent in earlier sources, the *mŏ nai* ('inner doctors') and *mŏ nōk* ('outer

\textsuperscript{131} The meaning of the term *wannarōk*, which in modern Thai generally refers to tuberculosis, will be discussed more fully in Chapter 4.

\textsuperscript{132} Krom Sinlapakōn (1978), p.137.

\textsuperscript{133} Prachum Phongsāwadān (1969), pp.183-184.

\textsuperscript{134} Thiphakorawong (1966), vol.2, pp.440-441; Wilson (1970), p.807. Wilson's *bat phāeng* is apparently a misprint for *phīēe*.

doctors'). These terms do not refer to a division between doctors who treated internal ailments and those who were concerned with diseases of the exterior of the body, as described by Pallegoix and Bowring. Rather, they differentiate between the doctors who had access to the King and immediate family, and those who treated other members of the royal family or officials. The positions within these two divisions, as described by Bradley, otherwise appear to correspond to those listed in the *Kotmāi trā sām duang* which were discussed above.

The division between 'inner' and 'outer' doctors may have been derived from the earlier categories of "forensic" and "practising" doctors: by the 19th century it appears that the forensic doctors had ceased to perform their original duties and were possibly engaged in the treatment of patients drawn from the royal household and officials in the administration. These doctors were known as *mō sālā* or *mō nōk*. The original practising physicians were referred to as *mō rōng nai*, and they continued to be responsible for the treatment of the Royal Person and family. By the late 19th century it would appear that this demarcation of duties was not adhered to, and the services of both 'inner' and 'outer' doctors were accessible to royal family and officials alike, according to preference.

2.8. Court Medicine During the Bangkok Period

It is apparent from the above account that a number of the differences in the organisation of the Department of Court Physicians between Ayuthaya and the late 19th century reflected changes in the fortune of the Kingdom. The increasing contact with Europeans, and the developing Siamese administration are two factors which appear significant in this regard. But perhaps the single most important factor in effecting change was the fall of Ayuthaya to the Burmese in 1767. The siege, sacking, and burning of the

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137 Bowring (1857), vol.1, p.144.
138 D.B. Bradley (1865a), p.109; Yuwadee (1979), pp.64-65. As Terwiel (1988) notes, this division was probably related to Thai notions of hierarchy. Because of the 'magical power' which was attached to the Crown, it was necessary that a doctor who dealt with lower-ranked patients not come into close contact with the King's person.
140 Phrabatsomdet Phra Čhunlačhomklawčhawyühua (1965), p.150.
141 Ibid.
city was, from the point of view of traditional Thai medicine, a major crisis, and an important factor in the shaping of its course during much of the 19th century.

The significance of these events for the present study lies largely in the understanding that the fall of Ayuthaya involved destruction of much medical knowledge, the restoration of which was an important task during the early Bangkok period. How this knowledge was replaced, and from what sources, must be an important consideration in any study of traditional Thai medicine. These questions will now be briefly examined, together with an outline of other sources of information on 19th century traditional Thai medicine.

The destruction of Ayuthaya affected medical knowledge in two main ways. The first of these involved medical personnel, and the second the medical texts which formed a necessary adjunct to their practice. Turning initially to the question of personnel, though details are scant it is likely that many doctors, as with other sections of the population, may have perished as a consequence of the fighting or other effects of the siege, such as food shortages and disease. In addition doctors may have been taken by the Burmese as spoils of war, which appears to have been a common practice in those times.143 Then, following the retreat of the Burmese, a problem faced by the Thais would have been a shortage of experienced official doctors.

The Court medical texts appear to have suffered a similar fate to the doctors. This is supported by Koenig, who travelled to Siam in 1778, eleven years after the fall of Ayuthaya, noting in his journal as follows:

I asked one of the chief doctors of the king of Siam about their medical instruction, but learned very little from him. He said that their chief books on medicine had been burned or taken away by the Burmans, and I had much difficulty to get a look into the books which had remained intact.144

Lacking an organised Department of Court Physicians, books not destroyed or taken in the actual conflict145 were also liable to be scattered and dispersed among the general populace or found their way into temple libraries. Judging from the effects on other types of literature, very few texts were preserved. Thus it has been estimated that only one tenth of the previously existing legal literature survived the fall of Ayuthaya.146 The effects of the destruction of Ayuthaya on Court medicine are expressed in a verse included in a later medical text:

The medical texts may be lost forever:

144 Koenig (1894), p.154.
145 See also Reynolds (1982), p.37.
146 Wenk (1968), p.35.
Scattered and disordered for so long a time
Since the [Burmese] devils utterly destroyed the city of Ayuthaya,
The old and learned doctors died; now skill and knowledge disappear.
There remain but those young in learning to again set down the words and
increase knowledge.
Like a crow passing for a swan: who would take them for the same?\textsuperscript{147}

One of the tasks given priority in the early Bangkok period was the restoration of
institutions and texts disrupted or destroyed as a consequence of the Burmese conquest.
With respect to texts, various sources, primarily texts held in temple libraries or by
individuals, were drawn upon to reconstitute lost works. Thus the important cosmological
treatise, the \textit{Trai phûm Phra Ruang} ("The Three Worlds According to King Ruang"), was
re-compiled using texts from two temples outside Bangkok (at Phetburi and Paknam) to
supplement the surviving fragment of the Ayuthayan version.\textsuperscript{148} Later, during the First
Reign\textsuperscript{149} (1782-1809), a committee was appointed to carry out a revision of legal texts,
resulting in the production of an official edition (\textit{chabap luang}) of law books in 1805,
known as the \textit{Kotmâi trâ sâm duang} ("Three Seals Law").\textsuperscript{150} Clearly, from the
circumstances surrounding these editions, the information which they contain, such as that
discussed earlier concerning the structure of the Department of Royal Physicians during
Ayuthayan times, must be taken with care.

Early in the Second Reign\textsuperscript{151} (1809-1824) a revision of medical texts was begun. In
1812, on royal request, the populace was encouraged to present "good" medical
prescriptions to the court. These were examined carefully and revised by the court
physicians and then copied by the royal scribes for inclusion in the library.\textsuperscript{152} The revised
works, known, like the legal texts, as a \textit{chabap luang} ('Royal Edition'), were in the form of
palm leaf texts (\textit{bai lân}) and the first appear to have been completed around 1815, which
is the earliest date appearing on the remaining copies held in the collection of the National

\textsuperscript{147} PS:2:122.
\textsuperscript{148} Reynolds (1982), p.38.
\textsuperscript{149} That is during the reign of Phra Phutthayôtikhulálôk. Following a convention in Thai historical
studies, the Bangkok or Rattanakosin period is divided into periods corresponding to the reigns of
the kings of the Chakri dynasty. Thus the period during which the first Chakri king reigned is
termed the First Reign, that of the second king is the Second Reign, and so on. Dates are provided
in the text.
\textsuperscript{150} Quaritch Wales (1934), pp.165-167; Wenk (1968), pp.35-38.
\textsuperscript{151} Phra Phuthalôetlänaphâlai.
\textsuperscript{152} Damrong (1916a), pp.1 - 21.
Library in Bangkok.\textsuperscript{153} It is likely that, as seems to have been the case with the earlier "Royal Edition" of legal texts, the original versions on which the revised medical texts were based were deliberately destroyed.\textsuperscript{154}

The effects of the fall of Ayuthaya on court medicine may have continued much further than the early part of the Bangkok period. There is evidence to suggest that the process of compilation, revision and dissemination of traditional medical knowledge continued through the 19th century into the Fifth Reign\textsuperscript{155} (1868-1910). As well as resulting in further editions of hand-written texts, usually kept in official libraries, some medical knowledge was also presented in the form of inscriptions open to public access.

The first of these appeared in the latter years of the Second Reign. In the restoration of Wat Chōmthōng (Wat Ōrotarām or Wat Rātchārōt) in Thonburi Phračhawlūkkyāthōe Krommūn Čhetsabodin, the future third Chakri king, arranged to erect plaques bearing medical prescriptions on the gallery walls.\textsuperscript{156} This apparently came from a concern for the preservation of medical texts and to impart knowledge to the public.\textsuperscript{157}

Later, as King Phra Nangklao (reigned 1824-1851), he undertook the major restoration of Wat Phračhetuphon (Wat Phō), including, among the many inscriptions representing knowledge from various fields, medical treatises, together with pictures and statues illustrating various yoga postures used in the treatment of illness.\textsuperscript{158} To supplement the inscriptions a garden was also established, with the intention of containing examples of "every plant of any medicinal value".\textsuperscript{159}

This work of the inscription of medical texts continued in the Fourth Reign, as seen from the drawings and verses displayed at Wat Matchimāwāt in the southern city of Songkhla. These inscriptions were identical with those at Wat Phō, depicting rū'ūśī ('ascetics') in various yoga-like postures for the treatment of certain illnesses.\textsuperscript{160} As with those at Wat Phō, the medical inscriptions were part of a large corpus of work,\textsuperscript{161} seemingly a testament to the refinement and sophistication of (Central) Thai civilisation at that time.

\textsuperscript{153} Khamphī ahiwatakārōk(1815); Khamphī rōkanithān (1815).
\textsuperscript{154} Wenk (1968), p.37.
\textsuperscript{155} King Chulalongkorn.
\textsuperscript{156} Khrōŋkān phōei phrāe ekalak khōng Thai ('Programme for the Promotion of Thai Identity') (1979), p.9.
\textsuperscript{157} Ibid., p.2.
\textsuperscript{159} Dhani Nivat (1969), p.28.
\textsuperscript{160} Krom kānū'khat khrū (1978), pp.15-39.
\textsuperscript{161} Ibid., p.15.
Up until the time of these inscriptions the contents of medical texts were, for reasons which will be discussed later in this work, generally guarded closely by doctors. It is of interest to consider briefly the motives which may have lain behind their unprecedented public display. Most accounts attribute the public display of inscriptions containing medical knowledge to a desire on the behalf of the Thai monarch to conserve the texts and to benefit the population.\(^{162}\) However it is likely that, at least in part, the motivation for such projects came from more complex political reasons.

One motivation may have been an attempt to establish legitimise a claim to the crown. The performance of acts which are recognisably charitable fits well with the popular conception of the behaviour befitting a Buddhist king. To this extent the efforts taken towards the display of medical knowledge by King Phra Nangklao would have done no harm to his credibility. Though it is doubtful how accessible the information would have been to the general public, in the eyes of the nobility and the populace at least Phra Nangklao, in promoting medical knowledge, had demonstrated his worthiness as monarch. Echoes of such acts may still be seen today in the royal sponsorship of projects involving traditional medicine.\(^{163}\)

It is also likely that the display of knowledge and refined civilisation served as part of more general attempts to consolidate the state. In the context of increasing contact with European powers in the late Second and Third Reigns it may have been timely to make gestures which emphasised Thai cultural values.\(^{164}\) Medical knowledge is again well-suited to this end, representing valuable "essentially Thai" learning which may be held up in comparison to foreign culture and ideas. Interestingly, traditional medicine has also been a prominent feature of recent programmes intended to encourage Thai national identity.\(^{165}\)

2.9. The 1871 Edition of Court Medical Texts

In addition to the political role which the temple inscriptions of medical knowledge may have played, they were also associated with textual revisions and the ordering of information. Thus the information presented in the Wat Pho inscriptions was also

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\(^{163}\) For example the Khruongkān tām phrarātdamri suanpā samunphrai.

\(^{164}\) Wyatt (1984), p.175.

\(^{165}\) See for example the publications issued under the Khruongkān phōei phrāe ekalak khōng Thai of the Ministry of Education.
recorded in a series of illustrated manuscripts to be housed in the Royal Library, copies of which were made and distributed among various departments.166

Such textual revisions, which were apparently intended to benefit the court physicians rather than the public, may be seen as both a continuation of the restoration of medical knowledge lost in the fall of Ayuthaya as well as necessitated by the nature of the medium itself. For the palm leaves on which early texts were written were liable to deterioration and insect attack and had to be periodically re-transcribed to preserve the contents. Thus the reasons given when, in the Fourth Reign, in 1871, a further extensive revision of texts was undertaken by a committee of court doctors on royal appointment, were to "conserve, re-order, and correct" the medical texts.167 The new "Royal Edition" was written on the more durable khōi paper books.

This 1871 edition of texts came to provide the basis for the main works used in the teaching of traditional Thai medicine today168, and for the examination of illness classification to be undertaken here. Following the discussion in the preceding pages, the edition of texts produced in 1871 should be seen in the context of the events which surrounded the foundation of the Bangkok period, and the developments which followed. European contact, in particular, affected the organisation of the Royal Physicians, and probably prompted attempts to emphasise the identity of Thai medicine.

The revision and recompilation of texts which was precipitated by the fall of Ayuthaya meant that the Royal Editions inevitably contained information drawn from widespread sources. This is not to say that there was any consistency in their content prior to that time. Because of the ephemeral nature of the materials on which they were written, texts needed to be copied continually, together with changes and additions. Although commentators have characterised the contents of texts as unchanging,169 the potential for variation in content was nevertheless great, as will be seen in the course of this work. The events of 1767 may thus be seen as a very dramatic instance of a process which had probably gone on long before that date, and continued for some time afterwards.

2.10. Textual Sources for this Study

With this background information in mind, it is possible to consider some of the major sources of information for the present study. The main body of material available is the collection of texts compiled and published by the Wat Pho Traditional Medical College

166 Griswold (1965), pp.320, 322.
167 PS:1:1.
168 Mulholland (1979a), pp.82-83; MTP, pp.20-22.
169 See above, pp.28-30.
Association (Samākhom rōngrian phāetsāt phaēn bōrān Wat Phračhetuphon) under the title Phāetsāt songkhro ('Collected Medical Science'), which is largely based on the Royal Edition of 1871. The history of this work has been described in detail elsewhere by Mulholland.¹⁷⁰

A number of the texts included in Phāetsāt songkhro are held in form of palm leaf and paper manuscripts in the collection of the National Library in Bangkok. Among them are some identifiable as part of the various Royal Editions of 1812 and 1871, or close copies of those texts.¹⁷¹ In addition the collection houses a good many miscellaneous texts, derived from a number of sources including temple libraries and private collections. Although, to judge from their style and condition, a number of these are undoubtedly very old, they rarely give any indication of the date they were written, or place of origin. However, much of the content of these miscellaneous texts resembles that of that in texts included in the Royal Editions, and for this reason they provide a useful means by which doubtful points in the other editions may be cross-checked.

In addition to the texts described above, there are published editions of some of the temple inscriptions. The Wat Phō medical inscriptions have been published by the Wat Phō Traditional Medical College Association as Tamrā phēsat ("Texts on Medicine").¹⁷² Transcriptions of the medical inscriptions at Wat Rātcha'ōrot, Thonburi, and Wat Matchimāwāt in Songkhla are also available.¹⁷³

There are, in addition, some modern commentaries or guides on the most important traditional medical texts. The principle one of these is that written by a present-day practitioner, Matthayat Dārōt, mainly intended as a guide to the Phāetsāt songkhro texts for students. Besides this work, a three volume pharmacopoeia, with descriptions and alternative names of the materia medica appearing in Phāetsāt songkhro has also been published by the Wat Phō Traditional Medical College Association.¹⁷⁴

These Thai materials may be further supplemented by information derived from the other sources mentioned in the previous chapter.¹⁷⁵

¹⁷⁰ For a description of the provenance of this work see MTP, pp.14-19.
¹⁷¹ MTP, pp.26-27.
¹⁷² Samākhom rōngrian phāetsāt phaēn bōrān Wat Phračhetuphon (1962) (henceforth TP).
¹⁷³ Khrongkān phēei phrē ekalak Thai (1979); Krom kānfu'khrt khrī (1978).
¹⁷⁵ See Chapter 1, pp.7-9.
3.1. Introduction

Before proceeding to an examination of the classification of illnesses in traditional Thai medicine it is important to review some of the recent work which has been done on illness classification in general. In the first part of this chapter we will look at some of the approaches which have been taken to the study of human categorisation, as well as the ways in which it is linked to the body's physiological system, in particular the immune response. In the second part of the chapter we will examine the implications which these studies might have for the classification of illness. It will be argued that the recognition and naming of illnesses may in itself constitute a fundamental step in the initiation of the healing process.

3.2. Categorisation

Categories of things are not "out there" in the "real world" beyond our senses. They are the result of the interpretation and organisation of our sensory perceptions by the mind and are a means by which we can cope with the apparently infinite diversity of stimuli we receive from our environment. Categorisation is thus linked to survival and is guided by what Rosch has termed "cognitive economy", the differentiation between stimuli on the basis of the maximum advantage to the organism for the purposes at hand.

This differentiation between things is made through the recognition of relationships between them, through similarity or contiguity. That is, things may be recognised as sharing certain features, such as form or habit, or they may bear a common relationship to some other thing. The nature of the features which are salient is largely determined by the relationship between the perceiver and the environment, and may have a physiological base. Thus there is

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2 Rosch (1977), pp. 1-2; Simpson (1961), p.3.
4 Simpson (1961), p.3.
5 Hunn (1976), p.504.
considerable variation between species as to the salience of certain stimuli. Common examples are the enhanced sense of smell in dogs and of sight in birds of prey, relative to those of humans.

The immediate physical and social environment also markedly influences the types of attributes which are salient. Categories may thus be defined by purpose, which Lakoff has termed their "interactional properties". For example, we recognise a category "chairs" through their function as "things to be sat on", and "knives" as "things which can cut (in a certain way)". According to relativist theories, such as the so-called Sapir-Whorf hypothesis, the attribution of names may also contribute to the definition of perceptions. This might seem to imply that there should not necessarily be any consistency between cultures (or between individuals) as to the characteristics which are perceived as salient. However, since the time when this theory was first proposed, a large body of evidence has accumulated which demonstrates that there is in fact considerable agreement in what humans perceive as salient. This is especially the case with respect to folk biological classifications which exhibit a high degree of pan-cultural regularity.

Categories may be related in several ways. It will be convenient here to divide a discussion of these relations, following Rosch, into horizontal and vertical dimensions. This division is based on the observation that categories vary in the degree to which they may be contrasted: some are more inclusive than others. For example the categories "dog" and "cat" are comparable, whilst both are included in the more general category "animal". The category "animal" may in turn be said to occur at a similar level of contrast to "plant". Thus the horizontal relations of a category refer to those with other categories at a similar level of contrast, while the vertical relations are those with categories to which it is subordinate or superordinate.

To begin with the horizontal dimension, categories are not necessarily defined by a fixed set of attributes. The members of a given contrast set may draw their attributes from a pool of salient features, of which no one feature is common to all. This type of relationship

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8 See, for example, Berlin and Kay (1969).
9 "Folk" is used here, following the definition of Clement (1982) to refer to "any group of people participating in a cultural tradition" (p.211 fn.1).
was termed "family resemblance" by Wittgenstein, and in more recent literature "polythetic". Category membership may also be graded, that is, although a characteristic may be common to all members of a category, there are degrees of commonality, resulting in so-called "fuzzy sets".

Largely through the work of Rosch and Berlin and Kay has come an awareness that among entities in the same contrast set some may be recognised as being more typical than others. Rosch demonstrated that the most exemplary members of a category are those which conform most closely to prototypes which form around the most perceptually salient points in the domain. Prototypes may be regarded as clusters of interactional properties which act as gestalts, that is overall shapes that characterise what Rosch has termed basic-level categories. These categories represent a basic level at which categories are formed from perceptual information and correspond to "natural discontinuities" in stimuli.

Rosch argued that semantic noun categories are differentiated on an analogue rather than a digital basis in terms of their relationship to the prototype. Some categories are graded, with fuzzy boundaries, such as with colours, while others have clear boundaries within which grading occurs on the basis of the prototype. The domains of plants and animals are examples of the latter case.

Whilst, as noted above, the types of features which are salient, and hence the resulting basic level categories, are generally uniform cross-culturally, this does not extend to the vertical dimension. According to Rosch, the basic level of categorisation is the most inclusive level at which categories can mirror the structure of attributes perceived in the world. Other levels of inclusiveness are possible, but may not be as useful to the individual as the basic level. Categories superordinate to the basic level share only a limited number of attributes in

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14 Wittgenstein (1953), pp.32-34.
16 See Lakoff (1987) for a review of these theories.
17 See Rosch (1977) for example.
21 Ibid., p.29; Lakoff (1987), pp.56, 200.
23 Rosch (1977), p.3.
common, too few for normal usefulness, and those subordinate exhibit many areas of overlap, more than required for normal purposes.

For special purposes, however, it is useful to consider things at these different levels of contrast, that is in more general or more specific terms than usual. The criteria which are salient in such circumstances are largely dependent on the purpose at hand. Often they may be the result of the application of certain criteria determined \textit{a priori}, termed by Hunn "explanatory classifications".\footnote{Hunn (1977), pp.45-47, 62.} Scientific classifications and so-called "symbolic classifications" are both types of explanatory classification, since they are both based on possession of a limited number of defining attributes.

In the case of scientific classifications, attributes are selected on the basis of some theoretical premise, for example phylogenetic criteria in the case of plants and animals.\footnote{Simpson (1961), p.50.} The classification system for plants devised by Linnaeus was based on an existing "folk classification", modified using salient attributes related to reproductive anatomy.\footnote{Stafleu (1971), p.27ff.} With symbolic classifications the criteria may include a fixed numerical division, as occurs with the common use of binary pairs such as right/left, and male/female, or through association, by resemblance or physical proximity to something of symbolic value.\footnote{Needham (1979), pp.66-67.} The important difference between symbolic classification and other types of explanatory classifications is in the potential of symbols to link things from quite diverse areas of experience. That is, they allow a further stage of perceptual organisation.\footnote{Ohnuki-Tierney (1981b), p.451.}

These different types of explanatory classifications may be illustrated using the example of the basic level category "dog". The category dog is the result of a configuration composed of a number of features including ears, tail, snout, and so on, of a particular type, none of which in themselves account for the quality of \textit{dogginess}. In a scientific classification developed for the basic level category "dog", emphasis will be placed on those features which contribute to an understanding of the evolutionary background of the dog. These may consist of only a small number of characteristics, say hair type or teeth, which are determined as representing critical differences between dogs and other related animals such as wolves. A dog-fancier's classification, on the other hand, may place emphasis on altogether different criteria, such as the relationship which the dog bears to man. Thus in dog shows there are categories such as gun dogs, and sheep dogs. Within these categories the salient
characteristics will reflect the special purpose in mind, giving emphasis to features which are important for the role the dog is intended to carry out. In certain other contexts, the dog may figure in a symbolic classification, as it did for example in ancient Egyptian belief, where it represented Anubis, the god of death, and which was thus ranked with the remainder of the pantheon.\textsuperscript{31}

In illustration of the conflict which may occur when an entity is classified according to two systems, Hunn gives the example of the case where an animal is accorded a symbolic value, as with the eagle for the Ojibwa, which is both a bird (and therefore classified with other animals), and a 'thunderbird' (and thus also classified as a spirit).\textsuperscript{32} However, the occurrence of an entity in more than one classification system need not be a problem. In fact this linking of different areas of experience may be of some advantage. As we will see later in this chapter in respect to the domain of illness, the possibility of such links with other domains may play an important role in healing.

3.2.1. Naming and Taxonomies

Naming, the representation of concepts by words, is an important initial step in the classification process.\textsuperscript{33} In addition to the obvious survival advantages which result from the ability to communicate through language, the attribution of a name also contributes, as we have noted, to the definition of the perceptions to which it is linked. That is, it may imply that phenomena are consistent and definable. While, as we will see, this ordering of perceptions may be advantageous, especially in regard to healing, there remain limits to the extent to which names can be taken as adequate representations of phenomena. This is most clearly seen in the attempts which have been made to develop a model to represent the relationships between names.

Category names and the relationships between them have most commonly been examined using a taxonomic approach. Until recently this approach has predominated in studies of classification, and for this reason we will examine the taxonomic model in closer detail, as well as some of its inadequacies.

The taxonomic model owes its origins in large part to the methodology devised during the development of the biological sciences to classify and to account for the diversity of

\textsuperscript{31} Lurker (1980), p.28.
\textsuperscript{32} Hunn (1977), p.62.
\textsuperscript{33} It should be noted, however that concepts may also be represented by other linguistic forms and non-verbally (Keesing (1981), p.88; Ohnuki-Tierney (1981a), p.160). Here, since the primary focus of this study is on the names of illnesses, the discussion will not be widened to include these other forms.
species. The model, which proved so successful in scientific enquiry, has, under the label "ethnosemantics", also been applied with considerable success by anthropologists to folk biological categorisation. Using nomenclature as a guide considerable regularities have been demonstrated in the folk biological taxonomies obtained from across a diversity of cultures.

The taxonomic structure is formed by the hierarchical arrangement of named categories, or taxa, on the basis of subordination and inclusion, with the taxa occurring at any one level in the taxonomy being referred to as a contrast set in that they are derived from an exhaustive division of the same preceding taxon.

According to Berlin et al. folk biological taxonomies characteristically consist of five levels of inclusion, or ranks, which they term, in order of decreasing inclusiveness, unique beginner, life form, generic, specific, and varietal. Berlin et al. also described in detail the characteristics of these ranks, and it will be useful here to briefly outline them, with illustrations where possible from Thai taxonomies.

3.2.2. The Unique Beginner

This is the taxon which includes all other taxa. The unique beginner (UB) is characteristically labelled by primary lexemes, that is by "unique, single-word expressions, which are semantically unitary and linguistically distinct". However in folk taxonomies taxa at this rank are frequently unlabelled, or have no single, habitual label.

In Thai folk biological classification although UB taxa are usually named in accordance with these principles, the words used are frequently of Indic origin. For example in Central Thai a word of Sanskrit origin, sat, is employed to designate the UB category 'animal'.

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34 Simpson (1961), pp.16-17.
35 See for example Berlin, Breedlove, and Raven (1974) and Hunn (1977). The use of the term "folk biological" here follows that of Berlin et al. to refer only to the domains of plants and animals.
36 "Nomenclature is often nearly a perfect guide to folk taxonomic structure": Berlin, Breedlove, and Raven (1974), p.27.
40 Ibid., pp.26, 28-29. The term lexeme is defined by Conklin (1969) as a "meaningful form whose signification cannot be inferred from a knowledge of anything else in the language" (p.43).
42 From the Sanskrit sattva, meaning 'living or sentient being, creature, animal' (MMW, p.1135.).
Similarly the word for 'plant', is represented in Thai by *phru'k*, also derived from Sanskrit.\textsuperscript{43} The fact that both of the above examples of UB taxa appear to be either unlabelled or inconsistently labelled amongst the various Tai dialects\textsuperscript{44} would support the hypothesis that it was in response to a need to provide names for such taxa which led to the adoption of exotic words at the UB level in some Tai dialects. In particular for Central Thai, with its long exposure to Indic influence, the adoption of Sanskrit words would have been likely.

Although there has been some debate as to the extent to which the sharing of classifiers provides a reliable means of differentiating taxa and marking concepts,\textsuperscript{45} in general Thai classifiers appear to provide an accurate guide to membership of a particular domain. For example the word *tua* is the classifier in the case of animals, or animal-like things, and *ton* for plants and trees. In folk taxonomic studies classifiers have mainly been regarded as indicators for the existence of taxa rather than substitutes for them,\textsuperscript{46} however, as Chamberlain has shown, in Thai *tua* may in some cases substitute for the UB taxon.\textsuperscript{47} Such metonymic\textsuperscript{48} substitution presents problems for the traditional taxonomic approach, but, as will be seen later in this chapter, it fits comfortably with more recent theories on categorisation.

### 3.2.3. The Life Form and Generic Ranks

Taxa in the category *life form* (LF) are, according to Berlin *et al.*, comparatively few in number, characteristically polytypic, and labelled by *primary lexemes*. They include the majority of all taxa of lesser rank.\textsuperscript{49}

Taxa at the *generic* (G) level are more numerous than LF taxa but finite in number.\textsuperscript{50} They are usually included in the LF taxa, nevertheless there may be aberrant classes which are included directly in the UB class. There are likely to be a number of reasons for this, prominent among them being morphological conspicuousness and economic importance. Like LF taxa, generic taxa are generally labelled by primary lexemes, and represent the most psychologically prominent, and commonly referred to groupings of objects in the natural

\textsuperscript{43} From *vriksha*, meaning 'plant' or 'vegetation'. (MMW, p.1008). Unlike *sat*, which is common vocabulary, the use of *phru'k* is generally confined to more literary or scientific contexts.

\textsuperscript{44} Chamberlain (1977), p.48.


\textsuperscript{47} Chamberlain (1977), pp.48-49.

\textsuperscript{48} Strictly speaking, this is synecdochic, however, for reasons given later in this chapter, the term "metonymic" will be used in this work to refer to both synecdoche and metonym.


\textsuperscript{50} Ibid., p.26.
environment. They are also likely to be among the first taxa to be learned by children. They are thus equivalent to the basic level categories which we have described above.

For the most part, Tai folk taxonomies at the LF and G ranks fit these criteria, however in one respect they show a marked divergence from those taxonomies described by Berlin. This is in the direct subordination of G taxa to UB taxa. In an analysis of Tai zoological taxonomy, Chamberlain has shown that approximately half of all named taxa are not dominated by LF taxa. Furthermore, the direct subordination of taxa at the generic level to UB taxa, a phenomenon which Berlin regards as aberrant would appear to be a regular feature of Tai languages:

...in Tai the exception seems to be the rule. Moreover this is not a recent development, or the result of a stage in the evolution of zoological nomenclature, for the same system is found throughout the Tai family, and apparently the Kam-Sui family as well, a diachronically stable classificatory apparatus.

This would also appear to be the case in botanical classification, where plants are frequently named by "independent uninomial forms", that is primary lexemes. These taxa, exemplified by such commonly used plants as ginger (khing), and 'chilli' pepper (phrik), are subordinated directly to the UB taxon rather than to one of the LF taxa such as 'vegetable' (phak). Owing to the number of G level taxa which are dominated directly by the UB taxon, Tai botanical taxonomy is, like the zoological taxonomy, characteristically asymmetric.

With respect to zoological classification this asymmetry may largely be explained by the classificatory criteria employed by Tais. According to Chamberlain, a chief criterion for classification may be that of anthropocentric distance, that is the relationship which animals bear to humans, which he cites as a fundamental Tai cosmological principle. The use of LF taxa is limited to those taxa which are least like humans:

Thus birds, fish, and snakes, because they lack limbs readily identifiable as arms and legs, are more distant; whereas mammals, lizards, turtles, and amphibians

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51 Ibid., pp.26-27.
52 Chamberlain (1977), pp.21, 192.
56 Chamberlain (1977), p.25. It is possible that the criteria may be of a more subtle nature. According to Simmonds (1978), the apparent distinction between wild and domestic, for example in the naming of birds, may not always prove a reliable guide, and it is possible that other characteristics, such as the type of movement of which they are capable, are employed in the selection of categories (p.134).
possessing these physical characteristics are not dominated by LF taxa, only UB. 57

In the case of certain other animals a rather more literal notion of anthropocentricity would seem to apply, however. For example in Central Thai there is a term malāeng which corresponds in many cases to the English word "insect(s)", as in malāeng wan ('housefly'), malāeng sīp ('cockroach'), and malāeng mum ('spider'). There is also a group of insects, consisting of mat ('fleas'), mot ('ants'), yung ('mosquitoes'), rai ('mites'), len ('nits'), haw ('lice'), and phu'ng ('bees'), with which the prefix malāeng does not usually occur. In Berlin's terms they are thus directly affiliated to the UB taxon. What appears to distinguish this latter group of insects is that they are all of a particularly annoying type. 58 They are significant and well-differentiated because of their irritant nature. Thus, rather than "anthropocentric distance", a better term to describe the criteria for classification might be "cultural salience". This fits with certain other observations which have been made on zoological and botanical classification amongst the Northeast and Northern Thai.

Tambiah has discussed the lack of "affiliation" of some zoological taxa in Northeast Thai to which he links to certain dietary rules, and taboos. 59 It is possible to take issue with certain features of Tambiah's presentation of Northeast Thai zoological taxonomy, some minor, 60 and some of greater importance. 61 But, leaving these questions aside, if we take the reverse of Tambiah's case to be true, then rather than certain animals being subject to food prohibitions because they are "unaffiliated", their anomalousness becomes a reason for their salience and hence lack of affiliation. 62 For most of the animals cited by Tambiah as unaffiliated, certain readily-observable features come to mind which would cause them to "intrude" on Thai perceptions. For example house rats (nuu sing) 63 would be salient because

57 Chamberlain (1977), p.27.
60 For example his exclusion of the categories ngii. (‘snakes’) and pa (‘fish’) from his list of "major" (i.e. LF) categories (p.443).
61 These include the issue of whether categories such as sat nam, sat pā and sat bān can really be said to occur at a similar level of contrast to the categories nok and malāeng. Another issue is the edibility of certain animals such as snakes and dogs, which, though not a part of the "everyday" diet are certainly eaten on some occasions. See Chapter 7 for further discussion of diet.
62 For further elaboration of this argument, see Bulmer's (1967) comment on Douglas's discussion of the role of the "anomalous taxonomic status" of the pig in Biblical writings (p.21). See also Ohnuki-Tiemej (1981a), p.124.
63 I have followed Tambiah's transliteration of Northeast Thai names.
of their proximity and nuisance value, the *khapkae* by its proximity and call, the *hia* and other lizards because of their ugliness, snakes because they are poisonous, *ii haeng* ('vultures') and *ii kaa* ('crows') because of their association with death, and the toad through a combination of characteristics including sound, proximity, appearance, and possibly its poison. The features listed here are, of course, not definitive and there are almost certainly additional prominent features depending on locality, but they do suggest that there are good reasons for the salience of these animals without looking for classificatory "anomaly".

In Northern Thai a feature of the names of certain types of animals which appear to be unaffiliated to any of the major named categories is the prefix *f*. As we have seen above, this prefix also occurs in the Northeast Thai names for crow and vulture, both unaffiliated types of animals. The use of the term *f* is in fact widespread amongst Tai groups, occurring, in addition to zoological and botanical naming, in affectionate diminutives, kinship terms, female appellatives, ancestral terms, and a variety of other contexts. In Northern Thai *f* is found in terms of address, before the names of younger females, in address by children to their parents, and before the names of certain animals. The term may imply a lower social status, and constitute part of a term of abuse. According to Wijeyewardene (1968), the animals which take *f* as part of their name are generally small, familiar, wild animals, and the use of the term marks their intermediate status between wild animals *par excellence* (such as tigers), and domestic animals. This would also appear to hold for Northeast Thai, although the species to which it applies differ from Northern Thai. As Chamberlain points out, there is in fact considerable variation in the semantic domain for *f* between Tai languages. In general, however, when it is used in the zoological or botanical domains, this female-associated term

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64 Central Thai *tukkāe*, family Gecknoidae (McF, p.371), a large (15-25cm) house lizard conspicuous by its distinctive call.

65 Monitor or water lizard, genus Varanus (NMT, p.323).

66 Wijeyewardene (1968), pp.81, 85.

67 Ibid., p.81.


69 Wijeyewardene (1968), p.76.

70 Ibid., p.79.

71 Ibid., pp.80, 89.


serves to "domesticate" familiar wild things. This is of particular relevance to the domain of illness, for it also occurs in the naming of some illnesses.

In zoological and botanical taxonomies there is thus strong evidence of an attempt to make certain plants and animals familiar. In other words, the classification may function to reduce the potentially disruptive effect of unusual or dangerous things by reinterpreting them in terms of aspects of the environment which are already well-understood.

3.2.4. The Specific and Varietal Ranks

Taxa in Berlin et al.'s categories specific (S) and varietal (V) are less numerous than those of the G rank. They occur in contrast sets of few members, most frequently of two. Taxa in these categories are commonly labelled by secondary lexemes, that is they occur in contrast sets the names of the members of which all include that of the superordinate taxon.

Taxa in these two ranks are differentiated by criteria which are polythetic, that is, they do not possess a set of characteristics in common, but characteristics are drawn from a pool of features. For zoological taxa these criteria may be based on habitat, colour, food of the organism, the organism as food, folklore, shape, sound, habits, or taste; in short salient characteristics of the organism's natural history. For example, in Central Thai bird (nok) classification, habitat and origin appear to be important differentiating criteria. Thus the European sparrow is simply known as nokkrachok, the Malay tree sparrow nokkrachok bān (literally 'town (or 'village') sparrow'), the Pegu house sparrow nokkrachok pā ("wild sparrow"), and the Indian house sparrow is called nokkrachok thēt ("foreign sparrow").

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74 Ibid., pp.38, 195.
75 For example I dam I daeng ('measles'; McFarland adds: "Used by uneducated people") and I suk I sai ('varicella' ('chickenpox')).(McF, p.1001).
78 Chamberlain (1977), p.35.
80 Passer montanus malaccensis, Deig., McF, p.20. McFarland notes that the bird is very common in the city and villages, but is rarely found in the open countryside.
81 Passer flaveolus, Will., McF, p.20. McFarland adds that the bird is common in the ricefields and occasionally found close to the outskirts of towns.
82 Passer indicus (var. flavicollis), Gaird., McF, p.20.
83 This term is also used to designate the ostrich.
Similarly, botanical classification at this level is commonly based on physical characteristics or habitat.\textsuperscript{84}

### 3.2.5. Inadequacies of the Taxonomic Model

Since the development and application of this model to folk biology, there has been an increasing awareness of its inadequacies. These become even more apparent when attempts are made to extend the model's application to non-biological domains which, in contrast to biological domains, are not well-differentiated phylogenetically. Some of the problems with the taxonomic model have already been encountered in the description above. These were: the existence of unlabelled taxa, the direct subordination of taxa at the G rank to the UB rank, and the question of classifiers. In addition to these problems others which have been noted concern the assignment of rank, ambiguity in the determination of inclusion relationships, polysemy, and perhaps most importantly, questions relating to the validity of the model in general when applied to the way in which categorisations are used in everyday life. It will be useful to examine some of these questions in greater detail.

The assignment of rank is a question which has been the subject of some debate, since the characterisation of a taxon as UB or Varietal would appear to be arbitrary, especially with respect to non-biological domains.\textsuperscript{85} According to Kay the assignment of rank is based on empirical considerations and does not generally follow from a knowledge of immediate precedence,\textsuperscript{86} a situation which has been described as \textit{ad hoc}.\textsuperscript{87} With respect to biological domains, while admitting the difficulty in determination of which empirical considerations are involved in particular cases, Berlin nevertheless maintains that different ranks of taxa can be successfully established.\textsuperscript{88} The criteria he employs are diverse, and in addition to nomenclature include: indirect linguistic evidence such as the existence of exclusive morphological vocabularies for a particular domain; unsolicited recognition of the domain by informants; polytypy and monotypy, that is the number of constituents in contrast sets; the number of defining characteristics (few at the LF rank and many at the G rank); and the

\begin{itemize}
\item \textsuperscript{84} Simmonds (1978), pp.138-139. However these criteria may not always be reflected in the names of categories, as seen in the number of varieties featuring the name of the discoverer, or other prominent people.
\item \textsuperscript{85} Durrenberger and Morrison (1979), pp.408-409.
\item \textsuperscript{86} Kay (1975), p.161.
\item \textsuperscript{87} Hunn (1976), p.519.
\item \textsuperscript{88} Berlin (1976), p.383.
\end{itemize}
degree in diversity in biological extension, that is the number of distinct biological species included in a taxon.\textsuperscript{89}

In addition to these criteria, recent research has also indicated the importance of perceptual salience as a criterion in the establishment of rank.\textsuperscript{90} As Rosch has demonstrated, there is a primary level at which classificatory cuts in the environment are made which she termed the basic level of categorisation.\textsuperscript{91} As noted above, this basic level of categorisation appears to be at the G rank for the biological taxonomies described by Berlin, however there is convincing evidence that for more technologically sophisticated societies the LF rank is more salient.\textsuperscript{92} The rank at which basic level categories occur is therefore thought to be a function of the cultural importance of the domain.\textsuperscript{93}

Thus taxonomies are not defined by commencing with the UB and working downwards through levels of inclusion. Rather, on the basis of the above-mentioned studies, it would seem that they are first defined at a basic level with superordinate and subordinate ranks being established later.\textsuperscript{94} This is a point to which we will presently return since it is related to other problems in the application of the taxonomic model.

Another problem which has been encountered in the application of the taxonomic model, particularly in respect to non-biological domains, is that of ambiguity in inclusion relationships. There are several types of ambiguity involved here, but the main ones are cross-cutting, where an entity is subordinate to more than one taxon,\textsuperscript{95} and what Hunn terms non-transitive relations between members of a single contrast set, that is where they are grouped together on the basis of their likeness to other members of the set.\textsuperscript{96}

Both of these phenomena have been observed in Thai taxonomies: we have already seen how the prefix ɨ functions to link taxa from disparate domains. Such non-transitive relations have also been observed amongst taxa in other domains such as that of 'spirit-ghosts' \textit{(phīsangthēwādā)}. Van Esterik notes, for example, the inclusion by Brown \textit{et al.} in their 'spirit-ghost' taxonomy\textsuperscript{97} of taxa which are of unequal value, referring in some cases to specific individuals as well as classes, geographical variations of the same 'spirit', and gender

\textsuperscript{89} Ibid., pp.380-390.
\textsuperscript{90} Hunn (1976), p.519; Dougherty (1978); Brown (1980), p.185.
\textsuperscript{91} Rosch (1977), p.29.
\textsuperscript{92} Ibid., p.33; Dougherty (1978), p.73; Brown (1980), p.185.
\textsuperscript{93} Dougherty (1978), pp.73,78.
\textsuperscript{94} Berlin (1972), p.84; Brown (1980), p.186.
\textsuperscript{96} Hunn (1976), p.511.
\textsuperscript{97} Brown \textit{et al.} (1976), p.79.
differences. Stanlaw and Yoddumnern also note the wide variety of criteria used by Thais in the grouping of 'spirits'. Cross-cutting has also been observed in the 'spirit-ghost' domain where, depending on context, an entity may be considered to be either a phi ('ghost') or a thewada ('deity'). The number of alternative interpretations allowed by this ambiguity may, as Van Esterik indicates, be responsible for the power of these 'spirits'.

Polysemy is another of the problems which have been encountered in the application of taxonomic models. By polysemy is meant the situation where a single word has more than one meaning, which are systematically related. In terms of the taxonomic model, this refers to the occurrence of a taxon at more than one level in the hierarchy. Polysemy is a widely-occurring phenomenon in Thai taxonomies, having been reported in such domains as pain, cooking, and 'spirit-ghosts'. For example, the Central Thai word chep which often means 'pain in general', may also be used in contrast with other more specific terms, to refer to localised, intense pain, such as occurs in the initial stages of a deep puncture wound. It would seem that the specific term, which is perhaps close to the prototypical pain category, may have been taken metonymically to represent the domain as whole. The interpretation in such cases is reliant upon context, something which the taxonomic model cannot depict. Polysemy is particularly important from our point of view because it is a prominent feature of Thai illness categorisation.

To a greater or lesser extent most of the problems outlined above can be accommodated through manipulation of the taxonomic model. This manipulation has included the introduction of such concepts as those of covert categories, in the case of unlabelled taxa, typicality, to account for cross-cutting, and in the extreme case, a retreat to the ideal situation, at a suitably safe distance from the context in which these words are used. It is in

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101 Ibid., p.13.
107 Brown et al. (1976), p.79.
110 Kay (1975), p.156.
this connection that the last of the problems listed earlier, that is the validity of the taxonomic model in general, is relevant, since context is its point of focus.

3.2.6. Alternative Approaches to the Taxonomic Model

While agreeing that it is generally possible to elicit taxonomies during interviews with informants, a number of commentators have seriously questioned the extent to which they are actually used in other contexts. In a given situation, rather than conceive of a taxonomy, it has been suggested that people select a contrast set of characteristics appropriate to their needs. This view goes a long way towards explaining apparent inconsistencies in the conventional taxonomic model, in particular cross-cutting and non-transitivity. In fact it has been suggested that the taxonomic model may not be the best means to depict these relationships and alternative models have been developed based on the salience of certain categories. Furthermore such an approach tallies well with the results of research which has been undertaken in cognitive psychology and linguistics on categorisation, in particular the development of prototype theory, discussed earlier in this chapter.

The implications of the findings of Rosch for the understanding of some of the problems encountered in applying the taxonomic model are obvious. If categorisation is in fact analogic, then the application of a digitally-based model cannot fail to produce ambiguities. It is also quite possible that a typical category may be taken, in a metonymic fashion, to represent the contrast set as a whole, thus generating polysemy. As Rosch states, "by means of prototypes, categories can be made to appear simpler, more clear-cut, and more different from each other than they are in reality." This explanation is in accordance with one of the observations with which this chapter commenced, that categorisation is linked to survival.

In recent developments of the prototype theory, prototypes themselves have been incorporated into a theory of mind based on what have been termed cognitive models. According to Lakoff, the structure of thought is characterised by idealised models for understanding and creating theories about the world. These cognitive models may be of several types, including, in addition to those with well-defined boundaries, others based on

112 Burling (1964); Keesing (1972); Randall (1976); Hunn (1985).
113 Randall (1976), pp.552-553.
114 See for example Randall (1976), and Hunn (1976), (1985).
115 Rosch (1977), p.3.
graded membership, image-schematic, metonymic, and metaphoric types.\textsuperscript{117} Categorisation consists of the fitting of these idealised models to one's perceptions of a given situation.\textsuperscript{118}

The concepts of metonymy and metaphor both belong to the domain of symbolism.\textsuperscript{119} It is thus appropriate at this point to examine the relationship between the descriptive classifications we have been discussing and the other type of classification mentioned at the start of this chapter, symbolic classification.

3.2.7. Symbolic Classification

We have already seen in the discussion of taxonomic ranking how cosmological principles and the use of certain prefixes may affect the form of a taxonomy.\textsuperscript{120} As we noted in the beginning of this chapter, the use of symbols in classification creates links with diverse areas of experience.\textsuperscript{121} In the case of the Thai biological categories which were discussed the formation of these links enabled them to be drawn into the realm of the familiar. In this section we will examine in more detail some of the different types of symbolic classification, and show how they might be linked to the body's physiology.

Symbolic classifications may be divided into two general types: those which order events, and those which order things. The first of these is closely related to ritual, one of the main functions of which, it has been argued, is the need to accommodate categories subject to change.\textsuperscript{122} The transitions in human life, for example from childhood to adulthood, or from the unmarried to the married state, may be seen as re-classification, or a transition between classes. Such changes, which imply important changes in social relationships, are therefore marked symbolically in rites of passage.\textsuperscript{123} Although our primary focus in this study is the names of illnesses, this type of symbolic classification is still very relevant since the phenomenon of illness is itself characterised by change, and recognised in the formalities accompanying treatment.

In the second type of symbolic classification, which concerns the ordering of things, differentiation is achieved by two main devices: the number of divisions, and their names.

\begin{itemize}
\item \textsuperscript{117} Lakoff (1987), pp.153-154.
\item \textsuperscript{118} Ibid., p.71.
\item \textsuperscript{119} As Eco (1984) points out, symbols differ from tropes in that the former can be taken literally without jeopardising the communicational intercourse (p.141). For our purposes the distinction is sufficiently fine not to affect the arguments which will be presented.
\item \textsuperscript{120} See p.49.
\item \textsuperscript{121} See p.46.
\item \textsuperscript{122} Needham (1979), p.33.
\item \textsuperscript{123} Van Gennep (1960).
\end{itemize}
Often division is by means of binary opposition, that is the contrasting of opposites.\textsuperscript{124} However, partitions may also be commonly made in divisions of three, four, five, seven, nine, or more. In the Thai texts which will be dealt with later, the numbers eighteen and one hundred and eight are significant in this way. In contrast to descriptive classifications, symbolic classifications involve relative discriminations rather than absolute.\textsuperscript{125} Due to the relative nature of these criteria the resulting classes need not be permanent.\textsuperscript{126}

Some of the more common dual partitions are those of left/right,\textsuperscript{127} sacred/profane,\textsuperscript{128} and masculine/feminine.\textsuperscript{129} The Chinese \textit{yin/yang} is another example of such dual classification, and illustrates well the relativity of the division. For example, the tiger may be classified in some circumstances as \textit{yin}, since it represents the negative principle in nature,\textsuperscript{130} but, in other circumstances, it is regarded as \textit{yang} because of its strength and ferocity.\textsuperscript{131}

The naming of categories is another way in which symbolic value may be encoded. From the point of view of the present study, the most important of these verbal symbols is the trope, the most common form of which is the metaphor.\textsuperscript{132} Approaches to metaphor and its definition have varied widely. Some have defined metaphor simply as the transference of aspects of one object to another,\textsuperscript{133} while in others, it is seen as the use of a sign to represent something without form.\textsuperscript{134} Following a reduction of the four types proposed by Aristotle in the Poetics,\textsuperscript{135} metaphor has been divided into two types, \textit{internal} and \textit{external}.\textsuperscript{136} Characteristically internal metaphors are "felt" or expressive, emphasise the social context,

\textsuperscript{124} Needham (1979), pp.31-32.
\textsuperscript{125} Ibid., p.9.
\textsuperscript{126} Needham (1973), p.xxix.
\textsuperscript{127} See Hertz (1973).
\textsuperscript{128} Ohnuki-Tierney (1981a), p.108.
\textsuperscript{129} Needham (1973), p.116.
\textsuperscript{130} Mathews (1975), p.322.
\textsuperscript{131} De Groot (1910), Vol.6, p.955
\textsuperscript{133} Hawkes (1972), p.1.
\textsuperscript{134} Fernandez (1974), p.120.
\textsuperscript{136} Sapir (1977), p.5. These have also been termed textual, and structural or analogic respectively (Fernandez (1974), p.123).
and stress diachronicity. Included in internal metaphor are common metaphors, synecdoches, and metonyms. Common metaphor juxtaposes terms from different semantic domains having certain similarities, as for example when we refer to "computer viruses". Synecdoche and metonomy concern relationships between terms from within the same semantic domain. Synecdoche is the substitution of the general for the specific, the part for the whole, or vice versa, with one term including or included in the other. In the case of the metonym, the terms juxtaposed are related by contiguity. Using "sail" to refer to ship is an (often quoted) example of synecdoche, while the use of "the crown" for king is an example of metonymy. For the sake of simplicity, the term metonym will be used in this work to refer to both these devices.

External metaphors, on the other hand, relate the status of an object in one context to the status of another in a different context. They are thus characterized by synchronicity, and are "thought" rather than felt. An example of external metaphor is in totemism, where, as Lévi-Strauss puts it, human groups are related to animals by the differences between them rather than resemblances. Thus various groups are related to one another in a way comparable to that by which animal species are related. There is no direct relationship between man and totem.

Generally metaphors are drawn from the immediate environment of the individual, and within this range it is animals which occupy a pre-eminent position. Other elements of the environment which may also be employed are plants and recently, machines. Fernandez attributes this to the fact that animals and objects of the natural world are sensible images which can give form to phenomena lacking in definition.

However, in the choice of metaphor, there is clearly much more involved than an arbitrary selection from among a range of familiar objects. In explanation of this it has been suggested that metaphors are "verbal correlates of patterns of social interaction and bodily

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137 Crocker (1977), p.56.
138 The use of "metaphor" as both a general and a specific term is, as Eco (1984) has indicated, an example of synecdoche, dating from Aristotle (pp.87, 91).
140 As Eco (1984) points out, the boundary between metonym and synecdoche is fuzzy: it is difficult to determine the point at which contiguity becomes a constituent part of something (p.90).
141 Sapir (1977), pp.5-25.
142 Lévi-Strauss (1973), p.149.
143 Ibid., pp.87-90.
145 Ibid., p.121.
This is supported by the findings of studies of symbols, such as those of Turner, who stressed their multi-vocality, in that a particular symbol may stand for many things within a certain culture. Each dominant symbol has a "fan of referents" which are usually interlinked by a simple mode of association. Turner gave the example of "white clay" for the Ndembu, the whiteness of which enabled it to signify, in different contexts, "semen", "ritual purity", "innocence from witchcraft", or "solidarity with the ancestor spirits".

In a more recent development of this approach, Eco has shown in his analysis of the word "meandertale" in Joyce's *Finnegan's Wake* how metaphor may "short-circuit" links in a network of contiguous relations. When the network remains "open", as is often the case, there will be a degree of ambiguity in the interpretation of the metaphor. It may in fact form part of an extensive chain of associations. The choice of metaphor may thus reveal a good deal more about a given culture than might be initially apparent.

### 3.2.8. Metaphor and Cognition

The value of metaphor as a rhetorical device has long been recognized, and is a reflection of its ability to effect a change or movement in the subject. The means by which metaphor accomplishes this action is subject to some debate. Generally, however, it appears that the novelty or incongruity between the topic, that is the subject, and the vehicle of the metaphor results in an arousal which the individual seeks to reduce by resolving the two different images. Metaphors have therefore been viewed both as cognitive tools for creative problem solving, and as means for the generation of new insight through the creation of a different perspective. In this respect metaphor bears comparison with the double-bind situation postulated by Laing in connection with psychiatry, the impasse or dilemma thus created being resolved by the creation of a single image. It has been suggested that metaphor may even have a therapeutic role in resolving cases where this double-bind is manifested.

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148 Ibid.
149 Eco (1979), pp.256-259.
151 Fernandez (1972), p.43.
152 In Richard's terminology, this is referred to as the "tenor" (in Sapir (1977), p.7).
153 Paivio (1979), pp.151-152.
154 Sticht (1979), p.16.
pathologically.\textsuperscript{157} In such situations the metaphorical link permits an impasse in one area to be resolved by transferring it to another less stressful area.\textsuperscript{158} As we will see in the following part of this chapter, there are strong parallels here with accounts of symbolic healing.

Whether metaphor creates similarities, as Black has suggested, or reveals them, again is debatable.\textsuperscript{159} Recent studies suggest, however, that metaphor produces an hypothesis or a schema, which unifies the objects in question.\textsuperscript{160} It is therefore apparent that there are strong links between theories of metaphor, and those pertaining to perception in general. These links have been explored at length by Lakoff and Johnson, who conclude that, far from being simply an adornment to language, as it was once regarded, metaphor plays a fundamental role in human thought processes.\textsuperscript{161} Metaphor and other types of mental imagery combine with perception, motor activities, and culture in the processes of categorisation.\textsuperscript{162} As Lakoff argues, one of the implications of this view is that there is no separation between the mind and the body.\textsuperscript{163} For example the metaphors used in the conceptualisation of anger are not arbitrary, but grounded in the physiology of the autonomic nervous system.\textsuperscript{164}

\textbf{3.2.9. Thought and Physiology}

The links between the mind and the body are neither limited to those involving imaginative mechanisms, nor are they simply confined to one direction. At this point in the discussion it will be appropriate to briefly examine some of these ways in which thinking processes are linked to physiology, since this has an important bearing on the way we conceptualise illness, and the body's response to disease.

The frontal cortex of the brain, which is where the cognitive processes described above are understood to take place, is anatomically and physiologically linked both afferently and efferently to the limbic system and its subcortical correspondents, especially the hypothalamus. There are also links to with the parietal and temporal regions of the cerebral cortex, which are responsible for the processing of visual, auditory, and somatic information.\textsuperscript{165} The frontal lobe both monitors and modulates the limbic system, which is

\begin{itemize}
\item \textsuperscript{157} Jackson (1983), p.138.
\item \textsuperscript{158} Ibid., pp.138, 140.
\item \textsuperscript{159} Ortony (1979), pp.5-6.
\item \textsuperscript{161} Lakoff and Johnson (1980), pp.3, 6.
\item \textsuperscript{162} Lakoff (1987), p.8.
\item \textsuperscript{163} Ibid., p.9.
\item \textsuperscript{164} Ibid., p.407.
\item \textsuperscript{165} Brady and Nauta (1972), pp.181-182.
\end{itemize}
centrally involved in functions related to the organism’s internal milieu. When lesions occur in the frontal cortex, these may therefore be expected to affect the person’s viscero-endocrine, affective, and motivational responses to the environment. An example of the influence which this area of the brain may exert is in the case of intractable pain, where pre-frontal lobotomy relieves the distress, but does not disturb its appreciation.

The hypothalamus is the part of the brain responsible for the regulation of endocrine and neurotransmitter processes, which in turn affect both humoral and cell-mediated immunity. That is, the hypothalamus is responsible for the production in the bone marrow and the thymus of the lymphocytes which are the cells largely involved in the immune response. Studies have shown that psycho-social factors, such as stress and anxiety, produced for example by bereavement, can result in a depression of humoral and cell-mediated immunity, and influence the incidence of infectious as well as allergic and autoimmune illnesses.

Data from two other fields of research also provide valuable evidence for the capacity of the mind to produce changes in other parts of the body. These are psychosomatic and biofeedback research. Among the conclusions from the former is that psychosocial phenomena may correlate with a variety of physiological symptoms, and that this relationship may be manipulated by other people for beneficial purposes, as by a shaman or psychotherapist, or malignly, as in witchcraft. Research in biofeedback has shown that autonomic functions, such as heart rate, blood pressure, and gastric motility, can be controlled to some extent by conscious mental activity.

It is relevant to add at this point that a formal recognition of the potential of the mind to affect physiological changes in the body has come as a relatively recent phenomenon in Western medicine. In other medical systems, notably in the Indic tradition, there has long been an appreciation of these links. For example psycho-social factors such as excesses in, or suppression of, the individual’s normal behaviour or functions, are considered as being

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166 Ibid., p.182.
167 Ibid., p.182.
172 Ibid.
173 The link was recognised in ancient times however. Hippocrates (Aphorisms 2:33) says: "In every illness, a healthy frame of mind and an eager application to victuals is good. The reverse is bad" (Lloyd (1978), p.211).
174 See Dunn ((1976), p.135) for a definition of medical systems.
important factors in the aetiology of illness. The practices of meditation (dhyāna) in some sects of Buddhism are similarly capable of effecting physiological changes.

3.2.10. Summary

To briefly recap the argument thus far, my contention has been that human classification is concerned with the ordering of the environment to enable function and survival. It has been argued in the preceding pages that both the structure and naming of classifications may make important contributions to the process of perceptual ordering. Structurally, order may be derived from the grouping of perceptions into classes on either an inductive or a deductive basis. These classes may be given further order by their arrangement hierarchically. The representation of these hierarchical relationships by the taxonomic model was described and reviewed in the light of recent research. For some types of classifications, and in the representation of certain types of semantic relationships, such as metaphor, the taxonomic model appeared to be inadequate.

Naming contributes an additional degree of order to these divisions. Not only does the giving of a label provide in itself an appearance of form and stability, but naming also allows relationships to be recognised between classes in different fields of experience. Symbolism was found to be a significant device in establishing these links.

It was argued that symbolism plays an important role in both the structural and naming aspects of classification. Firstly, numerical symbolism may be important in the determination of the number of classificatory divisions, and secondly, the names of categories may be of symbolic value. In respect to the latter, metaphor was seen to be perhaps the most important type of symbolism.

We are now in a position to examine the domain of illness in relation to these findings on classification. As will be seen, the domain of illness provides an illustration of most of the problems encountered in the application of the taxonomic model, as well as an opportunity to examine the cognitive model approach suggested by Lakoff.

3.3. The Classification of Illness

Illness classification is linked to survival. In biological terms, the capacity for recognition of certain aggregations of sensory perceptions as "illnesses" confers an advantage on the individual concerned. The classification of illnesses is, in the words of the medical

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175 Thēp (1966), vol.1, p.56.
anthropologist Arthur Kleinman, the "initial therapeutic act"\textsuperscript{177} in a complex process. Not only does the recognition of illness allow various types of therapy to be administered, but the classification of illness may in itself make a significant contribution to the healing process. In the following section of this chapter we will examine the application of the theories of classification just discussed to the domain of illness and show the ways in which classification and therapy might be connected.

3.3.1. Illness

A fundamental step in the examination of illness is to define what is included in the domain, and the terms to be used in its representation. From the point of view of the taxonomic model, the definition of what constitutes illness presents problems in the case of both modern medicine, as well as in traditional medical systems. These problems are manifested in two main areas of illness classification: the relationship between the scientific definition of illness and folk conceptions, and that between symptoms and illnesses.

For the purposes of the following discussion, the state of illness will taken to signify a departure from a normal state of well-being, or health.\textsuperscript{178} Although illness often does give rise to a need for corrective action, this need not always be the case. For this reason the definition proposed by Fabrega of illness as a "disvalued change in the adaptation-functioning of an individual which gives rise to a need for corrective action."\textsuperscript{179} has not been adopted here. The conditions of health and normality are, of course, defined by the culture in question and thus open to cross-cultural variation.

In English several different names are used in relation to the state of illness: apart from illness, there are, amongst others, disease, sickness, malady, ailment, malaise, and affliction. In the literature there has been some variation in the use of these terms, which in part has been a response to the need to account for the variations between cultures of the definition of illness. For example Frake used illness to refer to "a single instance of being sick", in contrast to disease, or the diagnostic category, which he defined as:

...a conceptual entity which classifies particular illnesses, symptomatic or pathogenic components of illness, or stages of illness.\textsuperscript{180}

\textsuperscript{177} Kleinman (1973), p.209.
\textsuperscript{178} This is the definition used for example by Ohnuki-Tierney (1981a), p.34.
\textsuperscript{179} Fabrega (1982), pp.39-40.
\textsuperscript{180} Frake (1961), p.107.
An episode of illness might therefore include more than one diagnostic category.\textsuperscript{181} In contrast to Frake, Fabrega chose to use the term disease to refer to illness as a physical entity, as is the case in modern medicine.\textsuperscript{182} That is, disease as defined in terms of morbid anatomy.

In order to account for the aspects of illness neglected by such an approach, Fabrega makes the distinction between illness and disease. Illness, he argues, is a better term to designate a concept of illness which includes symbolic factors, such as behaviours and feelings, which the physical signs entail.\textsuperscript{183} Building on these ideas, Kleinman agrees with Fabrega in defining illness as the way in which symptoms are perceived, experienced and expressed, but redefines disease as the reformulation of the illness in terms of the healer's explanatory system.\textsuperscript{184} While this approach is motivated by an awareness that modern medicine is not culture-free, it sets up a dichotomy between the concepts of illness held by the healer and the lay person, a distinction which, at least in Thai society, is not always neatly defined. An example of a situation when there may be problems in the use of this definition is where the lay person is also a healer.

In the following work I have chosen to follow the definitions provided by Fabrega because they provide a convenient means of separating the physical and psychological-behavioural aspects of illness. If employed only as an expedient, a distinction between the physical and the behavioural will be useful in the discussion of various aspects of illness and healing. Thus, for the Thai illnesses to be discussed in the following chapters, disease will be used to refer to physical pathological changes in the body defined according to modern medicine, and illness to departures from health not defined solely in physical terms. The other English terms, sickness,\textsuperscript{185} ailment, malaise, malady, and affliction, will be used interchangeably with illness where appropriate, since these terms all convey the sense of a departure from the norm. For the most part, the distinction between the state of illness and particular named categories of illness is clear from the context. However, in cases where there is some ambiguity the term illness category will be used in referring to a particular type of illness, in preference to the term diagnostic category employed by Frake.

\textsuperscript{181} Ibid., p.107.
\textsuperscript{182} Fabrega (1972), p.584; (1979), p.545.
\textsuperscript{183} Fabrega (1982), p.39.
\textsuperscript{184} Kleinman (1987), p.165.
\textsuperscript{185} According to Kleinman the term "sickness" has been used to denote "the relation of a disorder to the political economy, social institutions, and cultural orientations of a historical epoch" (1987, pp.168-169). The use of the term in the present work is not so specific.
3.3.2. Illness Categorisation

Illness categories may be considered as concepts which result from the organisation of perceptions, or symptoms. Classification, or diagnosis, refers to this process of perceptual organisation. In the case of commonplace or habitual illnesses the features which are considered to be distinctive are, for the most part, derived from sensory stimuli, in the form of pain, loss of function, thermal sensation, and visual criteria. According to the taxonomic model, a specific illness category is defined by a set of distinctive features, and diagnosis consists of the fixing of a label to this entity.

However, the boundary between illness categories and symptoms is often not well-defined, and the status of some afflictions, such as cuts and headaches, is ambiguous. In fact afflictions need not always be organised into illnesses in order to elicit attention, and treatment may be directed towards symptoms, rather than illnesses. As will be seen, this may also be the case in Thai medicine. It would seem, then, that the domain of illness may have fuzzy rather than discrete boundaries.

A further problem is that there is, as anticipated in the above definition of the state of illness, considerable variation, both within and between societies, as to what phenomena connected with the body constitute the norm. It is clear from studies of illness in various societies that illness categories are cultural constructions. The role of culture in shaping illness is evident from cross-cultural comparisons of the domain, which show that what constitutes illness in one society does not necessarily count as illness in another. This is exemplified by Ackerknecht's finding that in certain parts of the U.S.A., where malaria was endemic, it was not regarded as a disease by the local population. What was elsewhere regarded as abnormal was there the norm. The illness categories recognised by modern medicine are similarly culturally determined. As Ohnuki-Tierney concludes in her study of the Sakhalin Ainu:

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187 Meaning "to classify", see Barron (1978), p.11.
191 See for example Rose (1987), pp.8-10; Lewis (1976), p.79; Ohnuki-Tierney (1981a), p.36.
Ultimately, the Ainu illnesses are not independent biological entities. The basic nature of the Ainu conceptualisation of illness illustrates that Ainu illness is fundamentally different from disease in biomedicine, in which biological symptoms and pathogens receive primary emphasis.\textsuperscript{196}

The question of similarity between some of the illnesses recognised in traditional medical systems and the categories of modern medical science serves to emphasise the fact that the domain of illness shares features in common with both biological and non-biological domains. By definition, diseases involve biological structures. They may in addition be caused by biological agents such as microorganisms or parasites. Diseases may also produce physical symptoms such as tissue hypertrophy or hyperplasia which resemble aspects of living organisms, in that they appear to develop independently of the host. It is thus easy to see how the principles employed in the classification of animals and plants might be carried over to diseases.\textsuperscript{197} This may be illustrated using some examples from the naming of skin diseases where there are such types as \textit{lichen planus}, \textit{lupus erythematosus}, and \textit{white sponge nevus}.

However, the domain of illness differs from biological domains in an important way. Unlike biological taxa, illness is, as Frake has pointed out,\textsuperscript{198} a dynamic process: it may progress towards resolution or exacerbation, and it may produce complications. While in many cases this inherent changeability may be recognised as a defining feature of a particular illness, as with the so-called crisis-point of certain fevers, in other instances it presents problems for classification. One means of accommodating this characteristic within the taxonomic framework is to depict illness as a series of specific types of diagnostic categories as Frake has done. However this approach still involves the fragmentation of what is essentially a continuous event.

\subsection*{3.3.3. Diagnosis}

The process of interpretation of symptoms begins with the recognition of an individual's malaise. This may be made at a subjective level, such as when we decide that we are "coming

\textsuperscript{196} Ohnuki-Tiemei (1981a), p.37.

\textsuperscript{197} In fact Linnaeus, who is famous for his contribution to botanical classification, also produced a work on illness classification called \textit{Genera morborum}, published in 1763. Probably the most significant of the early illness classifications was the \textit{Nosologia methodica}, published in 1763 by François Boissier de Sauvages who, like his contemporary Linnaeus, also had a background in botany (King (1958), pp.198-199, 204-213).

\textsuperscript{198} Frake (1961), pp.107, 113-116.
down with something", or by others, as in certain types of mental illness. The various symptoms then contribute to the formation of a concept of illness, a procedure which may be largely intuitive. To this extent, illness is similar to the other types of categorisation which we examined in the previous part of this chapter. Like categories in other domains it is also possible to view illness as a construction unique to the individual and his particular society. As Kleinman says:

The acts of ordering, naming, interpreting, and offering therapy for illness are aspects of a symbolic reality common to both the sick individual, the healer, and their society.... A given medical system in its socio-cultural context does considerably more than name, classify, and respond to illness, however. In a real sense it structures the experience of illness and, in part, creates the form disease takes.

Thus the classification of illness is the first act in a therapeutic process, for it transforms the unknown and life-threatening into a known. This in itself may be therapeutic. Classification also permits culturally appropriate responses, such as the administration of medicines. In this way the domain of illness may be linked with the highly classified botanical and zoological worlds, which form the basis of most medicines.

In comparison to other domains, illness is unusual because the individual's experience is often quite limited and, in many cases, recourse must be had to other people, notably experts, to provide an identification. Studies of the long-term illness history of individuals in pre-industrial societies until recent years have been difficult to undertake and therefore few in number. It would seem likely though, that individual experience would be greater for certain types of illnesses, particularly those which are slow-developing and not life-threatening. Frake has hypothesised that the density of classification is a function of the number of distinct social contexts in which information about a phenomenon must be communicated. If this hypothesis is widened to include the individual's experience of a particular illness, we could predict finer differentiations to be made in that domain.

Skin afflictions are one type of illness which would, on the grounds specified above, permit observation. The fact that they are often slow-developing, and generally a hindrance rather than an immediate threat to life may, for example, explain why skin afflictions are found to be well-differentiated in the languages of undeveloped societies, such as the farmers in

199 In certain circumstances the individual may not recognise "symptoms" as indicating malaise, especially where it may be recognised by an authority, as in the case of "madness".


201 Kleinman (1973), pp.208-209.


203 Ibid., p.116.
Frake’s study.\textsuperscript{204} It might also contribute to an understanding of why, among these peoples, diagnosis and treatment may be made at the symptom level without distinguishing the affliction as an illness. For it is possible in these cases that the diagnosis is self-made from the individual’s own experience, without consultation with others. In this context the criticism made by Keesing that ethnoscientific analyses frequently involve trivial domains\textsuperscript{205} is of interest, since it is more likely to be the trivial, benign types of illness which permit close-differentiation. With more severe illnesses, an individual would tend to become increasingly dependent on the opinion of others to enable identification. It is likely that for some of the more serious types of illness, only experts would have the experience to make diagnoses, since they are in a position to observe a larger number of cases.

As with the other domains which were discussed in the first section of this chapter, illness need not necessarily be named in every language. Lewis indicates, for example, that the Gnaau of New Guinea have no word which distinguishes illness from other types of misfortune.\textsuperscript{206} In general, however, other than at the unique beginner level, naming is an important part of diagnosis, and the name of an illness is closely linked to treatment.\textsuperscript{207} The process of diagnosis does not consist of the simple mapping of an illness name onto a set of symptoms, rather it is usually based on inference, or the formulation of a working hypothesis\textsuperscript{208} or provisional diagnosis\textsuperscript{209} on which treatment is based. The success of treatment may, as Lemaitre has observed with respect to Tahitian medicine, serve to confirm or reject the provisional diagnosis.\textsuperscript{210} This flexibility in the diagnostic approach reflects the instability of illness through time, as well as variations in its manifestations in different individuals.

The basis on which illnesses are differentiated in diagnosis is, as noted in the introduction to the World Health Organisation’s \textit{International Classification of Diseases} (I.C.D.), determined by the interests of the person doing the classifying.\textsuperscript{211} This publication provides in itself a good illustration of the effect of the purpose of the classification on the determination of its form, since the requirements of the I.C.D. are primarily statistical.\textsuperscript{212} The

\begin{thebibliography}{99}
\bibitem{204} Ibid., p.116. See also Lewis (1976), p.75 and Ohnuki-Tierney (1981a), pp.137, 140.
\bibitem{205} Keesing (1972), pp.307-308.
\bibitem{206} Lewis (1976), p.77. See Ohnuki-Tierney (1981a), pp.37-38 for a further discussion of this phenomenon.
\bibitem{207} Ohnuki-Tierney (1981a), p.39.
\bibitem{208} Barron (1978),pp.11-12.
\bibitem{209} Frake (1961), p.76.
\bibitem{210} Lemaitre (1979), pp.1308-1309.
\bibitem{212} Ibid., p.viii. The purpose of the I.C.D. is to codify the designation of the discharge diagnosis from hospitals and the completion of death certificates for statistical purposes. (Barron (1978), pp.14-15).
\end{thebibliography}
illness categories specified in the I.C.D. therefore differ considerably from the clinical nomenclature, the purpose of which is to enable decisions to be made about treatment.\footnote{W.H.O. (1977), p.viii.} For the most part, the classification of illness in modern clinical medicine is based on morbid anatomy,\footnote{Barron (1978), p.13; Lewis (1976), p.88.} which reflects the prevailing conception in modern medicine of illness as a disease.\footnote{Kleinman (1977), p.13.}

In traditional medical systems, as in clinical medicine, the purpose of classification is to facilitate healing. Unlike clinical medicine, however, the criteria on which classification is based are frequently not associated with morbid anatomy. This is reflected in the relationship between the criteria used to differentiate illness and world view.

One widespread means of differentiation is on a symbolic basis, which we discussed earlier, in the previous section of this chapter.\footnote{See above, pp.57-60.} An important type of symbolic classification occurring in connection with illness is that of numerical division.\footnote{This is what Needham (1979) has termed "classification by partition" (p.7). Since all classification is in a sense "partition", the term "numerical division" has been adopted here, in order to place emphasis on the notion that particular numbers are important.} That is, the basis for differentiation between illnesses is arranged such that they fall into a fixed number of categories. A common type of numerical classification is that of binary opposition,\footnote{Bisilliat (1976), pp.582-583; Ohnuki-Tierney (1981a), p.141.} mediated by the dominant symbols of the society. Thus the classificatory cuts may be seen as reflecting a nature/culture dichotomy, as seen for example in the Songhay-Zarma division of illnesses into bush and village illnesses,\footnote{Bisilliat (1976), pp.554-555.} a feminine/masculine dichotomy, as in the yin/yang division of Chinese medicine,\footnote{Porkert (1974), p.24.} spatial-environmental distinctions such as wet/dry, upper/lower,\footnote{Ohnuki-Tierney (1981a), pp.54, 140.} and colour oppositions.\footnote{Bisilliat (1976), p.577.} Other types of numerical division also commonly occur in connection with illness, for example a partition on the basis of three, four, or five.\footnote{As will be seen in the following chapter, these divisions occur in Greek, Arabian, and Indic medicine.}

Aside from numerical division, partition may also be based on less complex sensory criteria including auditory, thermo-tactile, and olfactory characteristics. Ohnuki-Tierney describes, for example, the differentiation of certain Ainu afflictions on the basis of their
auditory and tactile associations. These sensations are expressed in the form of their association with a particular animal familiar to the Ainu. Thus a bear headache "feels like the sound of a bear's heavy footsteps", and a woodpecker headache "sounds and feels like a woodpecker when it drills into a tree trunk". The effect of these associations with objects from both the familiar environment, and the symbolic system of the culture, is to draw illness into the realm of the familiar. This is of fundamental importance in the initiation of the healing response, as can be seen from the use of symbols in other aspects of the response to illness, particularly in healing rituals.

The result of classification is the relation of illness categories by inclusion and contrast. It is possible to analyse these relationships lexically and in some cases depict them taxonomically. In the application of taxonomic models to the domain of illness similar problems have been encountered to those which were described in the first section of this chapter. Some of these we have already met in the preceding discussion of illness. They include problems of ambiguity and cross-cutting categories, lack of words for the domain, and taxonomic polysemy. The limitations of the taxonomic model in providing only a glimpse of the total picture of illness have also been indicated. However the most damaging criticism of the taxonomic model has been its failure to account for context, which is seen as fundamentally important in the understanding, and hence treatment, of illness.

Of the attempts which have been made to find an alternative model which would account for some of the shortcomings of the taxonomic model, one of the most constructive approaches has been that of Good, who proposed a "semantic network" model. According to this approach, the meaning of illness categories is conceived of as being a network of symbols and experiences which form a pattern specific to the society in question. As Good says:

224 Ohnuki-Tierney (1981a), pp.49-60.
225 Ibid., p.49.
226 Ibid., p.154.
234 Ibid., p.25.
Following the (semantic network) model described above, illness categories can be understood as images which condense fields of experience, particularly of stressful experience. And they can be understood as the core symbols in a semantic network, a network of words, situations, symptoms and feelings which are associated with an illness and give it meaning for the sufferer.\textsuperscript{235}

The semantic network approach thus accounts for relationships such as those between extended symbolic meanings, metaphor, and the naming of illness.\textsuperscript{236} There are also strong similarities between this model and the cognitive model approach of Lakoff which was presented at the end of the first part of this chapter.\textsuperscript{237}

Although the taxonomic model falls short of the requirements of an adequate model for illness, it is still possible that the use of such an approach may be of value. The model is useful in at least one way, which is the examination of the names of illnesses.\textsuperscript{238} However this must be regarded as the beginning of an analysis, not its end. In order to understand the meanings of the terms constituting the taxonomy we will also have to examine their position in socio-cultural context, including their relationship to treatment, and the world view of the people using them. In the following section we will examine how the names of illnesses may in themselves provide information linking these domains.

### 3.3.4. Symbolism and the Healing Response

The importance of symbolism in the diagnosis and treatment of illness in traditional medical systems has long been recognised, and has been widely documented.\textsuperscript{239} On the basis of recent studies it is now apparent that symbolism plays an important role in the healing systems of modern large-scale societies as well.\textsuperscript{240} In general the purpose of the process of symbolization is the same in either context: to render the symptoms experienced by the sick person into a form which can be understood. We have already quoted Kleinman's statement relating to contemporary Western society indicating that illness is a "symbolic reality" shared by the sick person, the healer, and his society,\textsuperscript{241} but the following comment by Turner concerning healing among the Ndembu of Africa could equally apply:

\textsuperscript{235} Ibid., p.40.
\textsuperscript{236} Kleinman (1987), p.169.
\textsuperscript{237} See pp.55-56.
\textsuperscript{238} White (1982), p.75.
\textsuperscript{239} See in particular Turner (1967) and Lévi-Strauss (1972a).
\textsuperscript{240} For examples see Kleinman (1973), and Moerman (1979).
\textsuperscript{241} See p.67.
[Therapy is] partly a process of making hidden and secret things visible and thereby accessible, if they are harmful, to redressive and remedial action.242

A striking illustration of the power of this symbolic healing is that given by Lévi-Strauss concerning a childbirth-facilitating ritual of the Cuna people of South America. In this ritual the shaman provides the distressed woman with a framework, in the form of a symbolic journey into her womb to the cause of the difficulty, and, having identified the problem, birth occurs normally. Thus, as Lévi-Strauss puts it, by his employment of myth the shaman provides the woman with a "language" which enables:

a psychological manipulation of the sick organ...rendering acceptable to the mind pains which the body refuses to tolerate, and inducing the physiological changes necessary for birth to occur.243

A serious criticism of these theories is the degree to which the healing effect is the result of the patient's understanding of the symbols.244 In the case of the Cuna ritual described by Lévi-Strauss, for example, the patient's comprehension of the minute referential and symbolic details has been questioned.245 It would appear that the description, which is given in a special language, is directed towards the spirits, rather than the patient.246 However, despite the fact that the patients might not be able to understand all that is said, they are aware of the general nature of the description and its purpose. This, together with the relaxing effect due to the euphony of the chanting, confidence in the specialist, and perhaps the administration of medicines, contribute to the ritual's psychological effectiveness.247

From the various accounts it is apparent that there are differences in the ways in which symbolism may be be effectively employed: Lévi-Strauss's shaman worked directly on the psyche of his patients, whereas Turner's shaman worked to resolve the illness within an accepted and usual pattern of symbols.248 In both cases it is clear that language plays an important role in this process, whether in the sense intended above by Lévi-Strauss, or in the literal sense where it is spoken to evoke images. There is similarly no reason to suppose that these forms of verbal symbolism differ in respect to their connections to the body's physiology, and therefore their potential to initiate healing.

The use of symbols in ways which are inappropriate or unusual in a particular context, is also of particular importance in connection with illness. In this respect there are two uses

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246 Ibid., pp.120, 134.
247 Ibid., p.134. See also Laderman's analysis of Malay childbirth practices (1987), pp.299-301.
which are relevant here: the use of obscenity, and of tropes. The use of obscenity as seen, for example in the Sri Lankan healing rituals of the Sanni demons, has been attributed to its power to provoke a cathartic response in the sick person.\footnote{Obeyesekere (1969), p.205.} Another explanation follows from the idea that a role of symbolisation is the classification of the boundaries between categories. The disruption of the normal attributes of a classification, for example by the deliberate flouting of proper conduct or obscenity, may thus serve to represent ambiguity in a category's status as occurs during illness.\footnote{Needham (1979), p.43.}

Tropes, the other type of verbal symbolism mentioned above, are most commonly represented in connection with illness by the metaphor. Most of the metaphors used in conjunction with illness fall into the category of internal metaphors, which, as we have seen,\footnote{See p.58.} are commonly used to stress diachronicity. In view of the fact that illness and healing are concerned with change, the association between internal metaphors and these processes is therefore not unexpected.

In metaphors associated with illness, as with other types of metaphor, animals are frequently employed as the dominant motif.\footnote{See for example, Ohnuki-Tierney (1981a), pp.49-56. As will be seen in a later chapter, the classification of Thai illnesses also reflects certain other beliefs pertaining to animals.} The choice of metaphor has also been shown to reflect certain culture-specific patterns, for example, as Ohnuki-Tierney shows, the classificatory principles of Ainu 'headaches' and 'boils' intriguingly parallel the principles governing the spatial classification of the universe.\footnote{Ohnuki-Tierney (1981a), p.5.} In the case of illness, the choice of these images serves to draw a comparison between illness and animate, familiar aspects of the external environment, thus making the phenomenon comprehensible. This comprehension may then, through the processes which were discussed in the previous part of this chapter,\footnote{See pp.61-62.} allow the processes of healing to occur.

A similar argument might be made in the case of metaphor to that made above on the degree to which a literal interpretation is responsible for the effect of symbols in the healing of illnesses. On the basis of the extent to which we are conscious of their literal meaning, a distinction may be made between "conventional"\footnote{Lakoff and Johnson (1980), p.139.} and "active", or "loaded"\footnote{Keesing (1985), pp.209-210.} metaphors. The meaning of the latter is based on a literal interpretation. In contrast, the former type are, as Lakoff and Johnson have shown, accepted as everyday speech, and may not have the same
effect as if they were taken literally. Nevertheless, this does not preclude their value in the context of illness: the importance of providing a name for an affliction, rather than leaving a patient in a state of doubt, is well-known to many a wise practitioner or confident quack. As in the example given above, it may be the effect of a firm diagnosis, given by a person of repute, which enables healing to occur.

In the preceding discussion of the link between the naming of illness and the healing response we have focussed on the beneficial effects. It is also possible that the identification of an illness may have the opposite effect of worsening the patient's condition. As Sontag has so elegantly shown, the diagnosis of a person as having TB, in the nineteenth century, and cancer (or AIDS), in the present day, may, because of the powerful symbolic associations attached to these categories, serve to exacerbate the condition. Fear for the effect which the knowledge of such a diagnosis may have on a patient may present a dilemma for both doctor and family in deciding whether to tell the sick person the name of the illness. However, as Sontag points out, it is not the name of the illness which is the problem, but the associations which accompany it.

It is interesting to speculate here, in the light of the discussion of illness naming earlier in this chapter, that the original naming of cancer, which is derived from the Greek karkinos meaning 'crab', may have been an attempt to understand the affliction in terms of the familiar. It is commonly believed that the name describes appearance of the tumour, whose finger-like invading processes extend outwards from the main mass. It is ironic that the development of adverse symbolic associations has meant the negation of any positive therapeutic effect the name may have originally conferred. The connections between the brain and the immune system, which in one context serve to facilitate healing, may, in a different context, serve to impair it. However, it is probably not true to say that the patient's knowledge of a diagnosis of cancer or AIDS is likely to have a negative effect in every case. It is also difficult to determine whether knowledge of a terminal condition does in fact exacerbate the situation. The difficulty for the doctor and family is determining the appropriate course of action in a particular case.

3.4. Conclusion

In this chapter an overview of the general process of classification and its application to the domain of illness has been presented. Before commencing an examination of the

257 Lakoff and Johnson (1980).
259 Ibid., p.10.
classification of illness in the texts of traditional Thai medicine, it will be useful to review some of the main themes to emerge so far.

One important point is that categories, especially illness categories, are mental constructions. They depend on the interpretation of stimuli or phenomena for their definition. Thus, while it is possible to find correspondences cross-culturally in illness categories, it is not a valid assumption that an illness is something which possesses an objective reality.

A second theme to emerge is that illnesses may, like other categories, be related by inclusion. In common with biological categories, some types of illness exhibit well-defined ranking in their inclusion relationships. The taxonomic model, which has been the standard way of depicting these relationships, while useful as a means for examining names, was found to be inappropriate in respect to establishing their meaning. Such an approach neglects context-related phenomena, for example polysemy and symbolic associations (including metaphor), and may also impose an artificial structure which does not correspond to the way illness names are used in everyday life.

In accounting for these contextual relationships the cognitive model, or semantic network, approach was seen as being of more value than the taxonomic model. One of the advantages of this approach is that it allows links to be made between symbolism, naming, and the body's physiology, in particular the healing response.

Symbolism was found to be an important factor in the classification of illness, in both naming and as a basis for diagnosis. It was argued that the identification of the potentially life-threatening phenomena of illness in terms of the familiar and the dominant symbols of a culture represents a significant step in the initiation of the healing response.

In the following chapters the applicability of these findings to the interpretation of illness categories in the texts of traditional Thai medicine will be examined. The study will commence with an analysis of the classification of illnesses in general, then focus on one illness category in particular, and examine its naming, symptoms, diagnosis, and treatment, in the light of the points raised in this chapter.
CHAPTER 4

GENERAL FEATURES OF ILLNESS CLASSIFICATION IN TRADITIONAL THAI MEDICINE

4.1 Introduction

In this chapter the classification of illness in Thai medicine will be described and examined in relation to some of the more important points arising from the discussion in the previous chapter. In particular we will focus on the applicability of the taxonomic model, and the extent to which imaginative processes, such as metaphor and metonymy, play a role in classification.

The basis for the discussion will be the illness categories and descriptions occurring in medical texts compiled during the 19th century. For reasons already noted in the introduction, and which will be more carefully explored below, the classification of illnesses cannot be regarded as definitive throughout these texts. Although an analysis based on "internal" criteria (that is from descriptions contained within the texts themselves) may serve to adequately define many illness categories, there are others which remain problematic. In seeking to understand these terms it is necessary to analyse them critically, taking into consideration their etymology, their usage in other contexts such as the spoken language and literature, and the processes which shaped the texts themselves.

In the following examination information from three main sources will be utilised. The first consists of information derived from studies of other Tai dialects,1 the second of that obtained from other Central Thai sources, such as inscriptions and written accounts, and, lastly, information on the present-day usage of these illness terms. In respect to the latter source, interviews were conducted with a number of practitioners of traditional medicine and their patients in several regions of Thailand.2 By judicious use of the

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1 Sources include medical texts, dictionaries, and word lists obtained from speakers of these dialects. Some care needs to be taken in the use of such sources, since the information is at times sporadic. In the case of the compilation of dictionaries and word lists, the inclusion and meaning of certain terms depends on a number of constraints, such as the prevalence of certain conditions, or the ability of a compiler to recognise a condition.

2 See Chapter 1 for details of the areas in which this information was obtained.
information derived from these sources it should be possible to develop a matrix of possibilities for the interpretation of some of the illness categories encountered in the medical texts.

The following discussion will be based on the illness categories appearing in the collection of texts published as *Phāetsāt songkhroy* (PS) by the Wat Pho Traditional Medicine Association, which, for the purposes of this work, may be regarded as representative. A list of the main illness categories which occur in that work is included here as an appendix. Before commencing a discussion of these illness categories, it is important to consider some of the factors influencing the production of such a list, the degree to which the illness categories in the PS correspond to those in the "original" texts, and their relationship to the terms actually used by practitioners in dealing with patients.

Firstly, the list does not necessarily include all the illness categories appearing in the traditional medical texts, since the PS represents only a selection of the traditional medical texts available in the mid-nineteenth century. We have already considered the various circumstances which resulted in this corpus of material, and it is likely that the texts available to the compilers of the PS represented only a part of the number in existence prior to the sack of Ayuthaya. Apart from the likelihood of a reduction in the overall number of descriptions of illness categories, it is also possible that those remaining were representative either of what were considered to be less-significant illness categories, or illness categories from provincial areas.

A second factor to be considered is the effect of the editing process itself. It is probable that in the course of editing, first into the Royal Edition (*Chabap luang*), and then into the PS, that illness categories were revised or omitted in accordance with prevailing views. A comparison of some of the texts compiled during the 19th century

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3 The history of these texts has already been discussed in Chapter 2, pp.39-40.
4 See p.230.
6 Hereafter CL.
7 These include those inscribed and displayed at Wat Phra Chetuphon (Wat Pho) during the Third Reign, and published as *Tamrā phēsats* (hereafter TP) by the Wat Pho Traditional Medical College Association, and the Royal Edition compiled in the Fifth Reign. See MTP, chapter 1, for a discussion of their history. In addition, certain other texts held in the National Library, Bangkok, were examined in the course of this study, such as the palmleaf texts from the collection of Krom Luang Wongsaitherdt, who headed the Department of Physicians during the latter part of the Third Reign and the early part of the Fourth Reign (Prince Damrong Rajanubhap, cited in Riap (1978), p.4). These latter texts included *Khamphi mahāchōtrat* (dated 1816), *Khamphi ahiwātakarč* (dated 1815), and an additional palmleaf text in a similar style titled *Khamphi haṭhū’at* (undated).
with the names of illnesses appearing in the PS edition shows a good deal of consistency, however there is evidence of some minor changes which may increase difficulties in interpretation. For example the authors of the PS have in places modernised the spellings of certain words. In some cases\(^8\) this editing has little effect, if any, on meaning. In other cases the updating of spelling may possibly lead to change, or at least ambiguity in meaning. An example of the latter effect can be seen in the case of the word \(kān\), a word of Indic origin which may signify 'bubonic plague'.\(^9\)

In earlier texts \(kān\) was spelt with a final \(ä\) (\(ä\)-chulä). Spelt with a final \(ä\) the word \(kān\) represents the Pali word \(kāla\), which may mean either 'time', or 'blue-black'. Both of these meanings have strong associations in Indic culture: 'blue-black' is symbolic of Siva, whose neck became blue after drinking the poison which would have destroyed the world; and 'time' may signify fate, destruction and death.\(^10\) This latter sense is that which is meant, for example, in the classical Thai story \(Khun Chāng Khun Phāen\), where the anger of the King of Ayutthaya is likened to the effects of \(lom kān\), a 'wind preceding death'.\(^11\) Spelt with a final \(ä\) the word \(kān\) represents the Pali word \(kāla\) which means only 'blue-black'.\(^12\) While the symptoms of blue-black discoloration of the skin are no doubt an important feature of the descriptions of this illness in the texts, so too are its severity and fatal consequences. But by the change in spelling, this latter part of the range of associations contingent upon the ambiguous meaning of \(kān\) is reduced.

The word \(kān\) also illustrates another problem related to illnesses with Indic names. Although the editorial change in the final letter described above has removed ambiguity in the meaning of the word, it has done little to clarify the meaning of the illness categories in which \(kān\) appears. Thus, while the gloss 'bubonic plague' is consistent with the Pali meaning of the word, such an interpretation appears not to be supported by the way the

\(^8\) For example the replacement of the consonant cluster \(tt\) (th+r, =s) by \(t\) (s), and the short a vowel formed by repetition of the final consonant with \(ü\) (maihanakāt). These features are characteristic of Ayuthayan Thai.

\(^9\) McF, p.102.

\(^10\) Ibid., pp.98-99.

\(^11\) Sephā ru'ang Khun Chāng Khun Phāen, p.26; Yubol (1986), p.46. In other contexts the term \(lom kān\) might be interpreted as 'kān illness', however it seems likely that in this case the literal meaning of the word \(lom\) is meant – see the discussion of \(lom\) later in this chapter.

\(^12\) PTS, pp.210-211.
term is used in the traditional medical texts. In this case one might speculate that the editor of the PS, in interpreting the (difficult) word kān in the 'original' text, resorted to its original meaning in Pali, or at least the Pali meaning which seemed most apt in that context. As will become evident in the course of further examination of Thai illness categories, the meaning which Indic terms acquire in Thai may differ markedly from the original. Thus to resort to interpretations based on their Indic roots, as McFarland has done at times, is likely to obscure the full semantic range of certain terms.

The case of kān emphasises the importance of the role which editors, in both the near and distant past, may have played in the interpretation and shaping of the texts with which we are concerned. The question of meaning change, central to this issue, is particularly relevant to the modern-day function of the medical texts. Just as there is no certainty that the meaning of a word has not changed over the time which has elapsed since the texts were first compiled, so is there no certainty that the present-day meaning of a term corresponds to that intended by the 19th century editors of the Royal Edition. As will become apparent in the course of this work, the introduction of modern medicine has had a considerable influence on the meanings of traditional illness categories.

It must also be said that the compilation of a "list of main illness categories" is in itself an act of interpretation on behalf of the compiler. The issues of concern here, regarding the decision of what constitutes an "illness category", were discussed in the previous chapter. Following that discussion, the items included are those which, as far as can be determined, represent what are regarded in the texts as being deviations from the norm of health. The qualifier "main" is included since there will always be, adventitious omissions aside, differences in interpretation, both within the texts themselves and by readers, as to what constitutes an illness category.

Finally, another factor to be considered regarding the illness categories in the texts is their relationship to the spoken language, for this is important in understanding how they fit into the context of medical treatment as a whole. There is in fact no guarantee that the texts reflect all of the illness terms present in the spoken language of the 19th century, or

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13 In addition to the meaning of 'illnesses characterised by blue or black discolouration of the skin' (as at PS:1:31, 2:189), kān appears to signify 'illnesses involving abscesses (internal or external), and fever (literally 'poison')' (as at PS:1:245, 255, 258).

14 See, for example, his definition of krasai, cited later in this work.

15 Filliozat has commented on the problem of meaning change in Indic texts. As he has pointed out, although an illness category cannot be assumed to have a meaning identical to the original, it is almost certainly of the same type (Filliozat (1964), pp.98-99). An illustration of this may be seen in Thai terminology for cholera where old terms were given a new application (see Terwiel (1987)).

indeed of any time since they were first compiled. Conversely it is not certain to what extent the illness names mentioned in the texts were used in ordinary speech by people other than doctors, or even by the doctors themselves. This has a bearing on two issues which will arise in the course of the examination of illness categories in this chapter. They are, firstly, the use of formal language, and, secondly, the expression of the subjective or emotive aspect of the state of illness.

4.2. Illness Categories Occurring in Phäetsät songkhro

The Thai medical texts display abundant evidence of attempts to classify illnesses in a hierarchical fashion: it is often stated explicitly in the descriptions of illnesses that certain illness categories are types of certain other illnesses, or that they include a certain number of subordinate types. In the course of this chapter these classifications and the bases on which they are made will be examined. It is proposed to contrast this classification with the taxonomic model suggested by Berlin et al. Using this approach it should be possible to address some of the points raised in the previous chapter about the shortcomings and validity of the taxonomic model, as well as to explore some of the alternative approaches also suggested. In view of the evidence from the texts that the Thai compilers classified illnesses in a hierarchical way, there would appear to be some justification for the use of such an approach here, if only as an expedient, allowing an entrée into a discussion of the classification system.

4.3. Terms for the Domain of Illness

It will be recalled that Berlin proposed that, at the tip of the taxonomic tree of any given domain, there is a category which includes all others. This category he termed the unique beginner (UB). In the Thai medical texts the equivalent to the UB appears to be, at first glance, the word rök. This is a term of Indic origin, being derived from the Sanskrit rōga, which functions as a general term for illnesses. Rök, because of its Indic origins, carries formal connotations in Thai, which are further enhanced by its use with the classifier prakān in reference to specific illnesses or types of illness. In addition to its

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17 See MTP, p.95.
18 Hereafter referred to as "Berlin's model", or "the taxonomic model". See Chapter 3, pp.46-52.
19 See Chapter 3, p.47.
20 MMW, p. 888.
occurrence as a primary lexeme\textsuperscript{21} rōk also appears in compound expressions to represent specific types of illness. For example the texts contain references to ěhaksu rōk ('eye diseases'), mukkha rōk ('oral diseases'), and śīsa rōk ('diseases of the head').\textsuperscript{22}

In contrast to the situation implied by Berlin's terminology, rōk, although certainly the most common term for illness in general, is not \textit{unique} in that role. An examination of the texts shows that several other terms may also represent the domain of illness. These include the words \textit{phayāt}, āphāt, khai, lom, and čhep. While all represent the concept of illness, the meaning and usage of these terms also differs in significant ways which their incorporation into a taxonomic tree tends to obscure.

The term \textit{phayāt} \textsuperscript{23} is, like rōk, of Indic origin, being derived from the Sanskrit vyādhi ('illness').\textsuperscript{24} In modern Thai the term \textit{phayāt} is usually taken to mean 'intestinal parasites', a meaning which may also be found in certain of the traditional texts.\textsuperscript{25} However it is also possible to find occurrences of \textit{phayāt} in the texts where its meaning is clearly that of illness in general, either as an individual word which might be substituted for the word rōk,\textsuperscript{26} or as a compound with that term (phayāt rōk).\textsuperscript{27} Like rōk, \textit{phayāt} may also indicate specific types of illness as a compound with other words, for example in \textit{phayāt kāmarōk} ('the illness kāmarōk' i.e. venereal disease).\textsuperscript{28}

Further weight is added to the argument that in former times \textit{phayāt} had a meaning of illness in general by both historical and comparative Tai evidence. Such an interpretation of \textit{phayāt} is, for example, also consistent with its occurrence in one of the Sukhothai inscriptions. Inscription 14 2:13 has:

"May I be reborn with wisdom and property in each reincarnation, May I be free from illness (\textit{phayāt kō yā mī kāe kī})"\textsuperscript{29}.

\textsuperscript{21} See Chapter 3, p.47.
\textsuperscript{22} See Appendix for details of the location of these terms, and other illness categories from PS to be mentioned in this work (p.230).
\textsuperscript{23} An earlier version of the following discussion of \textit{phayāt} appeared in Bamber (1987), pp.187-188.
\textsuperscript{24} MMW, page 1037. The change in the initial consonant from 'v' to 'ph' indicates that the word \textit{phayāt} came to Thai via Khmer. See the earlier discussion of this consonant change in Chapter 2, p.29, fn.108.
\textsuperscript{25} See for example PS:1:198.
\textsuperscript{26} See PS:1:138 for example.
\textsuperscript{27} See PS:1:269.
\textsuperscript{28} PS:3:99.
\textsuperscript{29} Khanakammakan phic'haranā (1978), p.152.
In Northern Thai medical texts phayāt is also widely used as a general term for illness, in place of rōk, which occurs only rarely. Cognates of the word phayāt with the meaning of illness in general also occur in Lao (phanyāt), Tai Lü' (phayāt), and Shan (pyathī). In the case of Shan and Tai Lü' the term rōk does not appear to have been used, and while cognates of rōk occur in Lao (rōk, lōk, rōkhā, lōkhā), the term phanyāt seems to have been the more commonly used term in the past.

Cognates of phayāt which occur among other Tai groups do not appear to have had the more specific meaning of 'intestinal parasites' which the term has in Central Thai. Given the usage of the word in the more general sense in old Central Thai texts and inscriptions, this suggests that at some stage phayāt has undergone a narrowing of its semantic range in Central Thai. Possibly, this change in meaning came about through competition with the word rōk. Rather than a "horizontal" division of the semantic domain as seems to have occurred in other cases, the result was a "vertical" division, with the adoption of rōk to represent 'illness in general', and a narrowing of the semantic range of phayāt to refer to 'intestinal parasites'.

The concept of illness may also be represented by another term of Indic origin, āphāt which is derived from the Sanskrit ābdha ('pain, distress'). The occurrence of āphāt in the texts of traditional Thai medicine is restricted to only a small number of places, and usually in the context of sections of the text written in Pali. As in the case of phayāt, āphāt also occurs in Lao, either individually or as a compound with rōk (as rōkāphāt).

Apart from these words of Indic origin, illness in general is also represented by a set of terms apparently of Tai origin, consisting of khai, lom, and ěhep. For the most part
the evidence that these terms may function in such a way is less direct than with terms such as rōk, not only because their use in PS is more rare than the words of Indic origin, but also due to the fact that they all possess additional more specific meanings which make their interpretation difficult.

The first of these words, khai, is well-known in modern Thai as meaning 'fever'. In the texts on traditional medicine khai also occurs in the names of many illnesses which modern medicine broadly characterises as "fevers". Examples of such illnesses are khai pā ('malaria'),40 khai rāksāt ('typhoid fever'),41 and khai (i) dam (i) dāeng ('scarlet fever').42 In addition to these illnesses, however, khai is also used in naming, or in reference to, a number of illnesses which are not characterised by fever, or at least would not be regarded as fevers in the commonly accepted Western sense of the word. Examples of such usage are khai kamdaw ('nosebleed'), and khai ritsiduang pāk pu'āi ('a chronic ulcerated condition of the mouth'). In such cases khai appears to be functioning in a similar fashion to that in which rōk functions in naming specific types of illness, and, in the examples given above, rōk could indeed be substituted for khai without any apparent change in meaning. Thus, in addition to a specific meaning of 'fever', khai would also seem to carry the general meaning of 'illness'. This observation is supported by the use of khai in the spoken language of both the 19th century and today, in such expressions as pen khai ('to be ill')43 and khon khai ('a sick person'),44 a term which also appears in PS.

The word lom, like khai, is a term which has both general and specific applications in the naming of illness. Today the term pen lom, literally meaning 'to have wind', denotes a specific malady, 'to feel faint',45 and also occurs in the names of some conditions such as lom bā mū ('epilepsy'). There is, however, evidence that in the 19th century the word had a much more general meaning. Pallegoix, for example, defined the expression pen lom as "to be attacked by a malady",46 that is, in Berlin's terms, in the capacity of the UB taxon. Lom would appear, in this context, to function as a term for illness in general. This, in fact is the meaning of the word lom in some of the Northern Thai medical texts, for example in the phrase lom an nu'ng chī' wā ('an illness called...')47. While lom appears not to occur individually in the Central Thai texts in this sense, it does occur in compounds in a way

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40 NMT, p.52.
41 Ibid.
42 Ibid.
44 Ibid.
45 See Somchintana (1986) for a list of expressions containing pen lom (pp, 83-84).
46 Pallegoix (1896), pp.1477-1478.
which is consistent with this general meaning. For example, just as there may be a rŏk puang, so may there be a lom puang, in both cases meaning 'cholera'. Similarly the texts refer interchangeably to both rŏk krasai and lom krasai. In other cases, the word lom may be substituted for khai, also without any apparent alteration in meaning, as may be seen in the categories lom kamdaw/ khai kamdaw, lom phit/ khai phit, lom sannibāt/ khai sannibāt, and lom atisān/ khai atisān. In any of these examples the word rŏk could be comfortably substituted for the terms khai or lom.

In previous commentaries on traditional Thai medicine there has been a tendency to interpret the word lom literally, as meaning 'wind'. Attempts to understand the illness categories in which lom occurs have consequently been in terms of the Indic humeral theory in which "wind" plays such a conspicuous part. As we will see later in this chapter, Indic humeral theory plays an important role in the classification of illness in the traditional Thai medical texts, however the use of the term lom in the naming of illnesses clearly extends much further than that which could reasonably be expected on such premises. Thus while lom bā mū ('epilepsy') might, on the basis of Indic theory, be classified as a "wind illness", since it is characterised by symptoms which involve movement and therefore correspond to the wind element, it is difficult to construct a similar rationale for lom ritsīduang ('haemorrhoids').

Although it has previously been suggested that lom may function as a general term for illness in Northern Thai medicine (Muecke (1979), p.285; Weisberg (1984), p.118), little attention appears to have been given to this view. For example, in a recent work on Northern Thai medicine, Brun and Schumacher (1987) refer to a "khaang wind" (p.100), and "a serious wind" (p.197). In both of these examples the substitution of the word "illness" for "wind" would be far more in keeping with the context. Elsewhere, in reference to Central Thai medicine, Gosling states that "At a more colloquial level, 'pen lom' covers any illness associated with that lom, which might not be even remotely gastritic!" (1985, p.777). Although recognising that lom has a wider application than simply "air in motion", it seems that Gosling is perpetuating the notion that lom refers to illnesses involving the wind element. In dismissing Western interpretations of the use of the word lom in traditional medicine Somchintana (1986) rightly points out the tendency to ignore the word's range of extended or transferred meanings (pp.54-55), but the explanation she provides, based on Indic humoral theory, nonetheless places her in with those whose work she seeks to dismiss (p.89).

Even more of a challenge to justify on the basis of humoral theory would be the use of the word lom in the expression pen lom .38 ('.38 illness') which was the reply given by one group of Southern Thai villagers to my inquiry regarding the whereabouts of a local man. In response to my look of bafflement they explained, with some amusement, that the man had in fact been shot dead some time ago (field notes, Songkhla, October 1986). The combination of a general word for illness
The large number of lom illnesses which have been reported in the literature on traditional Thai medicine\textsuperscript{51} is due therefore, not to any proclivity which Thais may have for illnesses involving the wind element,\textsuperscript{52} rather it is because lom is being used in a very general sense to denote illness. While encompassing cases where lom indicates that a particular illness involves the faculty of movement, such an interpretation of lom as meaning 'illness in general' does not force such a distinction on all cases thus labelled.

As we have already noted,\textsuperscript{53} the possibility of there being several words which may serve as general terms for illness is at variance with the model proposed by Berlin \textit{et al.} It is important to consider here how this situation may have come to be, and what implications it may have for the use of the taxonomic model in the description of illness.

An observation made by Berlin on the labelling of folk taxa may be helpful in explaining the occurrence of several general terms for illness in Thai. Berlin noted that in folk taxonomies the UB category is frequently unlabelled.\textsuperscript{54} Supposing that this was the case in Tai prior to Indic influence, then it is possible that the Indic terms rōk, phayāt, and ãphāt were adopted to represent the unlabelled category. In Central Thai it was rōk which became the general term for illness, while in Northern Thai and Lao it was phanyāt which was adopted. Interestingly, as already noted,\textsuperscript{55} the UB taxa in other domains such as plants and animals are also labelled with words of Indic origin, which suggests that this phenomenon may not have been confined to the domain of illness.

To say that the UB taxon was unlabelled prior to Indic influence may not be entirely accurate, however. We have considered other words, of Tai origin, which may be used in PS to refer to illness in general, and there are still more in other written sources and in spoken Thai. Some of these are clearly of limited usage, such as the word prachuan, used when referring to Royalty, but others are widely distributed among Tai peoples. Table 1

with a number is also a common feature in Thai. This was the basis for a metaphor applied to alleged political corruption during the 1988 election campaign, which was termed rōk rōi ët, literally '101 illness'. Roi-ët is also the name of a Northeastern province where the practice of vote-buying was said to have been particularly rife (Sayām rat, 17-23 July, 1988, pp.11-12). See Bamber (1982) for a further discussion of some of the points raised here.

\textsuperscript{51} Pallegoix (1854), vol.1, p.344; Bradley (1865a), p.103; Sturge (1884), pp.51-52; Young (1900), pp.122-123; Beyer (1907), p.4; Landon (1939), p.140; Hofbauer (1943), p.196; Smith (1982), p.152.

\textsuperscript{52} Muecke (1979), p.272.

\textsuperscript{53} Page 5.

\textsuperscript{54} See Chapter 3, p.47.

\textsuperscript{55} Ibid.
shows some of the words which are used in reference to illness in general in a number of Tai groups, including those which have been subject to little, if any, Indic influence. Interestingly, for those groups geographically close to China and Vietnam, the term bing is used, which may be derived from either the Mandarin bing or the Vietnamese bênh.

It will also be seen that, for almost all the groups listed, the words khai and чеп, or their cognates, are used to refer to illness in general. As in Central Thai, the cognates of khai and чеп in other Tai dialects also have the specific meanings of 'fever' and 'pain' respectively. In what is apparently a metonymic process these specific terms have come to represent the general domain.

From the evidence presented above it seems very likely that, in certain situations, terms of Indic origin were preferred to those (possibly ambiguous) general words for illness already in use in Tai prior to Indic influence. Generally, in the medical texts, it is the words of Indic origin that are used in preference to those of Tai origin, while in the spoken language, both types of words are used, but in different situations. It is important that we give some consideration here to these contexts in which the different terms for illness are used.

A simple answer to the preference for words of Indic origin over those of Tai origin in the medical texts might be to conclude that the translators or compilers were merely being faithful to the (presumably) original Indic texts in using rōk, phayāt, and āphāt to represent their Pali or Sanskrit cognates. This answer would be in keeping with the large body of western descriptions which have characterised traditional Thai medicine as being largely Indic in origin. As will be seen in the course of this work, there are a number of grounds on which to doubt this assumption of Indic origin. As noted in Chapter 2, it is possible that in some cases Thai texts were compiled in the style of Indic texts. Nevertheless, even if the medical texts were crafted by Thais in a form suggestive of the style of Indic texts, the problem of the preference for Indic terms, rather than Thai, would remain.

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57 Bui Phượng (1977), p.77. I am grateful to Dr Marybeth Clark for her help in the identification of this term.
58 See Bowring (1857), vol.1, p.145; Beyer (1907), pp.1-2; Landon (1939), p.139; Cabaton (1920), vol.11, p.484; Hart (1969), p.41; and Coedes (1966), p.226. The account by Smith (1982) would appear to be the only one in which the origin of Thai medicine is attributed to China.
59 See p.29. It is possible, too, that some Khmer medical texts may have originated from Thai texts, as appears to have been the case with other types of texts. Quaritch Wales (1983), for example, cites the example of a Khmer divination text which he attributes to a Thai source (pp.8, 35, 138).
Table 1: Words for Illness in General from Several Tai Groups

<table>
<thead>
<tr>
<th>Tai Group</th>
<th>Names for 'Illness'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Thaia</td>
<td>khai, khot, čhep, chuan, chon, thehakasai, prachuan (Royal), patchon (Royal), pen lom, phayät, rucha, rök, ãdun/ãdün, āphät, āmai, āradi/ārati, puai</td>
</tr>
<tr>
<td>Lao</td>
<td>khai, čhep, čhepkhai, čheppuai, sōkhai, sō, puai, pasuan (Royal), patsön (Royal), pen lom, phanyät, mak pen, rök/rökhā, rökphanyät, rökāphät, lōk/lōkā, wanyät, han, āphät, āmai</td>
</tr>
<tr>
<td>Northern Thai</td>
<td>khai, phanyät, lom</td>
</tr>
<tr>
<td>Southern Thai</td>
<td>khai, rök</td>
</tr>
<tr>
<td>Ahom</td>
<td>khai, khai sip khai neu, nā (or dā/da), thum lum khai</td>
</tr>
<tr>
<td>Shan</td>
<td>khai, tāŋg pen (or pin), tāŋg khai tāŋg pen, noe mai, pen, pyathi, yawka, lum</td>
</tr>
<tr>
<td>Tai Lū's</td>
<td>phanyät, lom</td>
</tr>
<tr>
<td>Khamti</td>
<td>khai</td>
</tr>
<tr>
<td>White Tai</td>
<td>čhep, čhep tsay, tsay, han, bing</td>
</tr>
<tr>
<td>Nung</td>
<td>bīŋg</td>
</tr>
<tr>
<td>Dioik</td>
<td>ping, nai</td>
</tr>
<tr>
<td>Zhuang</td>
<td>ping, nai</td>
</tr>
</tbody>
</table>

a  Derived from McF; NMT; Pallegoix (1896).

b  Guignard (1912); Kerr (1972).
c  Brun and Schumacher (1987); PLTSP.
d  PPTT.
e  Barua (1964).
f  Cushing (1888, 1914); Young (1985).
g  Ranoo (1987).
h  Weidert (1977).
i  Minot (1940); Dięu and Donaldson (1970).
k  Esquirol and Williante (1908).
A more convincing explanation for the preference of Indic words over Tai words in the medical texts is linked to Thai beliefs regarding status, religion, and magic. The medical texts fit into this complex in that, being written, Indic, and dealing with medicine, that is, possessing 'magical power' (rīt), they are held in considerable esteem (saksīt). The distinction between magically powerful things and those which either do not possess such properties, or are antagonistic to them is reflected in many aspects of Thai culture.

One manifestation of this distinction is in the use of "high" and "low" forms of language depending on context. In many cases the high form for a name is derived from an Indic term, as, for example, is sīsa (Skt. sīrṣa), the high form of hua ('head'), a word of Tai origin. In general it is the "high", mainly Indic, forms of language which appear in the medical texts, while "low" words of Tai origin are used in non-formal contexts in the spoken language. It is therefore to be expected that the terms ṭīk, phayāt, and āphāt would be found mainly in medical texts, and the other terms for illness of Tai origin, discussed above, would occur in the spoken language.

A further aspect associated with the belief in the magical power of the medical texts, is the use of language in ensuring that certain knowledge remains accessible to only a few. It is likely that in the past the medical texts, as with other valued manuscripts, were written in the khōm, or Old Khmer, script. Although, the texts edited during the early part of the Rattanakosin period were written in the Thai script, some of the khōm script was retained, mainly for those passages written in Pali. The effect of writing medical texts in khōm and incorporating Pali or Sanskrit passages was probably twofold: firstly, because of the association of the khōm script with supernatural power, it lent the text mystique, and secondly, because literacy was the province of a relative few, an understanding of the contents of the texts was restricted mainly to those who were trained, or initiated into the profession.

Although increased literacy, together with the transcription of the texts into Central Thai script, has made such considerations no longer valid, the retention of Indic

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60 As an illustration of the magical value of texts, Terwiel notes the use of ash from the oldest handwritten sacred books in the making of amulets (Terwiel (1979), p.75). See also Davis (1984), pp.96-98 and Textor (1973), vols.1,2, pp.15, 110.
61 See Davis (1984) for a close examination of these beliefs in traditional Northern Thai culture.
62 There are also other levels of language, for example Royal language.
63 MMW, p.1078.
64 It is relevant to note here that Thai medical practitioners, in the interests of protecting their livelihood, are reported to have omitted certain ingredients or other pieces of knowledge, such as "verbal charms", in copying down formulae (Golomb (1985), pp.84-87). See also Brun and Schumacher (1987), p.46.
terms still serves to mark the genre to which the texts belong, in much the same way that Latin and Greek terminology is characteristic of the texts of modern medicine.

In addition to their role as objects possessing an intrinsic power, some of the medical texts, particularly those which serve as working manuals for practitioners, also contain a good deal of information which is not very esoteric, concerning the treatment of rather mundane everyday complaints such as cuts, bites, and burns, or even the entry of insects into the ear.\(^65\) As will be seen in the detailed examination of a particular text in a later chapter, "low" forms of language may still be found in the medical texts. The language in the medical texts is therefore likely to be the result of a tension between the requirements of these two functions, that is between what may be regarded as their formal and practical roles.

In summary, to represent illness in general the Thai texts employ a number of terms, which differ in their origins, uses, and associations. Although all these terms would fit the requirements for the UB category in Berlin's model, it is also apparent that their representation in such a way may tend to hide the important differences between them. For example, in a taxonomic representation the "high" connotations of the various terms of Indic origin would not be apparent, nor would the specific associations carried by words such as lom and khai. So, while in one sense all the terms are equally able to denote illness in general, in another sense they are unequal, and contradict the notion that there is a unique beginner, or perhaps even a unique domain.

4.4. Illness Categories based on Select Criteria

At a level of contrast immediately subordinate to the UB level, according to Berlin's model, is the taxonomic rank of Life Form (LF). In traditional Thai medicine the categorisation of illnesses at this level of contrast is particularly complex in comparison to that of other ranks. The reason for this complexity is largely, but not solely, due to the role played by theories of classification in the determination of illness categories. Illnesses may in fact be classified on the basis of any of several different theories, embracing not only

\(^{65}\) PS:1:269. Reference also appears to be made to this affliction in one of the Sukhothai inscriptions (no.86 I: 8-10) where it is given as the reason why a certain person, Nāi Siyōthā, could not take up an official post:  

\[
\text{chu'ng nāi Siyōthā huapāk māengkhā khaw hā čhak aw rātchakān bō mi dai}
\]


It is possible that in this context the expression has a metaphorical meaning, or signifies a more serious condition than a literal translation would indicate. I am grateful to Dr A.V.N. Diller for bringing this reference to my attention.
those of the major Asian medical traditions, but also some of apparently limited prevalence. As will be seen in the following examination of these various theories, they embody a range of concepts regarding illness.

4.4.1. Indic Theories of Illness Classification

The most obvious of the theories influencing Thai classification at this level of contrast are those derived from Indic medicine. As already noted, until recently descriptions of Thai medicine have emphasised those aspects which are common to Indic medicine, of which the theories regarded as "humoral" are perhaps the most prominent example. In addition to the latter, there are also other types of classification of Indic origin, for example a classification of illnesses according to the body part or organ involved. Since such a great deal of emphasis has been placed on the first of these theories in previous descriptions of Thai medicine, they will not be examined in close detail here. The following account will be confined to an overview of the role of these theories in the classification of illnesses in the texts.

The term "humoral" theories refers to two types of classification, which will be termed here the theory of the tridoṣa and the four elements theory. Although they have similar origins, these two theories differ significantly, and represent separate influences within Indic medicine, the theory of the tridoṣa being more characteristic of Ayurveda, and the element theory of Buddhist medicine.

According to Ayurvedic theory, the body is composed of five elements (Skt. dhatu) consisting of earth, fire, wind, liquid, and air. The names of these elements should not be taken literally, however, as their function in this context is metaphoric, and they in fact refer to those attributes of the body corresponding to the qualities of these different elements. Thus by earth is meant that part of the body which is solid, by fire,

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66 Matthayat (1972) terms this type "classification according to the elements" (p.19).
67 For a detailed account of the role of Indic humoral theory in traditional Thai medicine, readers are referred to Mulholland (1979a) and (1979b).
68 See Jolly (1951), pp.23, 61, and Demiéville (1937) for information on the development of a distinctive "Buddhistic medicine".
69 According to Dasgupta (1952) dhatu refers to "elements which uphold the body", from the root word dhā,"to hold" (vol.2, pp.317, 319).
70 Mulholland (1979b), pp.29-30.
that which has heat, by water, that which is liquid, and by wind, the quality of movement.\textsuperscript{71}

Illness is said to result when one (or more) of the elements of the body undergoes an abnormal increase or decrease in its function, producing a disequilibrium in the balance of the whole. In practice only three of the five elements are thought to be active in this way: wind, heat, and liquid.\textsuperscript{72} When troubled, these are referred to as the trido\(\text{\textipa{\textit{s}}}\)a ('three afflictions'), comprising wind (Skt \textit{v\=a\textipa{\textit{t}}}a), bile (\textit{pitta}), that is heat, and mucus (\textit{s\=le\textipa{\textit{\=m}}}\textipa{\textit{n}}\textipa{\textit{a}}\textipa{\textit{n}}, or \textit{kapha}), representing liquid.\textsuperscript{73} Thus there are said to be diseases of wind, bile, and mucus, or a combination of all three, termed \textit{sannip\=a\textipa{\textit{t}}}a, corresponding to symptoms involving these three elements.\textsuperscript{74} There are said to be one hundred and one diseases of each of these types, making a total of four hundred and four.\textsuperscript{75}

In Buddhist theory the body is also seen as being divisible into four elements, defined in a similar way to the Ayurvedic tradition. In practice the fifth element, air, is rarely mentioned.\textsuperscript{76} However Buddhist theory differs from Ayurveda in its theory of pathogenesis, and, in contrast to the tertiary theory of the trido\(\text{\textipa{\textit{s}}}\)a, it is a quaternary theory which predominates. Diseases are thus thought to arise from an abnormal increase or decrease in any of the \textit{four} elements – solid, liquid, heat, and movement. However, some amalgamation with Ayurvedic theory is evident in Buddhist texts which make occasional reference to the trido\(\text{\textipa{\textit{s}}}\)a.\textsuperscript{77}

\textsuperscript{71} Mulholland points out that three of the elements–fire, water, and earth–are common to the Greeks, Indians, and Chinese (1979a, p.89). In Chinese theory, however, the elements would appear to be related in a rather different way: metonymically, as opposed to metaphorically. Thus in application to medicine, the relation between certain symptoms of illness may be as wood:fire:earth:metal:water (Professor A.C. Graham personal communication, August, 1985).

\textsuperscript{72} Caraka (1949), vol.5, p.162.

\textsuperscript{73} Ibid., pp.162, 214.

\textsuperscript{74} Dasgupta (1952), vol.2, p.338, fn.1.

\textsuperscript{75} Demiéville (1937), p.253. It is unlikely that there were literally "one hundred and one" illnesses. It seems more likely that the number was chosen for auspicious reasons. "One hundred and one" is also regarded as significant among some Tai groups (Terwiel (1980-81), vol.1, p.115).

\textsuperscript{76} Ibid., p.249.

\textsuperscript{77} According to Demiéville, at the time of the visit of the Chinese Buddhist Yi Jing to India, around 671 and 695AD, there was a divergence between the quaternary theory taught within Buddhism and the "three humours" theory of the lay Brahmanist doctors (Demiéville (1937), p.251; Takakusu (1970), p.132). Demiéville cites the need to reconcile these two theories as the cause of considerable difficulty in the analysis of Indic medical theory as it appears in Chinese sources. It is likely that the Thai physicians encountered similar difficulties to the Chinese in their interpretation of Indic
Both the Indic humoral theories of the *tridoṣa* and the theory of the four elements figure prominently in the Thai texts. Of interest are the apparently syncretic aspects of these theories in the Thai sources, which resemble those mentioned above in respect to Indian medicine, and which also occurred in Chinese Buddhist medicine. Thus, though it is said that illness may ultimately result from only three of the elements, in practice four elements are often mentioned. Rather than the earth element, which should predictably complete the four, in certain cases, as in some Indic sources, it is blood which is included together with the *tridoṣa*.

In Thai medicine there is a category of illness, *sannibāṭ*, corresponding to the Sanskrit *sannipatika*, which in Indic medicine represents illness resulting from the involvement of all three of the *tridoṣa*. From its usage in the texts, however, it is clear that *sannibāṭ* has come to represent an illness category in its own right, not necessarily indicating involvement of any of the *tridoṣa*. This may be seen especially in its occurrence in the compound *khai sannibāṭ*, meaning either 'sannibāṭ fever' or 'sannibāṭ illness', depending on the interpretation of *khai* in the particular context. In either case, *sannibāṭ* would be a more basic illness category, rather than one at this level of contrast which, according to the theory, it ought to be.

From the perspective of the taxonomic model, both the theories described above provide an example of a classification based on a limited number of characteristics, that is on deduction. The classification relies on the recognition of similarities between illnesses and the categories provided by these two theories. For example the high temperature which characterises fevers means that they are classified as "heat" illnesses. Likewise, illnesses which involve the neuro-muscular system, such as cramps and spasms, are classified as "movement" illnesses.

As we have noted, there is a second type of illness classification of Indic origin which serves to complicate classification at this level of contrast. In Indic medicine this theory. Further evidence of a syncretism between Ayurvedic and Buddhist thought is shown by the incorporation of magic formulae of both traditions into Ayurvedic medical texts (Rosu (1986), p.229).

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78 See Demiéville (1937), p.250.
80 Ibid., pp.30-31.
81 Jolly (1951), pp.60-61, 70. In Greek and Arabic medicine blood is also sometimes included as the fourth humour (Ullmann (1978), p.58).
82 Mulholland (1979a), p.103.
classification is based, in the main, on the body part affected, but may also be grounded on some other salient characteristic of the affliction, such as colour, or general location (for example internal or external) in the body. Examples of the illness categories resulting from this system of classification are *ḥṛdroga* ('heart diseases'), *netraroga* ('eye diseases'), *śiraroga* ('diseases affecting the head'), *pāṇḍuroga* ('diseases affecting the skin colour'), and *bāhyaroğa* ('external diseases'). The corresponding Thai classification closely follows this pattern, although in some cases the Thai word indicating location or characteristic, though still of Indic origin, may not correspond to those given above. Examples of this type of classification appearing in the texts include *chaksurok* ('eye diseases'), *mukkharok* ('oral diseases'), *sisarōk* ('diseases affecting the head'), *mūtarōk* ('diseases affecting the urine'), *hru'ṭhayarōk* ('heart disease'), *kimirōk* ('parasites'), *kāmarōk* ('venereal diseases'), *kumanrōk* ('illnesses affecting children'), and *wannarōk* ('illnesses involving infections or abscesses').

The usage in the texts of the classes of illness mentioned above is unambiguous, with two exceptions. These are the categories *kāmarōk* and *wannarōk*. Both these categories are ambiguous in that in modern Thai they have more specific meanings than those given above. Thus, particularly among poorly educated people, *kāmarōk* tends now to be used as an illness category in its own right, as if it represented a single disease (gonorrhoea), rather than a class of "sexually transmitted diseases". That is, it has become a category at a more basic level of contrast, instead of at this (LF) level. The other category, *wannarōk* also illustrates this phenomenon, though in this case the change in meaning is more widespread. In modern Thai *wannarōk* means 'tuberculosis', a meaning also recorded earlier this century by McFarland. This definition is clearly not in accordance with the occurrence of the word in PS, where the meaning of *wannarōk* is consistent with its Pali cognate *vaṇa* ('wound, sore'). It seems that *wannarōk*, like

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84 Jolly (1951), p.72.
85 Ibid., p.133.
86 Ibid., p.166.
87 Ibid., p.174.
88 Ibid., p.127.
89 Ibid., p.72.
90 Matthayat (1972) terms this type of classification "naming according to the faculties or organs (insī)" (p.19). The term *insī* is derived from the Pali *indriya*, meaning "sense perception" (PTS, p.121).
91 McF., p.765. In modern Thai *wannarōk* has also become the vehicle for a pun meaning someone who is often sick (*wan-la-rōk* – literally 'an illness a day').
92 PTS, p.596.
kāmarōk, and the category sannībāt discussed earlier,⁹³ is an illness category which may function at both a broad and a narrow level of meaning.

Besides illness categories resulting from these two types of classification of Indic origin, there is another group of terms which are characterised by their heterogeneity and their apparent indigenous Southeast Asian origin. These categories are those which are, in Matthayat's terms, "named according to accepted usage".⁹⁴ Like the illness categories previously discussed these terms may appear in compounds with the word rōk, in either the initial or final position. Unlike those categories, though, in these "indigenous" categories the word rōk forms an arbitrary part of the name. On examination of the list in the Appendix it is possible to isolate a number of such terms which are based on possession of one of a select number of criteria. These are khai, ritsiduang, sāng, tān, krasai, fi, mareng, and phlāe. Certain other categories such as ru’an and pradong, may also qualify for inclusion at this level of contrast, but there is insufficient data in the PS texts to enable this to be substantiated. We will here consider in detail the categories for which there is ample evidence to enable a case to be made.

4.4.2. Khai

In addition to its role as a general term for illness which we have already discussed, the term khai has a narrower meaning, referring to fever,⁹⁵ or those conditions characterised by a raised temperature. Examples of the latter include khai pā ('malaria'), khai wat nōi ('common cold'), khai wat yai ('influenza'), and khai (ī) dam dāeng ('scarlet fever').

4.4.3. Krasai

Krasai is one of the few illness categories in PS which is the subject of a complete text, the Phrakhampī krasai. Significantly, the only other illness categories to which complete texts are devoted are also based on select criteria, for example the Khamphi mukkharōk ('The Text on Illnesses of the Mouth'). The illness category krasai will be discussed in detail in the following chapters of this work, since, in respect to its classification, it is in many ways representative of the illness categories in traditional Thai medicine. Its discussion here will therefore be confined to only a few brief comments.

⁹³ See above, pp.92-93.
⁹⁵ See for example PS:i:261, 2:43.
Krasai embraces a wide range of afflictions affecting the lower abdomen, including hernia and kidney disease. The texts further divide krasai into two sub-categories: the so-called 'element' krasai, which includes the category klōn, and a category termed 'spontaneous' krasai. Although the texts are not explicit in defining krasai as 'illnesses affecting the lower abdomen', examination of the descriptions of krasai, and the contexts in which it occurs, reveal this to be its common meaning. Krasai thus fits the criteria for inclusion here. In certain contexts, however, krasai is used at the same level of contrast as klōn, that is, with a much narrower meaning.

4.4.4. Ritsīduang

The category ritsīduang is perhaps one of the best examples of indigenous categories based on select criteria. Today ritsīduang is generally taken to mean 'haemorrhoids', however there is considerable evidence that in the past, and in other Tai groups the term had a much wider meaning. In the texts, for example, reference is made to several types of ritsīduang affecting, amongst other parts of the body, the eyes, mouth, throat, thorax, and bowels. The Dioi, a Tai group from Southern China, have an illness category duang which appears to be cognate with ritsīduang, and may used to refer to "cancer of the nose" as pan dang duang. The present-day meaning in Central Thai is but one of the categories recognised in the past or by other Tai groups. What is common to all the types of ritsīduang appearing in the texts is that they are chronic, and usually affect hollow organs, or body orifices. Like the LF taxa in the model proposed by Berlin, ritsīduang is thus distinguished on the basis of a limited number of characteristics, in this case predominately duration or resistance to treatment.

4.4.5. Sāng and Tān

Another more complex example of illness classification at this level of contrast is that of the categories sāng and tān. As Mulholland has concluded after a close

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96 The category klōn, which includes several types of hernia, will be discussed more fully in Chapter 5.

97 Esquirol and Williatte (1908), p.99. Dang means 'nose', and pan is cognate with pen, 'to be (afflicted by)' [my transliteration].

98 McF, p.713; Mulholland (1979a), p.91. Mulholland (1987), citing a Thai informant, defines ritsīduang as "a condition in which lumps occur", which, while consistent with the modern meaning, is inconsistent with much of its usage in the traditional texts (p.104).
examination of the term, sāng refers to "children's disease". In addition to this general meaning, sāng has a more specific meaning in modern spoken Thai, being used to refer to certain types of oral diseases, usually affecting children. This meaning is reflected in possible cognates of sāng occurring in some Tai dialects, for example khāng in Northern Thai, kāng in Lao, and kām in Black Tai, all of which refer to oral diseases in children.

In descriptions in the medical texts the category tān is often associated with sāng, in some cases as a compound term, tānsāng. In other instances the words tān and sāng appear to be used interchangeably in the naming of some illnesses, as for example in the case of sāng chōn/tān chōn, sāng khamōi/tān khamōi, and sāng chōn/tān chōn. In the case of one illness category, tānsāng khamōi both terms appear. There are indications that there may be a fixed chronological order in the onset of the two conditions, with tān following sāng, the effects of the latter being limited to the first few years of life and the effects of the two until puberty. For example, in the Phrakhampī chantasāt, tān chōn is said to commence following the end of sāng at the age of five years. The Khampī prathom chindā also refers to the development of tān chōn after both sāng and its associated diseases have run their course. Again, in the Khampī mahāchōtrat, it is said that once a girl reaches the age of fifteen (that is, puberty) she has passed beyond the time of tānsāng. These references in the texts are also echoed in the belief still held by some Central Thais that tān follows sāng, which is said to occur in very young children.

Such observations indicate that at one time children's illnesses were further classified according to the age of the child. Within the category sāng itself there are examples of changes in illness names with time, as in the case of nin kān, which changes

99 Ibid., p.260. This conclusion was largely based on information supplied by Thai sources (Dr J. Mulholland, personal communication, July 1988).
100 Brun and Schumacher (1987), pp.73, 100-102.
102 Professor Cam Trong personal communication, July 1987. The final consonant here is irregular.
103 For example PS:1:63, 105. See also MTP, pp.44-45.
104 Sāng chōn/tān chōn are probably the same illness as sāng khamōi/tān khamōi, since chōn and khamōi are the high and low forms respectively for 'robber'.
105 PS:1:40.
107 PS:2:47. See also pp.69-70.
to nin fai, then nin phet.\textsuperscript{109} That the stages of development in a child are salient in Thai classifications may also be seen in the description in the \textit{Khamphi prathom ċhindā} of the sāng associated with the normal bodily changes of infancy.\textsuperscript{110} With each of these stages of development (yaw), from when the child first learns to hold up its head, through teething and crawling, until the time it can walk, sāng is said to affect the infant, causing vomiting and other illnesses.

Although seemingly a minor passage in the \textit{Khamphi prathom ċhindā}, it is interesting to note that this observation of child development is common to several Tai groups. In Northern Thai belief illnesses, especially diarrhoea, are linked to the various stages in the infant's development (yaw).\textsuperscript{111} This is also the case in Northeastern Thailand where infant diarrhoea (su)\textsuperscript{112} is named for the various stages in development at which it occurs.\textsuperscript{113} In Southern Thai diarrhoea, termed mروح, khi prah du'an, or khi plian du'an, is associated with developmental changes in infants.\textsuperscript{114} In Black Tai the association between illness and specific changes in body development (čhaw) is also recognised, as for example in the expressions "man čhaw yān ("it [the child] has walking čhaw")" and "man čhaw ṭk khaew ("it has teething čhaw")".\textsuperscript{115} Lastly, in White Tai a category of illness (tsao) is limited to children below the age of two or three years. Tsao may be used in expressions such as dec noi mị tsao ("sickly children"), and met tsao ("to have outgrown being prone to childhood illness").\textsuperscript{116} The White Tai also have an illness category (dan), characterised by fever and yellow skin, which refers to "a type of fever among all young children".\textsuperscript{117} According to Donaldson this term simply means "to be sickly", being spoken of a young child who is habitually ill, as in the expression dec noi pin dan\textsuperscript{118} ("the child has dan"). It is possible that the word dan may correspond to the Thai tān and, as with the use of the terms sāng and tān in the Thai medical texts, the White Tai words dan and tsao may refer to illnesses affecting children of different age groups.

\textsuperscript{109} PS:1:104. \\
\textsuperscript{110} PS:1:65. See also MTP, p.44. \\
\textsuperscript{111} Mrs Ranoo Wichasin, personal communication July 1987; Mstä (1965), p.195. \\
\textsuperscript{112} According to Kerr (1972), su thōng means diarrhoea, and the word su means "to chase out, expel" (p.482). The association of su with diarrhoea would thus appear to be metaphorical in origin. \\
\textsuperscript{113} Earmporn (1987), p.12. \\
\textsuperscript{114} PPTTT, p.259. The literal meaning of the latter two expressions is 'diarrhoea [associated with the] changing of the month'. \\
\textsuperscript{115} Professor Cam Trang personal communication July 1987. \\
\textsuperscript{116} Dieu and Donaldson (1970), p.371. \\
\textsuperscript{117} Minot (1940), p.55. \\
\textsuperscript{118} Dieu and Donaldson (1970), p.83.
Another aspect of the recognition of classes of illness specific to children is the depiction of illnesses in terms which suggest their ability to enter, or reside within, the child's body, as if a spirit or an animal. During the normal stages of a child's development this presence may be disturbed and cause illnesses. Some Thais still say that care must be exercised in handling small children for fear that if they are shaken up, or allowed to run about excessively, the sāng will be shaken up (krathu'an sāng), resulting in illness. Hanks has reported the onset of sāng ("diseased red eyes in a new-born baby") caused by the loud noise made by the dropping of firewood. There are strong affinities here with ancient Tai beliefs linking illness to soul (khwan) loss. Indeed, amongst the Black Tai of the Red River region there is a category of serious children's illness, called pay kōt, which is believed to result from part of the soul(s) of an infant leaving to reside in the womb of an unfamiliar woman until the age of seven years. Hanks describes a case in Central Thailand where sāng is attributed to soul-loss. In the etymology of the word sāng itself there may also be links with the belief that illness may be caused by the entry of animals into the body. If Li Fang Kuei's reconstruction of Proto-Tai is correct, then sāng may be cognate with the Zhou Chinese ziăng or yang. Yang (阳), the usual meaning of which is "sickness", may also refer to a worm which was believed to "gnaw at the heart". Certain types of therapeutic practices, such as the sia kabān ceremony which is described in the Khamphi prathom čhindā, also help to portray illness as an external presence which has invaded the child's body.

The depiction of sāng in terms suggestive of the entry of a living entity into the body may be further enhanced by its occurrence in compounds with the word māe, which literally means "mother". Such compounding may be seen, for example, in the terms māe

120 Dr Wilaiwan Khanittanan, personal communication September 1987.
121 Hanks (1963), pp.53, 71.
122 See Chapter 2, p.17.
123 See Terwiel (1978) for a discussion of variations in the number of khwan among Tai groups.
124 Robert (1941), pp.70-71.
125 The disease was diptheria, and the symptoms were diagnosed by a traditional village practitioner as a combination of "red sāng and elephant sāng". See Hanks and Hanks (1955), pp.158-159.
126 Karlgren (1957), p.193, no.732g, i.
128 PS:1:52
129 The sia kabān ceremony and associated therapeutic practices will be discussed at greater length in Chapter 6.
sāng\textsuperscript{130} and māe sāng fai.\textsuperscript{131} Māe also occurs in other illness names mentioned in PS, such as māe ta'ngāw (meaning unclear),\textsuperscript{132} and māe rammanāt (probably a type of periodontal disease).\textsuperscript{133}

The use of the term māe in connection with the naming of illnesses presents some difficulties in interpretation. In Thai, as in English, "mother" is a rather complex term, and the basis for much metaphorical usage.\textsuperscript{134} In modern Thai, as well as representing "bearer of children", māe may be used in a variety of situations which have some abstract link to this meaning. Māe may, for example, be used to refer to women of a similar age to one's mother, and it occurs in terms denoting female occupations as in the compounds māe khā ('shopkeeper') and māe khrua ('cook'). But the term has a wider extension, signifying "primary", as in māe thap ('a general', usually male), māe nām ('river'), and hua māe mū ('thumb'). Māe also occurs in the names of several machines or other objects whose function is to generate or control other things, such as māerāeng ('a vice or jack'), māekunchāe ('master-key'), and māelek ('magnet'). For the most part these have become "dead metaphors", that is the metaphorical usage of māe is no longer active.\textsuperscript{135}

The use of māe in the naming of illness has also been described in Northern Thai by Brun and Schumacher, who interpret it to mean the invasion of the body by some agent:

The mother [māe] is a physical entity that settles down in the body and from which the disease spreads.\textsuperscript{136}

Like a living entity, this "unidentified etiological agent"\textsuperscript{137} may be killed by the ingestion of certain substances ("medicines to kill the mother") or weakened by withholding the foods which "she" likes.\textsuperscript{138} In this case māe provides both a metaphor for the spread of the illness through the body, drawing on the sense of "that which generates", and a rationale for its treatment since, having "human" qualities it can be "killed" or "starved" like a "mother".

\textsuperscript{130} PS:3:24.
\textsuperscript{131} PS:1:106.
\textsuperscript{132} PS:2:190, 191. In modern Thai, māe ta'ngāw refers to a type of poisonous snake (\textit{Vipera russellii}, Viperidae (PCR, p.642)), however, in PS, māe ta'ngāw is described as "a type of kān" (see the discussion of this term earlier in this chapter, pp.79-80).
\textsuperscript{133} PS:1:269.
\textsuperscript{134} See Lakoff (1987) for an examination of the usage of the term "mother" in English (pp.74-84).
\textsuperscript{135} This point was discussed in Chapter 3, p.74.
\textsuperscript{136} Brun and Schumacher (1987), p.74.
\textsuperscript{137} Ibid., p.135.
\textsuperscript{138} Ibid., p.172.
It is not clear whether such an interpretation is warranted in the case of the use of the term *mae* in connection with illness in Central Thai, however. In some cases the usage of *mae* is apparently similar to that in the "dead metaphors" listed above. *Mae* simply refers to a primary lesion, which is followed by a number of secondary lesions. This is consistent with Mulholland's interpretation of the word *mae* in relation to illness in Central Thai as signifying "major". For example, in relation to the "pustules" of *sangfai*, *mae* signifies the "major" or primary pustule which precedes the eruption of other "follower" (*boriwan*) pustules. Like *mae*, the usage of the word *boriwan* here might simply be as a "dead" metaphor.

However, taken in the context of the other terms and practices associated with *sang* which fit well with the conception of illness as a living entity, discussed above (and later in Chapters 6 and 7 of this work) the use of *mae* and *boriwan* seems appropriate. Thus, even if the usage of *mae* in Central Thai is not as literal as Brun and Schumacher suggest it is for Northern Thai, the term still draws upon associations between illness and living entities. *Mae* may be an example of a dead metaphor come back to life.

If *tän* and *sang* indeed refer to distinct groups of childhood illnesses, then some inconsistencies in the usage of the two terms remain to be explained. One of these is the references in the texts to *tän* arising with *sang* from babyhood. Another is the use of the words as a compound *tansang*. Both these cases suggest that it would appear possible for the two conditions to occur at any time during childhood, and presumably not in a given order. This is, of course, contrary to what has been argued here. These apparent inconsistencies may be clarified if we consider the usage of *tän* and *sang* to be metonymical in these instances. That is, *tän* and *sang* may each have specific meanings, of illness in early and late childhood respectively, but in addition either term may be used to refer to all children's illnesses. The process is similar to that which has already been noted above in respect to the terms for illness in general. As with those terms, compounding may also be a feature of the use of *tän* and *sang* in a more general sense, hence *tansang* ('children's illnesses'). Although Bradley has defined *tansang* as two separate types of illness, this is not necessarily contradictory to the case put here, since, if *tansang* is a general term for children's illness, then it would naturally include all types of illness occurring in children.

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139 MTP, p.54, fn.1.
140 PS:1:106; MTP, p.54, fn.1.
141 PS:1:91.
142 See above, pp.96-97.
143 Bradley (1873), p.251.
An interpretation of tān and sāng as representing two separate phases of childhood illness may further serve to clarify certain other anomalies which have been noted in the use of the two words. For example, referring to the two illnesses khamaw sāng and khamaw tān, Mulholland states that "what is meant by [these two terms] is not explained".144 If the interpretation suggested here is valid, then these two illnesses could mean 'khamaw occurring in early childhood', and 'khamaw occurring in later childhood' respectively.

Another reason for the lack of clarity in the meaning of khamaw is that it may also mean "soot", and has an alternative spelling, krama.145 McFarland defines khamaw/krama as "a coating or furred condition of the tongue (a symptom of infantile throat diseases)".146 This meaning is consistent with that given in the PCR, which adds that "in ancient times it was known as krama sāng, being derived from khamaw".147 In contrast to these definitions, according to one of Mulholland's informants, khamaw "is black...and occurs on the upper lip and in the mouth", while, to another, "it is possible for khamaw to occur anywhere on the upper body and on the head, as well as in the mouth."148

In certain other Tai groups there is an illness category maw which appears to be cognate with khamaw/krama.149 For example, in Shan maw refers to oral diseases,150 in White Tai mau refers to stomatitis,151 and in Northern Thai maw refers to an oral illness affecting babies or young children which is characterised by a white coating on the tongue.152 According to Brun and Schumacher these symptoms are consistent with oral moniliasis (candidosis),153 commonly known as oral thrush, a disease common in young children.154 The weight of the comparative Tai evidence thus favours a meaning for

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144 MTP, p.66.
145 McF, p.48.
146 Ibid.
147 PCR, p.47.
148 MTP, p.43, fn.1.
149 The prefix kra, of Khmer origin, is a common addition to Thai words.
150 Cushing (1914), pp.406, 480.
154 Schafer, Hine, and Levy (1974), p.355. Candidosis may also found in people of any age, usually associated with conditions affecting the balance of the oral microflora such as severe debilitation, or chronic disease.
*khamaw/kramaw* of 'illness affecting the mouth', probably affecting children. The extended, or apparently contradictory meanings, given by Mulholland's informants may reflect a coalescence with the homonym of *khamaw* meaning "soot". There is a good reason for this link to be made, since soot was probably a prominent feature associated with the room where the old Thai custom of 'lying by the fire' following childbirth (*yū fai*155) took place, and, by extension, with the illnesses affecting young children.

The sources currently available, and the scope of the present work do not allow an exhaustive exploration of the origins of the terms used reference to children's illnesses. Speculative as they are, the interpretations made here may nevertheless indicate a direction in which future research in this area might proceed. Paramount among the findings presented above is the association of the classification and nomenclature of children's illnesses with traditional Tai beliefs and explanations. While the beliefs themselves may have all but disappeared among Central Thais, it would be unwise to neglect the possibility that they are still reflected in the terminology associated with children's illness.

4.4.6 *flī, Mareng,* and *Phlāe*

In the previous chapter the observation was made that skin afflictions are well-differentiated in most cultures, and consideration was given to some of the reasons why this might be so. One of the features of skin afflictions which, it was argued, contributed to this differentiation is their salience, not only because they are superficial, but also because skin afflictions generally develop slowly. One of the features which we could thus expect to find at this level of Thai illness classification is terms representing the most general groupings of skin afflictions. There are in fact at least three illness categories which fit these criteria, *flī, mareng,* and *phlāe,* however the way in which they are used is rather more complex than might be expected.

The first of these categories, *flī,* is usually glossed as 'abscess' or 'boil',156 but in the texts its application extends beyond the domain of superficial conditions to encompass afflictions which modern medicine classifies separately. Thus there is reference to various types of *flī,* such as *flī rammanāt* ('periodontal abscess'), *flī duang diaw* ('single-headed

155 See Hanks (1963), pp.49-57 for a description of *yū fai.* Accounts of *yū fai* as it was practised in the 19th century stress the amount of smoke and lack of ventilation in the room where the mother lay (see Bradley (1865b), pp.89-90). The period of confinement was also longer at that time than in recent years, being, according to Bradley, thirty days for the first child (ibid., p.89). Both these circumstances would have favoured the formation of soot, and hence its metaphorical use in association with illnesses affecting newborn children.

156 McF.,p.556.
boil'), and ꦡ hua lek ('small-headed boil'), which conform, in the main, to categories well-defined in modern medicine. In addition, however, ꦡ may be used to classify a number of internal conditions ranging from infections to malignancies. These include tuberculosis (_EDITOR蘃 nai ymbols, infections of the female reproductive system ( IDEOGRAPHÉ nai mot lük), and liver disorders ( IDEOGRAPHÉ nai tap). ꦡ may also be used to classify conditions in a less specific way, for example ꦡ phăi nai ('internal ꦡ'), ꦡ nai thōng (' ꦡ in the abdomen'), and ꦡ phit ('literally 'poisonous ꦡ ', that is, ꦡ associated with systemic infections, which may include ꦡ kăn 'bubonic plague'). ꦡ also appears in the names of certain other illnesses which satisfy the criteria for inclusion at a more specific level of contrast, for example ꦡ dăt ('smallpox') and ꦡ hua khwam ('carbuncle').

In modern Thai the word mareng means cancer, but in the past it appears to have had the far wider meaning of 'any ulcerous or malignant sore'. In the medical texts, for example, reference is made to mareng khuttharat, mareng tamjī, and mareng rammanāt, among others. In all of these examples mareng is linked to the name of another specific

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157 Also called wannarōk (see above pp.94-95) and ꦡ pluak (literally 'termite ꦡ').

158 Possibly other organs are included in this category. There does not appear to have been any systematic study of the body's internal organs within the tradition of Thai medicine, and no record of the Thais having practised human dissections prior to recent times (Yuwadee (1979), p.39; Bradley (1865b), pp.92-93). Mulholland (MTP, p.60) has observed that "specimens of all the substantial elements of the body" are displayed at Wat Bowonnwet in Bangkok. But, to judge from the traditional Thai apprehension regarding dead bodies (see Thompson (1941), p.721), this is likely to have been a recent innovation. Nevertheless, while "scientific" dissections may not have been known, it is possible that some anatomical knowledge was gained from corpses during warfare. In this regard an observation made by the late war cameraman Neil Davis regarding the behaviour of Khmer soldiers during battle is of interest. According to Davis, the Khmer cut out and ate the livers of the enemy dead, believing that in this way they would partake of the "strength and courage of the vanquished soldier. They respected and liked a brave man and so they ate his liver," (in Bowden (1988), pp.293-294; see also Vickery (1984), p.309 fn.87, and Shawcross (1979), p.127). It is of interest also that it was the liver that was considered to be the organ which contained the "power" of the soldier, for in Thai medicine the liver is frequently identified as the organ affected by illnesses. Also in popular Thai belief, some types of phi ('spirit-ghosts') which devour human entrails, such as phi pōp in the Northeast, are believed to prefer the liver (Chāruwan (n.d.), pp.112-113), which may be related to a belief that the liver is the seat of "power" in the body. Referring to the preference of the Northern Thai phi ka for the liver of its victims, Irvine equates the liver with the Western "heart" as being a symbol of life (Irvine (1982), pp.383-384). Such an interpretation also accords with the prominence of the liver in the Central Thai medical texts.
illness: khuttharat usually refers to yaws, tamūi is a whitlow,159 and rammanāt is gingivitis or periodontitis. Although it is possible that any of these conditions may be a precursor to malignancy, it is more likely that the use of mareng only signifies that the condition has become complicated to the point where normal healing is compromised. This would include a variety of conditions, including localised infection, cellulitis, gangrene, and large spreading ulcers or chancres. The difference between some of these conditions and cancer would of course be unclear.

The distinction between the categories mareng and fi is poorly-defined in the medical texts, and this is reflected in the names of some types of mareng and fi. For example there is a category fi mareng suang ('chest abscess-sore'), and a category fi rammanāt ('periodontal abscess'). It is relevant to note also that the category mareng rammanāt is described as "a type of wannarōk",160 where wannarōk clearly means 'ulcers' or 'sores' rather than the modern meaning of tuberculosis.161

Although phlāe does not figure prominently in the PS, it is nevertheless clear from the few references to phlāe that it occupies a similar level of contrast to fi and mareng. There also seems to be no clear distinction between mareng and phlāe, which usually has the meaning of 'ulcer' or 'sore'. The affinities between the two categories may be seen in the case of the illness category mareng pāk mū which appears to correspond to a modern illness phlāe pāk mū. This illness is characterised by the development of a small number of spreading very itchy sores on the legs and arms.162 The apparent interchangeability of phlāe with mareng, and of mareng with fi suggest that, despite their well-defined meanings in modern Thai, in the past they may have been rather closer in meaning. An examination of the occurrence of these terms in other Tai dialects might assist in the clarification of this question.

159 That is paronychia, an infection of the cuticle around the nail.
160 PS:3:92.
161 Again, though cases of tuberculosis affecting the oral tissues, including the gingiva, have been recorded, it is unlikely that this is meant here.
162 Thai rat 20th July 1984, pp.1, 16. According to this source, the illness mainly affected schoolchildren, although some adult cases were reported. The sores began as small vesicular eruptions, usually on the lower legs, which produced a serous exudate. After two days the vesicles ruptured, producing a painful itching ulcer, with a raised indurated border and a serous exudate. After four days the ulcers had increased in depth and width, with continued pain, a purulent exudate, and inguinal lymph node enlargement. The condition healed slowly following antibiotic treatment. To Southern Thai speakers from Songkhla Province questioned in the course of this study, plāe pāk mū simply meant 'a large sore'.
For its cognates occur in several Tai dialects, with the meaning of 'boil' or 'abscess' as in Central Thai. These include Shan (phi,pha),163 Khamti (phi),164 Zhuang (pei),165 Dioi (pai),166 White Tai (ti),167 Black Tai (fi),168 Northern Thai (fi),169 Lao (fi, mak fi),170 and Southern Thai (fi). Cognates of mareng also appear to be distributed across a range of Tai dialects: in White Tai hing refers to a rash, occurring in the newborn;171 the Shan mak hing applies to erysipelas,172 in Lao mak heng may refer to syphilis,173 heng and maheng to "a type of eruption resembling external leprosy but easy to cure",174 maheng to cancer,175 and khi maleng to cancer or yaws,176 the Northern Thai term baheng denotes "a group of skin diseases characterised by superficial eruptions",177 and in Southern Thai marian, or rian, may refer to ailments causing debilitation or wasting,178 or leukaemia.179 Mareng is also cognate with the Khmer word mreɪ and the Mon words maran and baran.180 In Khmer the word has the meaning of "ulcer, chancre, gangrene",181 however, in a sixteenth century Mon inscription, the word means "smallpox", and in late Mon "to be spotted, to have a skin eruption".182

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165 Mr Luo Yongxian, personal communication May 1988.
166 Esquirol and Williatte (1908), p.365.
167 Minot (1940), p.68.
168 Professor Cam Trong, personal communication July 1987.
170 Guignard (1912), pp.131, 459.
172 Cushing (1914), p.472. Erysipelas is an acute febrile infectious disease of streptococcal origin, and characterised by diffusely spreading, deep red inflammation of the skin or mucous membranes (The Macquarie Dictionary, p.223).
173 Guignard (1912), p.164. Skin lesions are characteristic of both primary syphilis (chancre) and secondary syphilis (muco-cutaneous eruptions).
174 Ibid.
176 Ibid., p.121.
178 Rōk phôm hāeng, PTTT, p.199.
179 Ibid., pp.219-220.
181 Ibid.
182 Ibid.
From this information it is possible to construct a possible scenario which would explain the divergence in the meanings of *mareng* and its cognates. Let us assume that in the language ("proto-Mon-Khmer") which was a precursor to both Mon and Khmer there was a word resembling *mreñ*, which had the meaning of "skin inflections", including both erosive and superficial lesions. This meaning was retained in old Khmer, but in old Mon a semantic change took place so that it carried only the narrower meaning of "superficial skin conditions". The Mon terms *maran* and *baran* subsequently entered some Tai dialects, as *maheng* and *baheng* respectively and conserving the meaning of "superficial skin conditions". In Khmer there is also likely to have been a change in the meaning of *mreñ*, resulting in the continuation of only the sense of "erosive lesion". With respect to Central and Southern Thai, according to this scenario, it appears to have been the Khmer word *mreñ* which was introduced into the language (the Southern Thai *marian* is a regular cognate of *mreñ*), carrying only the meaning of "erosive skin conditions".

This explanation is complicated by the occurrence of a probable cognate of *mareng* in White Tai, a dialect which is likely to have been remote from Khmer or Mon influence. Also, cognates of the Central Thai prefix *ma*, which occur frequently in the names of fruits, are sometimes used in the naming of illnesses, especially skin diseases. For example in Lao, apart from the term *mak heng*, noted above, there is also a term *mak wian* which denotes another type of skin affliction, and *mak fi*, which means 'boils'. In Shan *mak* is occurs in the names of a number of skin afflictions: besides several varieties of *mak hing* (mentioned above), there is *mak ling*, meaning erysipelas, mak, qk mak, and tu'ng mak, all three of which refer to cutaneous eruptions. In Ahom *ok mak chā* refers to "smallpox". In White Tai a wart may be termed *mak hut*, a rash *ok mak man*, and a pimple as *ok mak tsiu*. These examples suggest that the use of the word *mak* in naming skin illnesses is widespread amongst Tai groups, again including those which were not in close contact with the Mon-Khmer languages.

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183 Guignard (1912), p.933.
184 Ibid., p.459.
185 Cushing (1914), p.472.
186 Ibid., pp.471-472.
187 Ibid., p.466.
188 Ibid., p.704.
189 Ibid., p.312.
190 Barua (1964), p.3.
192 Ibid., p.209.
193 Ibid., p.376.
The use of the word *mak* in connection with skin afflictions also suggests a metaphorical link between skin illness and fruit which fits well with certain other terms used in the naming of illnesses, notably *qk* and *dqk*. *Qk*, which in Central Thai means 'to come out from', or 'leave', appears in two of the examples from White Tai given above, as well as one of those from Shan. In Ahom the term *pin qk* may be used to refer to "the suppuration of a disease" or "smallpox",194 and *qk mak cha* to "smallpox".195 In Central Thai there are the expressions *qk dök* (meaning "a disease characterised by an eruption"), *qk fai* ("marked by pimples, papules, or pustules"), and *qk fi dät* ("to be suffering from smallpox").196 The texts on medicine have several such examples of this use of *qk*, such as *qk dāeng*, *qk dam*,197 and *qk thoraphit* ("to have smallpox"). The comparison with the plant world suggested in most of these examples, and made explicit in the case of *qk dök*, is also reflected in the use of *dök* to name certain other skin conditions, such as *dök lep*, which in Central Thai and Lao refers to the white spots which sometimes occur on the fingernails.198 In Lao *dök* also occurs in the name of another affliction with superficial symptoms, *dök kang khong* ("scrofulous"199). The use of these terms, which serve to depict illnesses affecting the skin, or with superficial manifestations, in terms of the flowering or fruiting of plants, allows the conditions to which they are applied to be understood in terms of aspects of the familiar environment. This accords well with the observations which were made in the previous chapter on the role of symbols in healing.

Interestingly, there may be some connection between the use of metaphors in the naming of skin afflictions and *phlāe*, the third of the illness categories under consideration here. *Phlāe* appears to be very limited in its distribution among other Tai groups, possibly occurring only in Northern Thai (*phāe*), Lao (*phae*200), and Southern Thai (*phľae*201). The word *phlāe* also occurs in Khmer, in the names of certain skin conditions, for example *plāe pnaek* ("sty, blister or boil on the eyelid"), and *plāe moat* ("fever blister, gumboil").202 However, the primary meaning of the Khmer word *plāe* is "fruit".203 It would thus seem likely that in Khmer the usage of *plāe* in connection with skin afflictions

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195 Ibid., p.3.
196 McF, p.977.
197 It is difficult to determine whether these two terms correspond to categories in modern medicine.
198 Ibid., pp.320-321; Guignard (1912), p.103.
199 Ibid., p.251. Scrofula is a tuberculous infection of the lymph nodes.
201 In Southern Thai *phlāe pāk mūl* refers to a large type of *phlāe*.
203 Ibid.
parallels the Tai use of fruit metaphors. Indeed, it is quite possible that the Thai word *phlē* may be derived from Khmer, and that it entered Thai in this metaphorical sense connected with skin afflictions. With the passage of time, the awareness of the metaphorical reference may have been lost, so that the word *phlē* came to mean specifically 'ulcer' or 'sore'.

A stronger case might be made for the borrowing of the word *phlē* from Mon. In Mon and Nyah Kur, a Mon dialect spoken in an isolated region of Central Thailand, the words *sraa* and *mraa*, which are cognate with *phlē*, mean ulcers, sores, or other similar types of lesions. Coupled with the apparent restriction of the word *phlē* to those Tai groups likely to have been in closest contact with the Mon, that is the Central Thai, Northern Thai, Southern Thai and Lao, it seems very probable that the word *mraa/sraa* became the Thai *phlē*.

There is, however, another remaining possible origin for the word *phlē*. Following Li Fang Kuei's reconstruction of Proto-Tai, then it is possible that the word *phlē* may be cognate with *fi*, and also the Zhou Chinese *p'iaror p'ji:* ("sore on the head"). The apparent absence of the word *phlē* in Tai dialects other than those likely to have been in contact with Mon, and the existence of a cognate for *phlē* in that language, with a very similar meaning, would argue against a Proto-Tai or Zhou Chinese origin. Given the limited amount of information available, it would be unwise to speculate further here in this direction.

What light do these findings shed on the usage of the terms *fi*, *mareng*, and *phlē* in the Thai medical texts? If we accept that *fi* was probably the Proto-Tai word for a range of lesions, both internal and external, and that *phlē*, with a similar semantic range, had its origins in Mon, then it is easy to see how there might be considerable overlap between the usage of these terms in Thai. The word *mareng* presents a more complex problem, owing to the existence of cognates in other Tai dialects with the meaning of 'skin afflictions', a meaning which is, in some cases, at variance with its usage in the Thai medical texts, and in Khmer. In seeking to understand this problem, we should not assume that the direction of transmission of medical terms was only from Khmer to Thai, or that it was a single event. It is in fact possible that the word *mareng* was adopted from the Thai by the Khmer, changed its meaning over a long period of time, and then re-entered Thai. Such a protracted process of adoption of medical terms would be in keeping with the vacillations in importance of these two civilisations through time. The result is that the three terms, *fi,*

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205 Li (1977), pp.77, 286.
206 ~ Karlgren (1957), pp.150-151, no. 566, 1.
*plāe*, and *mareii* share a similar semantic domain in the Thai medical texts. A closer examination of Khmer medical texts might help identify more clearly the extent to which the terms *plāe* and *mareii* figure in Khmer illness terminology, and further clarify some of the points raised here.

### 4.4.7. Summary

Before looking at illness classification at the next level of contrast it may be useful to briefly recap some of the observations made here. One important influence on illness classification at this level of contrast is that of Indic culture, both through the contribution of theories of medicine, as well as through the provision of a medical language. Importantly, the Thai texts also appear to reflect certain divergent schools of thought within Indic medicine.

In addition to illness categories resulting from Indic theories, there are also categories which are based on heterogenous criteria, including location in the body, chronicity, temperature, and visual criteria. Besides their broad meanings at this level of contrast, most of these categories also appear to have narrow meanings, thus context is an important factor in their interpretation. Another important consideration in the interpretation of these categories is the evidence that some of them are derived from other mainland Southeast Asian cultures. It is obvious that the texts represent a hybrid tradition, incorporating terms from Mon and Khmer, in addition to those shared with other Tai groups.

A final point to emerge from the examination of illness classification at this level of contrast is the important role played by the trope. Two types of trope were encountered in the course of the discussion, metaphor and metonym. Metaphor was used particularly in the classification of skin diseases, likening various conditions to the flowering or fruiting of plants. Metonymy appears to play an important role, especially in the classification of children's illnesses, in allowing categories with a relatively narrow meaning to represent a broader range of conditions.

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207 This process is similar to that described by Wilaivan and Placzek (1986) who conclude that "Where the loan-word and the native word overlap in semantic space...and neither is able to eliminate the other completely...then some adaptation or shift in meaning in one or both words becomes inevitable" (p.158).
4.5. Basic Illness Categories

Although the illness categories discussed above undoubtedly play an important part in the classification of illness in the traditional medical texts, they are not the main focus of symptomatic description and treatment. In the main, prescriptions are linked to illness categories which are distinguished on the basis of a large number of diagnostic features. These categories correspond to those which satisfy the criteria for inclusion at what Berlin has termed the Generic rank, or what Rosch called the "basic level of categorisation". For the reason that they appear to be the most prevalent type of categories, both in the texts and in spoken Thai, these illness categories will be referred to here as basic illness categories.

According to Berlin's criteria the Generic level is that at which illness taxa should be most numerous, and this is indeed the case with Thai illness terms. As will be seen from the Appendix, the illness categories are in fact so numerous that their individual discussion here would not be possible. A few examples may suffice, however, to illustrate the general form of classification at this level.

Basic illness categories fall into two main types, those which are affiliated to those of the level immediately above, and those which appear to be directly subordinate to the most general level of contrast. Of the former class, we have already given examples in the preceding section, such as the various types of khai, ritsi\u0101uang, and f\u1d71. Of the group of illnesses directly affiliated to the general level, examples are pradong, rød (herpes), puang (cholera), and m\u0101n (oedema). None of these categories readily fits into any of the categories discussed in the previous section, and all often appear in compounds with rök, lom, or, rarely, khai. The phenomenon of direct affiliation to the UB category has been termed aberrant by Berlin, but the findings here agree with the observation made by Chamberlain, regarding direct affiliation to the UB level in other domains, that in Tai folk taxonomy "the exception seems to be the rule".

One possible reason for the direct subordination of some basic level illness categories to the general level is revealed on examination of their names. In a number of cases the names of illness categories appear to be descriptive of the condition they

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208 See Chapter 3, pp.48-49.
209 See Chapter 3, p.53-54.
210 See Chapter 3, p.48.
211 Pradong includes a variety of painful afflictions usually affecting the skin, including such modern medical categories as eczema and urticaria.
212 See Chapter 3.
represent, rather than autonomous. In Berlin’s terminology they are productive,\textsuperscript{214} but, on analysis, rather than eliciting the name of an LF illness category (such as ritsiduang or khai), these names yield a simple description of the condition. For example, sai lu’an (‘hernia’) literally means ‘displaced intestines’ (lu’an means ‘to slide or shift position’), khō tip, which literally means ‘constricted neck’, corresponds to the disease diphtheria,\textsuperscript{215} and chaksu dāeng (tā dāeng in spoken Thai),\textsuperscript{216} literally ‘red eye(s)’, to conjunctivitis. All these examples fulfil the criteria for G level taxa. Other illness categories similarly named are less recognisable as G level taxa, for example khō khu’n met (‘pustules break out on the neck’), khat baw (‘inability to urinate’, also termed baw khat),\textsuperscript{217} lōhit khaw fak (literally ‘blood enters the scrotum’, probably a type of hernia), and the use of pain terms with a body part term, such as puat sisa (‘headache’), and puat thōng (‘stomach-ache’). This phenomenon is, of course, also seen in English, with similar expressions to those in Thai. There is a similar problem in English to that encountered in Thai in the interpretation of such expressions: is “headache”, for example, an illness category in its own right, or a description of symptoms? It seems that at this level of contrast there is no distinct boundary between symptomatic description and the recognition of discrete illness categories.

Another aspect of this phenomenon may be seen in the case of certain terms which, while generally regarded as symptoms, in some cases constitute illness categories in their own right. Examples of such categories are: bit, which may refer to certain symptoms such as extreme colicky pains, or the condition of severe diarrhoea of which they are a part; kamdaw, which has two meanings, of epistaxis\textsuperscript{218} and ‘internal heat’,\textsuperscript{219} and ai, which may mean, as it does in English, either a single cough, as well as a persistent condition characterised by coughing. In these cases it would appear that the characteristic

\textsuperscript{215} See also the description of diphtheria in Hanks and Hanks (1955), where it is described as a type of sāṃg (pp.158-159).
\textsuperscript{216} Čhaksu and tā both mean ‘eye’. The choice of the former word, which is derived from Sanskrit and considered to be formal, provides a clue to the context in which the texts should be considered.
\textsuperscript{217} The term baw literally means ‘light’, but here means ‘urine’, contrasted with nak, the literal meaning of which is ‘heavy’, but signifies ‘faeces’ in the medical context. The usage thus appears to be metaphorical. The usage of baw here is also an example of the apparent reversal, or at least flexibility in the order of the terms in such names. Besides the case of khat baw/baw khat, this flexibility is also seen in the pair thōng long/long thōng, both meaning diarrhoea.
\textsuperscript{218} That is, nosebleed.
\textsuperscript{219} See MTP, p.47.
symptoms, or predisposing conditions, are being employed to refer to the condition in general, that is, as metonyms.

A corollary of this lack of distinction between symptoms and illness categories is that, in certain cases, what appear to be illness categories may be regarded as non-pathological phenomena. Although it is unlikely that such terms would be included in medical texts, since these are in the main concerned with pathology, it is possible to find at least one example. This is the illness category sāng, discussed earlier in this chapter, the descriptions of which hint at its role as a normal phenomenon, common to all children. The distinction is made much clearer in the related category, su, used in Northeast Thailand to refer to infant diarrhoea. In contrast to the symptoms of diarrhoea in adults and older children, termed thōng sia, su is apparently not regarded as an illness and prompts none of the usual responses to illness unless it persists longer than three or four days.220

In the transition from symptomatic description to illness category, there are similarities with what we have said in the previous chapter about metaphor. With time, for example, symptomatic descriptions may become accepted illness terms in their own right just as metaphors become conventional or dead. Further, metaphors may contribute substantially to the actual formation of symptomatic descriptions. For example, the expression thōng khu'n, meaning 'indigestion', literally means 'the stomach rises', the usage of stomach being metaphorical. Another example is the expression thōng long, meaning 'diarrhoea', which literally means 'the stomach descends'. In a further abstraction, the term long may be used by itself to refer to diarrhoea, sometimes coupled with other descriptive terms, for example long lōhít ('bloody diarrhoea') and long dāeng (literally 'red diarrhoea'). In the latter example the word 'red' is also being used metaphorically to refer to blood. In other cases, exemplified by bit, mentioned above, the device used to build illness names may be the metonym, employing a major symptom to represent the condition as a whole.

After the following chapters of this work, in which an example of a basic level category will be examined in much greater detail, it will be possible to say more of the relationship between the findings here and the theoretical approaches discussed in the previous chapter. However, to briefly summarise the main points to emerge so far, we have seen here how there is no distinct boundary between "illness categories", and "symptoms", or descriptions of illnesses, and that symptoms need not necessarily be regarded as pathological. The trope was also found to be an important means by which illness categories may be established: either by taking one symptom to represent a condition comprising a large number of symptoms (metonymy); or through metaphorical

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associations developed around symptomatic descriptions. As we have seen in the previous section, the trope is also an important means by which these basic level categories may in turn come to function as more inclusive categories.
5.1. Introduction

There are finer levels of differentiation between the basic level illness categories just discussed, corresponding to what Berlin terms the "specific" and "varietal" levels of contrast. The differences between illness categories at these levels of contrast are made on the basis of a small number of characteristics, thus any discussion of illnesses at these levels will necessitate a close examination of symptomatic descriptions. Clearly, owing to the constraints imposed by time and the length of this work, it will not be feasible to cover all of the illness categories appearing in the texts. It is proposed, therefore, to select one representative illness category, krasai, and examine in detail how it is classified and described in the major texts of the court tradition of Central Thai medicine.

This examination begins with a brief discussion of the etymology and modern usage of the term krasai and the reasons for its choice here as a representative illness category. The main textual sources for descriptions of the role of krasai in traditional medicine are then discussed. This is followed by translations of key descriptive passages from the texts, together with a commentary including, where possible, interpretation in modern medical terms.

5.2. The Illness Category Krasai

Some indication of the prominent role which krasai plays in the texts of traditional Thai medicine is given by the list of references in the Appendix, where it will be seen that krasai occurs as either a single or a compound term in most of the texts included in PS. This reflects the usage of the term at a number of levels of contrast. It is in the sense of a basic illness category that the word is most widely known today, as seen from its use in speech, in the manuals or texts sold at markets or fairs, and among the lists of illnesses printed on the packets of herbal medicines available in small shops throughout Thailand. Krasai is thus very much a part of the vocabulary of traditional Thai medicine, and a suitable example for the purposes of this study.
Although familiar to most speakers of modern Thai, the meaning of krasai differs, as would be expected, according to the age, status, and origin of the Thai speakers concerned. Thus to many of the younger educated Thais interviewed in the course of this study, exposed mainly to modern medicine, krasai was recognised simply as an "illness in traditional medicine". But to most of the older Thais interviewed, especially those in rural areas of Central Thailand, krasai signified a specific illness, 'kidney disease' (rök tai).

Typically, among village doctors (mddf yà), krasai is characterised by such symptoms as puat (‘deep aching’) and mu’ai (‘muscular aching’) in the area of the lower back and abdomen, and ‘urinary obstruction’ (khat baw) or ‘frequency’ (yiaw bòi). These terms are also employed by villagers less-widely versed in a knowledge of herbal medicine or massage in the description of the symptoms of krasai. In the main, village practitioners favour a classification based on the four elements, including, or in addition to, 'blood'. Thus the types of krasai named include krasai din (‘earth krasai’), krasai nām (‘water krasai’), krasai fai (‘fire krasai’), krasai lom (‘wind krasai’), and krasai lu’at (‘blood krasai’). However, though all the practitioners questioned recognised at least four of these types, most were either unable to define the types of krasai they specified, or else gave poorly-differentiated descriptions.

These descriptions are in contrast to those found in some of the major Thai dictionaries. While Bradley’s dictionary of 1873 defines krasai as a "bodily illness" affecting the lower abdomen, it is defined in both the Royal Academy Thai Dictionary and the McFarland Dictionary as “an emaciative illness". The word krasai is in fact of Indic origin, being derived from the Sanskrit word kṣaya, which literally means "emaciation". Its usage in the context of Indic medicine appears to be consistent with this meaning, that is kṣaya refers to the symptom of "emaciation" rather than to an illness category. Thus, with the exception of Bradley, the interpretation of krasai given in authoritative Thai dictionaries appears to be based on the Sanskrit cognate of the term.

The difficulties with this interpretation might be considered in relation to the

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1 See Chapter 1, pp.8-9.
2 Field notes, Nakhon Pathom and Ratburi, June 1984.
3 The relationship between formally and informally acquired knowledge was discussed in Chapter 2 in the discussion of the meaning of the term 'doctor' (mddf).
4 Bradley (1873), p.53.
5 Photchananukrom chabap rāchabanthitsathān (henceforth PCR).
6 PCR, p 43; McF, p.45.
7 MMW, p.328.
following description of a bout of illness suffered by Prince Damrong⁹:

Prince Damrong was once sick with debility or roog kasaii [sic] (as it is called by the natives). He felt cold in his hands and feet. His body was stiff and sore.¹⁰

The usual meaning of "debility" is "weakness", but in some situations it might be interpreted as "emaciation". However, in applying this interpretation to the above description, certain inconsistencies become apparent. For example, the symptoms of coldness in the extremities, and aching, are not among the salient features of an "emaciative illness" in terms of modern medicine. Furthermore the description continues to say that, after taking a strong medicine prepared from cannabis, "he recovered completely from "roog kasaii" the morning after". If he were indeed suffering from an "emaciative illness", it is unlikely that even a man with the fortitude of Prince Damrong would be able to manifest such a rapid recovery. An interpretation of krasai as an "emaciative illness" would therefore appear to be inconsistent with the description provided.

Information on krasai derived from modern Thai sources, dictionaries, and historical sources, thus appears to be in conflict. To some Thais krasai signifies "kidney disease", while according to other sources it is "emaciative illness". In the course of this examination of the description of krasai in the texts of traditional Thai medicine, it should be possible to place these conflicting interpretations into better perspective.

5.3. Sources for Krasai

The basis for the description here will be the text titled Phrakhamphi krasai which appears in volume two of PS.¹¹ There are two other major sources which will also be used in the course of this chapter, these are firstly the texts recorded in the form of stone inscriptions at Wat Pho in the Third Reign,¹² and secondly those held in the collection of

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⁹ Prince Damrong, whose name means 'endurance', was aptly named. A half-brother of King Chulalongkorn, held high positions during the Fifth Reign in the military and in education before appointment to the position of Minister of the Interior from which post he carried out important reforms in provincial administration. After holding minor positions during the Sixth Reign he re-emerged politically in the Seventh Reign to remain until 1932 one of the most influential figures in government (Batson (1984), p.32). He is also remembered for the importance of his contribution to Thai historiography.
¹¹ PS:2:194-220. See Chapter 2, pp.39-41 for details on the provenance of PS.
¹² The version used here is that which was transcribed and published by Samakhom rongrian phäetsät
the National Library in Bangkok. Of the latter, the most important for our purpose is the text titled *Khamphi krasai*, which is among those included in the so-called "royal edition (chabap luang)" of the major medical texts, undertaken in the Fourth Reign. This text, dated 1870, is a particularly fine example of its genre. Like the other volumes in the edition, it is a *khôi* manuscript, bound in black lacquer covers, with the text recorded in elegant calligraphy, the *khôm* passages of the Pali invocation being in gold, and the Thai in yellow, on a black background.

The collection of the National Library, Bangkok, also contains several other texts under various titles such as *Khamphi krasai*, or *Tamrâ yâ kâe krasai* ('prescriptions for the treatment of krasai') and recorded in *khôi* paper books or on palmleaves. These texts vary considerably in the amount of information included, and in quality. To judge from certain spelling and tonal characteristics, they appear to have been kept in various parts of Thailand, in temples, or by individual medical practitioners. For these reasons they have not been used in the analysis here, although it would be an over-simplification to make a rigid distinction between a folk and a royal tradition. As will be seen, despite the presentation of the texts in a "courtly" style, the content is in some cases very similar to that of texts from the folk milieu.

Apart from these primary sources, there is a secondary source which contains information useful for the interpretation of the illness category *krasai*. This is the version in Matthayat, which is a revision of *Khamphi krasai* updated into modern Thai, and with a commentary on difficult sections of the text.14

The examination of these sources can be an exacting task. The language is difficult, even for native speakers of Thai, and the texts vary in quality, due to such factors as deterioration with age, insect attack, or, especially with palmleaf manuscripts, splitting, and addition or loss of leaves.15 The effects of these factors raise some important questions regarding approaches to the contents of the texts.

Perhaps the main question to be considered is the extent to which any given text may be considered to be an integral work. In the process of copying and editing of texts, it

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13 *Khamphi krasai*, two volumes, Medical Catalogue 1 (Royal Editions), no. S.5. The title page carries a note to the effect that the text was obtained from the library of the Department of Education. See Chapter 2 for an account of official text revisions in the 19th century.


15 See earlier note on palm leaf texts in Chapter 2, p.21, fn.63.
is likely that what may have been originally a collection of prescriptions or notes written on palm leaves became a distinctive work. Thus, it may be that the *Khamphi krasai* was never conceived as a complete work, but evolved gradually into the organised form in which the text is now known. This being the case, the taxonomy of *krasai* which appears in the *Khamphi krasai* may be more a product of the ordering of palm leaves, than it is to the use of the term in practice. The appearance of a "rigid" taxonomy may be the result of the literary form.

5.4. The Description of *Krasai* in *Phāetsāt songkhrop*

In keeping with the general form of the texts, as described above, the text of the *Phrakhamphi krasai* as it appears in *Phāetsāt songkhrop* (hereafter PKPS) begins with a lengthy introduction in Pali, accompanied by a paraphrasing in Thai. From its style, with dedications to the Three Gems, rather in the manner of an invocation, and its emphasis on learning, it would appear that the text was written with didactic intent, rather than as a working manual for physicians. The body of the text consists of descriptions of each of the different types of *krasai*, together with prescriptions for their treatment. The text displays some discontinuities in the order of listing the types of *krasai*, a fact which taken together with the acknowledged inclusion of part of another text at one point indicates that this version of *Phrakhamphi krasai* is the result of the compilation of at least two separate works. Some clue as to the identity of these texts may be had from the reference at various points to other *Khamphi* which appear to no longer survive intact separately, for example the *Khamphi wutthikarok*. The final entries of both the texts comprising PKPS also appear somewhat fragmentary and disjointed in relation to their earlier parts. These probably represent additions or disordered readditions to an earlier text, and they are consistent with those which might have resulted had the text been previously recorded as a palmleaf manuscript. These entries characteristically appear prefaced by little or no symptomatic description, and are included here following the description of the major categories of *krasai*.

Twenty-six types of *krasai* are listed in PKPS. These are divided into two main categories: eight types derived from the elements (*thāt samutthathān*) and eighteen types arising spontaneously (*uppatikarok*). This division will be followed in their description.

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16 The Buddha, the Dharma, and the Sangha.
18 PS:2:196.
19 According to Indic theory in the Thai texts, there are four main causes or determinants of illness: the elements; season; time; and age. See Riap (1978), pp.32-33.
5.4.1. "Element" Krasai

The eight types of krasai arising from the elements consist of five types of krasai klōn, together with one nam ('liquid'), one lom ('wind'), and one fai ('heat'). PKPS states that these eight types of krasai will not be described, since they are discussed elsewhere. However, later in the text, descriptions of four types of klōn are in fact included, as well as those of the three "element" types of krasai. Apart from this version of the Phrakhamphi krasai there appears to be no text existing which includes a complete description of all twenty-six types of krasai. There are, however, other sources which contain detailed descriptions of klōn, and using these it is possible to produce a composite description, suitable for comparison with the information included in PS.

One of these sources is the inscriptions at Wat Pho (published as Tamrā phēsat – henceforth TP), where descriptions of klōn are recorded in Pavilions Four and Seven. Descriptions of klōn are also to be found in various manuscripts held in the collection of the National Library, Bangkok. Of these, the most detailed description is to be found in the palmleaf text named Khamphi krasaiklōn (henceforth KKK). The content of this text is very similar to that of the Wat Pho inscription, and for this reason these two sources will be used as the basis for our description here. Before commencing an examination of the descriptions of klōn in the texts, it may be helpful to look at the way the term is defined in some of the major Thai dictionaries.

According to McFarland klōn refers to "a condition characterized by the infiltration of water that cannot be easily drained", and is associated with the vata and pitta doshas of Ayurvedic medicine.

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20 These last three correspond to the elements apo, vata, and tejo, respectively, of Indic medical theory. Together with a fourth element, parthiva (hardness), they are integral to an elaborate theory of pathology based on a conception of the human body as being composed of the qualities of hardness, wetness, heat, and movement. See Mulholland (1979a), pp.90-95.

21 In the Khamphi wutthikarōk, mentioned above.

22 According to TP, the locations are Pavilion 4, post 7, plaque 2, and Pavilion 7, post 11, plaque 3 (pp.291-299).

23 Khamphi krasaiklōn (7), phūk 1, cat. no. 2, Medical Catalogue 3, National Library, Bangkok.

24 Other texts held at the National Library, Bangkok, also contain descriptions of klōn. These include Tamrā kasaiklōn (samut khōi, cat. no. 3, Medical Catalogue 3), and various palmleaf texts (cat.nos.278, 280, 283, 288, 315, and 326 of Medical Catalogue 2). For the most part the descriptions in these texts appear to be abridged versions of those in the major sources described above, although there are some interesting points of difference which will be commented on where appropriate.
of serum into the tissues of the scrotum. Klon nām (the 'liquid' type of klon) refers to a hydrocele and klon long fak (klon descending to the testicles) is an "indefinite, indurated condition of the testicles". PCR defines klon as "a type of illness, which, according to the traditional medical texts, is due to the entry of liquid into the scrotum". There are different types of klon depending on the nature of the liquid. PCR mentions three types: 'liquid' (klon nam), 'blood' (klon lu'at), and 'purulent' (klon nōng). This is also the definition given in the Dictionary of (Traditional) Medicine (Photchananukrom phāet, henceforth PP), which adds that the literal meaning of klon is "to wear down, or be gradually used up". As will be seen from the symptoms described in the texts, klon refers to a wider range of illnesses than is implied in these definitions.

5.4.1.1. The Description of Klon in Phētsat songkhro

Four types of krasai klon: are described in PKPS: din, nām, lom, and fai. These correspond to the four elements 'solid', 'liquid', 'wind', and 'heat', as mentioned above. In addition there is a krasai thaw which may represent the fifth type of klon. These five types of krasai are described as follows:

[1] Klon din arises in the 'solid' element (pathawi thāt), and as klon sen

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26 An accumulation of serous fluid.
27 Fak literally means a 'pod' or 'case'.
28 Ibid., p.59.
29 PCR, p.59.
30 PP, p.14. This appears to be the result of a coalescence with the meaning of the word kro n which, although differing in spelling, may have the same pronunciation in modern Thai.
31 Sen literally means sinew, but the author possibly intends the meaning of a tendon-like lump or swelling. Sen, often coupled with en (sinew) as sen-en, are usually interpreted as being vessels or channels within the body. The number of sen specified in the various sources differs, but there is general agreement that there are 10 principal sen and probably 2700 auxiliaries (see Mulholland (1979a), pp.95-96). Their names correspond to the nādi of Indic tantric theory, where 14 are regarded as principal. Nādi are ordinarily held to be nerves and arteries (the literal meaning of the word in Sanskrit is "tubular stalk"(MMW, p.534)), but in yoga they are thought of as being "subtle channels of energy" (Woodroffe (1963), p.47). Needham (1980), p.268) speculates that, since this this "pneumatic physiology" dates only from late tantrism (after 1577AD) then it "may be possible to regard it as a somewhat garbled and theologized echo of the acuttracts and qi channels so ancient in Chinese medicine". In the same source mention is made of a further system of channels "neuro-
establishes itself as a lump in the suprapubic region, on either the right or the left side, then it slides downwards to affect the testicles, which become swollen and sore, with pain travelling right up to the heart. When the appropriate medicine is taken, the krasai withdraws upwards to be situated as a lump or a "cord" extending up into the suprapubic region. It then causes sharp pains in the sides of the ribcage, reaching to the top of the chest. If the sen is pierced, then eleven afflictions result; it causes stabbing pains, faecal impaction, pain all over the body, pain around the waist, loss of sensation to the extremities, aching and discomfort in the suprapubic region and hips and tension in the abdomen, descending on either side to the urinary tract. It causes head pain and dizziness, dimness of the eyesight, blockage of the ears, discomfort along the sides of the ribcage, indigestion, swelling of the abdomen and loss of appetite. These afflictions arise because of the drying of mucus outside the intestines, and may cause hardening of the faeces. When this occurs it causes a fever and loss of appetite. Sometimes it causes fever and the desire for sour and sweet; it likes these things associated with the illness. It is the same for both men and women. It is said that this krasai klōn arises in the solid element due to the hardening of the sen and the faeces.39

muscular in character", the 12 jing-jin, which are thought to be more superficial than the regular acutrats (zheng-jin). The number of these tracts, together with their muscular association, is highly suggestive of the sen-en of Thai theory, and it is possible that the Indic theory has become combined with a notion already existant in Tai ethno-medical belief. It is also possible, in this regard, that the Thai word en may in fact be cognate with the Mandarin word jin. (Karlgren (1957), p.122, No.445a).

32 Thaw. The word literally means 'vine', but in this context it appears to mean a series of cord-like swellings, extending axially within the abdomen. The application to illness appears to be metaphorical.
33 Could be pierces. The text is ambiguous here.
34 Phanduk.
35 Tu'ng, literally 'tension'.
36 The text has hai khu'n nu'a khran tua, which appears to have been more commonly used the expression khran nu'a khran tua. in use today.
37 Thōi ahan.
38 That is it causes an appetite for sweet and sour foods.
39 PS:2:207.
The symptoms of the din form of kiñn are consistent with those of hydrocele, inguinal hernia, or if in a woman, femoral hernia. The faecal impaction may result from the functional bowel obstruction of strangulated hernia. The loss of appetite, taste changes and fever indicate the development of a toxic septicaemia.  

[2]  

Kiñn nām arises due to the liquids, that is blood, serum, and mucus. Whether it involves one or all three of these components it is still called 'blood' krasai. If in a woman, it is situated three niw below the navel, and it causes aching and pain up to the top of the chest, and severe general pain. Sometimes it spreads upwards to the top of the chest, like fi mareng suang or fi pluak.  

In the case of a woman, they say that blood enters the uterus and this blood dries and adheres to the bones of the back and the pelvis. Sometimes the blood affects the mind, causing the person to be crazy, as if possessed by a 'spirit'.

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40 I am grateful to Dr Richard Schloeffel for his assistance in providing the differential diagnoses given in this section. They are, of course, very preliminary, and in the clinical situation diagnosis would be carried out in conjunction with certain other tests.
41 Lu’at.
42 The Thai inch, approximately 0.8 of an English inch. Haas (1964), p.273.
43 Fi mareng suang has the symptoms of bouts of bloody mucus, like dysentery, severe deep pain, obstruction, sharp colicky pains and tightness in the front of the chest, sharp pains over the back, dizziness, a wheezing cough, hunger, weakness, emaciation, ague, and aching in all the joints and bones (PS:3:91). See the discussion of fi and mareng in Chapter 4.
44 Literally 'termite' abscess. See the note later in this chapter for the 9th krasai rōk.
45 Lōhit. Note the use of the "high" term for blood.
46 Lu’at. Here the "low" word for blood is used.
47 Lu’at.
48 See Chapter 2, pp.15-17.
If the patient is a man, the blood is in a mass which rises up to affect the front of the chest, where it changes into a 'chest abscess'. Sometimes it changes to oedema with blood, then does various things. Sometimes it changes to muttakit, muttayat or santhakhāt for example. This occurs because of krasai lu'at, or by means of krasai nām, that is 'blood'.

50 Fi hua khwam. Probably the same as フィ yōt khwam, which has the symptoms of deep pain in the lower abdomen, passing down to the anus, dull pain in the front of the hips, and intermittent acute pain. There are hot and cold flushes, and a dull pain at night, which abates somewhat during the day. It is said to cause "various poisons (phit)" (PS:3:91), that is 'fever'.

51 Mān lu'at. Mān refers to various types of abdominal enlargement, including oedema.

52 Leucorrhoea, a mucous discharge from the female genitals (McF, p.653).

53 Probably a misspelling of muttakhāt, which is thought to be haematuria, the passing of pus or blood in the urine (McF, p.653; Samākhom phē sat lae ayuravēt bōrān hāeng prathēt Thai (1964) (henceforth PP), p.260).

54 Santhakhāt is defined in PP as a "dense seri", but it probably refers to a specific group of illnesses affecting the lower abdomen. According to the PS texts, "if a person is suffering from santhakhāt or kīn hāeng he is likely to have the symptoms of constipation accompanied by sharp pains, causing balls, lumps, or masses in the abdomen, and aching pains all over. It may cause pain around the waist, loss of sensation to the hands and feet, obstruction to the supra-pubic region and the front of the hips. There may also be tightness on both sides, as far as the anus, and haematuria. There is dizziness, contortion of the mouth, staring, a houreuse, inaudible voice, dim sight, the hands are heavy, there are stabbing colicky pains in the abdomen, which rise up to cause discomfort in the front of the chest, and loss of appetite. These afflictions are due to the expansion of wāṭā wind), mucus, and blood. This causes an unpleasant body odour, and reflux of the food, sometimes accompanied by hot and cold flushes, and a desire for sour, sweet, and cooling food. This is because blood dries out and sticks to the spine." (PS:2:95). Another description from the PS texts runs as follows: "The trisanthakhāt (ie. three santhakhāt), occurring in both men and women are described as arising as a mass or a "vine" (thaw) of blood in the abdomen, leading one to suppose that it is krasai lōhit (blood krasai), or krasai thaw, causing pain in the eyes, and generalised aching of the body. Causes pain in the navel, and in the testicles, and erection of the genitals, with pain and inflammation. There is a discharge of serum, as well as growths in the urethral orifice, about the size of a pepper seed (phrik thai, Piper nigrum, L., Piperaceae), which, when fully developed, are about the size of a wart. There is haematuria, pain in the hips and in the extremities. If not not treated correctly death occurs. This illness arises due to eating of saībāng (proscribed) food, that is, things which are khāw (that is flesh, possibly 'gamey' in this context) or sweet. Due also to
The symptoms of the nām type of klōn appear to be consistent with those of infections and inflammation within the pelvis, for example urinary tract infection, suppurative cystitis, venereal disease, or endometritis, with the possible complication of pelvic abscess.

The relationship between blood and the onset of mental disturbance mentioned here, which also occurs elsewhere in these texts, appears to amalgamate certain aspects of Indic pathological theory with indigenous Tai beliefs concerning the dangerous nature of blood. These beliefs are discussed further in the following chapter.57

[3] klōn fai ('heat' klōn) may arise because of the heat element, called akkhimukha,58 which blows incompletely, and collects in one place. It then causes abnormal changes: it may establish itself in the chest, causing severe colicky pains, or it may cause a high temperature, like fire, and profuse sweating.59

The symptoms of klōn fai are not sufficiently well-defined for a diagnosis to be made save in the most general terms.

[4] Klōn lom ('wind' klōn). Whether arising during the waxing or waning moon, or in the morning or evening, the symptoms are almost the same: it causes colicky pains to rise upwards, then obstruction, its pain biting into the abdomen, causing "crying"60 inside the chest, and a coldness like water. The pain may return intensely, but after eating the heat may abate a little.61

pathawithāt, wāyōthāt, and tēchothāt (that is, the elements solid, movement, and heat, respectively). Causes vomiting, and saliva of the appearance of pāt saliva (nāmkhelapat. Pāt probably refers here to a type of tree frog, Rhacophorus nigropalmatus (PCR, p.525)) (PS:2:166). The word santhakhāt is derived from Skt. sāndra, meaning viscid, thick, or compact (MMW, p.1203), and ghāta, which means "injuring" or "destruction" (MMW, p.377). MMW also includes ghātakricchra, "a type of urinary disease" (ibid.).

55 'Blood' krasai.
56 Lōhit. PS:2:207-208.
57 Chapter 6, p.161. See also Bamber (1982), pp.15-16.
58 klōn muk. From Pali aggi meaning "fire" (PTS, p.4) and muga (meaning unclear). PP has akkhi muk (ākki muk), literally 'fire mouth', which is the name of a type of snake (p.360).
59 PS:2:208.
60 R ṣn ṣg.
61 PS:2:209.
As with the previous type of klōn, the description is insufficient to enable a diagnosis to be made.

[5] Klōn thaw arises due to lom santhakhā and patthakhā which affect the sen. They cause the sen to swell, harden, and widen in the pelvic region, joining together and twisting to the side. If in a man, it arises on the right, and if in a woman, on the left. It causes sharp pain along the side of the body, as far as the top of the chest. Aching pains then affect the inside of the chest, the sensation rising up into the throat. Sometimes there is vomiting of serous fluid. If it is vomited out from the aching place, then some relief is obtained. It then affects the genitals, causing symptoms like pluak, or mareng suang. These differ with respect to the urine: if it is krasai nām then the urine appears red, but if it sticks to the sides it will be a bit yellow. Take a cup and collect some after it has settled: there may be dregs resembling lime water in the bottom of the cup. If an abscess, the colour is black, and the illness is due to eating things which are very 'fleshy', or sweet. Once it occurs it takes about twelve to thirteen years before it changes into mān krasai and can't be treated. Treatment must be carried out in the early stages.

The symptoms of klōn thaw are consistent with an infective urinary tract, possibly due to renal stones, and perhaps complicated by pelvic abscess. This could lead to ureteric obstruction, renal failure, and also the oedema mentioned in the text.

62 See above, p.122, fn.32.
63 See previous note, p.124, fn.54.
64 Patthakhat is said to have the symptoms of soreness and pain along either or both of the shoulder blades, restricting movement. (Riap (1978), p.41; see also Diller (1980), p.20). NMT p.184, has "certain blood vessels in the thigh which Thai masseurs say are the cause of body ache".
65 See above, p.121, fn.31.
66 Text has "saliva".
67 See above, p.123, fn.43.
68 'Liquid' krasai.
69 Nām pān. Pān is slaked lime or calcium hydroxide (MTP, p.306).
70 Khāw. See p.124, fn.54 above.
71 'Oedematous' krasai.
5.4.1.2. The Description of Klön in Other Sources

In the Wat Pho inscriptions, as in PKPS, five types of klön are mentioned.\(^72\) These consist of:

\[\text{[a]}\] klön en ('tendon' klön), 2 types: anthaphru'k,\(^73\) and anthaphät\(^74\)

\[\text{[b]}\] klön hāeng ('dry' klön), 4 types: affecting sen muttakhät, santhakhät, patthakhät, and rattakhät

\[\text{[c]}\] klön nām ('liquid' klön), gives rise to 4 types of thurāwsā\(^75\) characterised by black, red, white, and yellow urine.\(^76\)

\[\text{[d]}\] klön lom ('wind' klön), 4 types: affecting athōkhamāwāt, usuangkhamāwāt, kuchachiyawāt, and kōthāsayawāt\(^77\)

and

\[\text{[e]}\] klön hin ('stone' klön), 4 types: semha, pitta, wāta, and sannibāt\(^78\)

Not only do some of these names differ from those of the five occurring in PKPS, but there is also considerable variation in their descriptions, given as follows:

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\(^72\) TP, p.291. The text begins by stating that there are four types, however five are listed. Possibly this discrepancy is due to the similarity in form of the Thai numerals 4 (4) and 5 (5) which might be mistaken in transcription. Most of the palmleaf klön texts cited above specify 5 types.

\(^73\) Antha literally means "egg", hence "testicles" (McF, p.984). Phru'k means "tree" (McF, p.570).

\(^74\) There is apparently some confusion here with another term, amaphru'k, which PP also refers to as sen amaphru'k, defined as "the central point of the body, located in the front of the abdomen" (p.362). This meaning is consistent with the context, as part of a discussion of klön affecting the en, which are related to the sen (see above, p.121, fn.31).

\(^75\) As with the previous entry, there appears to be some confusion here with another term, in this case amaphät, which refers to paralysis of the limbs, a 'wind' illness (PP, p.362). As will be seen below, this meaning is consistent with the description in the text.

\(^76\) The term thurāwsā is defined in PP as meaning "a disease affecting the bladder" (p.151). Although apparently a Sanskrit word (duravasa, literally meaning "bad serum/marrow" (MMW, pp.484, 930)), the term does not appear to be prominent in Indic medicine.

\(^77\) The text adds "as already described in the Khampiti pramāha".

\(^78\) Although it states that there are four types, TP lists only three, omitting usuangkhamāwāt. Those listed here are from KKK (p.5(a)). The types given correspond to 4 of the 6 types of the body's "wind" element. See Mulholland (1979a), p.94, and Bamber (1982) for a detailed description of their action in health and illness.

\(^79\) These correspond to the tridōṣa. See Chapter 4, pp.91-93.
[a] Klōn en

[i] causing anthaphru'k has symptoms of dull, persistent, muscular aching,79 stiffness of the legs and hips, sometimes with ague and fever, and a severe "dragging" feeling80 in the lower abdomen.81

[ii] causing anthaphāt has the symptoms of loss of sensation in the hands and feet, the sen82 become strained,83 there is tightness in the chest, loss of appetite, aching in the legs and calves, difficulty in urination, and constipation.84

[b] Klōn hāeng

[i] affecting muttakhāt,85 has the symptoms of urinary obstruction, aching,86 "dragging" pain, frequent urination, "dribbling" of urine, and muscular aching around the waist and hips.87

[ii] affecting santhakhāt, causes hardness of the abdomen, like a mass, or thaw,88 colicky pains, tightness, loss of appetite, flatulence, and "dragging" on the scrotum, accompanied by extreme itchy feeling. Later on, a serous fluid is passed, and the condition abates.89

[iii] affecting patthakhāt, has symptoms of muscular aching, with pronounced numbness, muscular tension90 affecting the whole body, "dragging" in the pelvic region, and the skin of the scrotum becomes thickened.91

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79 Mu'aikhap. See Diller (1980) for a detailed description of Thai pain terms.
80 Thuang. Although apparently employed here as a "pain term", this word is not normally used in this way. Its usual meaning is "to increase the weight" of something (PCR, p.362).
81 TP, p.291.
82 The meaning of sen here is probably that of 'tendons'.
83 Mu'ntu'ng. PCR (p.635) has "angry" for mu'ntu'ng, but the context here is musculo-skeletal, rather than affective, so 'strained' may be a better term.
84 KKK, p.6(a).
85 In KKK the symptoms labelled here as muttakhāt are called santhakhāt, while those corresponding to [ii] here are labelled muttakhāt.
86 Puat, a dull, deep-seated pain.
87 TP, p.291.
88 See note above, p.122, fn.32.
89 TP, p.292.
90 Tu'ng.
91 TP, p.293.
[iv] affecting rattakhāt, causes sharp pain along the ribcage and chest, severe pain, muscular aching and strain, extreme "sensitivity" over the whole body, deep aching, "dragging", contusion of the testicles, and difficulty in urination.

[c] Klōn nām

[i] characterised by black urine; causes urine to "dribble", loss of awareness of the body and of time, deep aching, "dragging" along the urethra, with [urine] the colour of viscous oil [from the ground]; males and females are similarly affected, and there is an accompanying sharp, burning pain in the urethra.

[ii] characterised by red urine, sometimes the red of annatto flowers, sometimes the red extracted from sappan wood, and sometimes that of stick lac, causes deep aching, "dragging", oily urine, intermittent stinging pain and burning in the urethra.

[iii] characterised by white urine; the urine is not copious in quantity, clear, with no smell; sometimes there are small threads in the urine, or filaments like lotus down, sometimes pramēha occurs with "dribbling" and an offensive odour; sometimes small raised lesions appear at the entrance to the urethral passage, causing burning, stinging pain, "sensitivity" over the top of the testicles, and

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92 Siat.
93 Khopyāk.
94 Siaw. As Diller (1980) has indicated, this term may encompass a range of sensations, including an "on edge" feeling (such as that caused by the sound of chalk drawn across a blackboard), that felt when one "hits one's funny bone", and the erotic (pp.18-19).
95 TP, p.294.
96 TP, p.294.
97 Đōk kham, Bixa orellana, L., Bixaceae (McF, p.200). The colour is a pinkish-red.
98 Fāṅg, Caesalpinia sappan, L., Leguminosae (McF, p.554-5). Sappan wood is the source of a purplish-red dye.
99 Nām khrang. That is "brick red".
100 TP, p.295.
101 Yai bua. According to McFarland the leaves of bua luang, the 'Royal lotus' (Nelumbium nucifera Gaertn., Nymphaeaceae (Perry (1980), p.289), are kept from saturation by closely set fine hairs (p.478).
"dragging". 102

[iv] characterised by yellow urine, 103 the urine is clear, with a colour like fresh turmeric, sometimes like lacquer, 104 and sometimes like well-brewed tea; these symptoms are accompanied by colicky or stabbing pains, tightness in the chest, loss of appetite, "sensitivity" and strain in the genital region; klōn descends to the testicles and to both thighs. 105

[d] Klōn lom 106

[i] klōn lom arising from athōkhamāwāt affects the 'wind' in the lower part [of the body], making it weak and to blow abnormally; the feet and hands may become cold, which may spread to the knees and the elbows; sometimes there is numbness, sometimes the movement of the knees and thighs is restricted, impeding mobility. 107

[ii] klōn lom arising from uthangkhamāwāt affects the 'wind' of the upper part [of the body] causing it to be weak and to blow abnormally; sometimes it causes hunger, dizziness, lassitude, disorientation, and mental agitation; there may be coldness in the chest and lower abdomen, loss of feeling in the genital region, swelling and a dragging feeling in the testicles. 108

[iii] klōn lom arising from kutčhachiyāwātā has symptoms of bowel obstruction, causing constipation, persistent indigestion, sometimes accompanied by colicky pains, tightness or pressure in the chest, which the doctor might take to be bit. 109 There is deep aching and "dragging" in the lower abdomen, as well as muscular aching in the

102 TP, p.296.
103 The entries for "yellow urine", and all but one type of klōn lom (kutčhachiyāwātā) are not included in TP. The descriptions appearing here are from KKK.
104 The text has nāmtrak, apparently a misprint for nām rak (Melanorrhoea usitata, Wall., Anacardiaceae (PCR, p.438). It is likely that this tree is identical to M. luccifera, Pierre, utilised by the Khmer for lacquer, and as a medicine. Martin (1971), p.93.
105 KKK, p.16(a).
106 According to KKK, the four types of klōn lom arising from wāyō (i.e. the 'wind' element) have already been described in the "Text on the treatment of the illness krasāi".
107 KKK, p.17(b).
108 Antha ('testicles') is here (in the printed version of TP) misspelled khantha.
109 See the discussion of the meaning of bit in Chapter 4, p.112.
waist and thighs.\textsuperscript{110}

(iv) \textit{kôn lom} develops from \textit{kôttâsayâwât} when the wind "boldly" blows \textit{têchô} [the 'heat' element] causing it to expand and burn food, then suddenly fail. This results in constipation, colicky pains, tightness in the chest, loss of appetite, "dragging" in the bowels, extending as far as the testicles, and "sensitivity" in the urethra.\textsuperscript{111}

\begin{itemize}
  \item [(e)] \textit{Kôn hin}\textsuperscript{112}
    \begin{itemize}
      \item [(i)] \textit{kôn hin} resulting from a combination [\textit{sannibât}] of the four types: \textit{anthaphru'k}, \textit{muttakhât}, black urine, and \textit{athôkhamâwât}. Causes the \textit{sen} to become tense and hard, swelling of the testicles, black urine, and frequent urination. \textit{Athôkhamâwât} cannot blow to its fullest extent, and there is a severe dragging feeling in the lower abdomen.
      \item [(ii)] \textit{kôn hin} arising from a combination of \textit{anthaphru'k}, \textit{santhakhât}, red urine, and \textit{utthangkhamâwât}. The symptoms occur when \textit{utthangkhamâwât} "boldly" blows \textit{anthaphru'k}, causing expansion, and that \textit{sen} to become rigid and swell. The urine is red like annatto flowers, and micturition is difficult. There is abdominal pain, and "oiliness",\textsuperscript{113} bouts of burning and stinging pain in the genitals, dizziness, coldness in the chest and lower abdomen, loss of sensation in the genitals, and swelling of the genital region which diminishes following massage.
      \item [(iii)] \textit{kôn hin} due to a combination of \textit{anthaphât}, \textit{patthakhât}, white urine, and \textit{kuchâchihiyâwât}. Symptoms are produced by a slackening in the effect of \textit{kuchâchihiyâwât}, which "burns"\textsuperscript{114} in the bowels. \textit{Anthaphât} then "boldly" expands abnormally, causing urinary obstruction and constipation, because of the 'wind' burning in the bowels, preventing them from opening. \textit{Patthakhât} then becomes a "strand",\textsuperscript{115} accompanied by muscular aching\textsuperscript{116} and numbness. The urine is white and clear, like dew or rainwater. There is severe deep
    
\end{itemize}
\end{itemize}

\textsuperscript{110} TP, p.299.
\textsuperscript{111} KKK, p.21(a).
\textsuperscript{112} Mentioned as the 5th type of \textit{kôn} in TP, but description not included.
\textsuperscript{113} Man. The meaning here is unclear.
\textsuperscript{114} \textit{Khu}, literally meaning "to smolder", or "be active (like a volcano)" (NMT, p.63).
\textsuperscript{115} \textit{Kliaw}.
\textsuperscript{116} \textit{Mu'aikhop}. 
aching and a dragging sensation in the genital region, sometimes there is sharp or burning pain, which descends to the base of the scrotum.

[klōn hin] resulting from the combination of anthaphāt, rattakhāt, yellow urine, and kōṭṭhāsayāwāt. Symptoms arise because of kōṭṭhāsayawāt "boldly" blowing, causing constipation, an uncomfortable tightness [in the abdomen], mental distraction, and persistent indigestion. Anthaphāt and rattakhāt then expand, causing contusion of the right side of the abdomen: if it descends on the left side, it is called klōn; if it descends on the right side it is called sai lu’an,117 as the Teachers have described in the Khamphī krasai. Here only klōn will be described. Klōn results from the swelling up of the sen, with the 'wind' then blowing down into the testicles, causing them to become enlarged. When fully developed it does not resolve, in which case it has presumably become hollowed out due to the force of the 'wind' blowing in the sen. This causes the urine to be yellow like turmeric, restriction of movement and immobility, and "sensitivity" of the genital region. What has been described here is an asāṭhayarōk,118 that is, it is very difficult to treat.119

In addition to the five types of klōn listed above, there is another type of klōn described in TP and KKK, klōn samdāeng. Klōn samdāeng120 is described as a type of achinawutthirōk.121 It is said to be due to "exertion",122 and is classified into four types,

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117 See the note in the previous chapter, p.112.
118 Asāṭhayarōk is defined in PP as an incurable or malignant illness (p.363). It is derived from the Sanskrit word asādhya, meaning "incurable" (MMW, p.120), combined with rōga ("illness").
119 KKK, pp.47-48 (pagination in Thai letters only).
120 According to NMT (pp.294-295), samdāeng means "poison", however a better gloss would perhaps be 'proscribed things', since the acts or substances so-named may, in other circumstances, be regarded as "normal". The meaning of the word samdāeng will be discussed in greater detail later in this work.
121 PP defines this as "an incurable illness" (p.354), however the meaning may be more complex. The word is a combination of two terms of Indic origin, the second of these, wutthirōk, is mentioned elsewhere in PKPS, and appears to have been the name of a text (see above, p.119). Wutthirōk is defined in PP (p.304) as sai lu’an, usually glossed in English as "hernia", a term which we have referred to above. It is partly derived from the Pali vuṭṭhi, meaning "increase", or "growth" (PTS, p.645). The first part of the word achinawutthirōk appears to come from the Pali ajina, where it means an antelope hide, "worn as a garment by ascetics" (PTS, p.10). In view of the description
thakhinawut, prawatawut, turitawut, and chinawut. According to the text these four conditions "embolden" wutthirōk, that is, they cause the klōn to develop. They are described as follows:

[i] thakhinawut ('right-sided enlargement'). People bring this affliction on themselves by strain, rigidity, running, leaping, pouncing, and other types of bodily exertion. The harmful effects [of these actions] are first seen in the development of a cough, then tautness of the calf muscles and the feet. There is intense pain and dull pain all over the body, severe muscular aching, loss of appetite, and extreme tightness in the chest.

[ii] prawatawut ('blowing enlargement'). This arises from physical tension, and the riding of animals such as elephants, horses, oxen, buffaloes, or in vehicles. As a consequence of this abnormal use of the energy of other [beings] for transport, and the strain of controlling them, prawatawut illness arises. It has the symptoms of a "dragging down" feeling, contusion of the testicles, aching and "sensitivity" extending up to the top of the chest. There is a severe tightness in the chest, loss of appetite, and severe muscular aching. When advanced, it may become mān or krasai pluak, which have already been described in the Phrakhamphi krasai. As the Teachers have said, it is very difficult to treat.

[iii] turitawut ('hastening enlargement'). Arises because of much walking

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122 Phian. This term may have a range of meanings including "strength, energy, exertion, and patience" (McF, p.599).
123 McF, p.407. Thakkhina could also mean 'south'.
124 TP, pp.296-297. The remainder of this entry has been lost from TP. The rest of the description is taken from KKK.
125 Čkr.
126 Rabom.
127 KKK, p.4.
128 See above, p.126.
129 One of the 'spontaneous krasai', to be described later in this chapter.
130 TP, p.297.
without rest, or over a long distance, exceeding the limits of the body's strength. It may cause a dragging feeling along the front of the legs, and tension. Patthakhät and rattakhät expand, causing intense pain\(^\text{131}\) to stab into the chest. The body feels hot all over, as if poisoned. If these symptoms persist then the condition may change to mareng suang, which was described in Khamphi wannarök.\(^\text{132}\)

\[\text{[iv]}\] chinawut (‘ancient enlargement\(^\text{133}\)) Due to sitting down too much. Such postural actions may in fact cause wutthirök to arise. The symptoms are severe "dragging" of the lower abdomen, a burning feeling at the front of the hips, and along the spine at the back of the neck, which feels as if fire were being placed on it, little by little. There is impaired mobility, sleeplessness, emaciation, loss of appetite, yellowness of the skin, eyes, and of the urine, which is obstructed. The condition may change to fi ruang phu'ng\(^\text{134}\), as described in Khamphi wannarök.\(^\text{135}\)

5.4.1.3. The Remaining Three "Element" Krasai

The remaining three "element" krasai listed in PKPS are not described in detail, nor do they appear in either TP or KKK with the types of klōn described above. According to the commentary by Matthayat (1970) on Khamphi krasai the details of these types of krasai are as follows:

\[\text{[6]}\] Krasai nām.
According to Matthayat's commentary the symptoms of nām, or 'liquid', krasai are the same as for the second type of klōn from PKPS, already described above.

\[\text{[7]}\] Krasai lom.
The symptoms of the seventh element krasai, the lom type, given in the commentary

\(^{131}\) Y ṃ k.

\(^{132}\) See Chapter 4 for a discussion of mareng and wannarök.

\(^{133}\) McF, p.296. The word china might also mean 'conquering' (PTS, p.284).

\(^{134}\) Literally 'honey-comb abscess'. These have the following symptoms: tightness in the edge of the liver on the right side, sharp pain in the back, jaundice, like turmeric, faeces yellow like lacquer, hot and cold flushes, stupefaction, aching of all the joints and bones, inflation with wind, and loss of appetite (PS:3:91). See also discussion of fi in Chapter 4.

\(^{135}\) TP, p.298.
by Matthayat correspond to those appearing out of sequence in the list of "spontaneously arising" *krasai* in the PS. text.\textsuperscript{136} It would appear likely that they owe their current position in PKPS to a displacement in the leaves of an earlier version. The symptoms of *krasai lom* are given as follows:

[i] The type arising due to the *lom* in the intestines,\textsuperscript{137} which causes them to form a lump or a cluster, about the same size as the segments inside a sugar palm fruit. When developed this illness causes both sides of the body to become hard, as well as colicky, stabbing pains and tightness inside the chest.

[ii] The *krasai lom* arising outside the intestines,\textsuperscript{138} which then enters the bones, causing them to ache, as if they were going to break apart.

[iii] The *krasai lom* arising because of the *lom* which pervades the whole body,\textsuperscript{139} which consolidates and establishes itself as a mass the size of a *madu'a* fruit\textsuperscript{140} above the navel. It causes severe colicky pains and tightness in the chest.

[iv] The type caused by *lom uthonawät*.\textsuperscript{141} which [in health] rises up from the tips of the feet to the head. When it is the cause of illness in an individual it blows only as far as the top of the chest, then enters the intestines, causing small lumps to arise in them and honey-comb abscesses\textsuperscript{142} then causes severe pain and aching.

[v] The type which may arise due to the *lom* which blows from the tips of the feet all the way up to the *kramom*.\textsuperscript{143} When this *lom* does not blow all the way, pain originates in the place it reaches. This illness is called *krasai lom* and is located in four places: (1) below the navel, (2) above the navel, (3) to the right side of the navel, and (4) to the

\textsuperscript{136} These are given following *krasai siat* (PS:2:213).

\textsuperscript{137} *Kothāsayawät*. See Mulholland (1979a), p. 94.

\textsuperscript{138} *Kutčhachisayawät*. Ibid. Matthayat's description differs in reading "the blood (*lu'at*) *krasai* due to the wind outside the intestines." (p. 212).

\textsuperscript{139} *Angkhhamankhānusāriwät*. (ibid.).

\textsuperscript{140} *Ficus* spp., Moraceae (PCR, p.623; MTP, p.292). The fruit is approximately the size of the Mediterranean fig.

\textsuperscript{141} *Utthangkhamawät*.

\textsuperscript{142} *Fi ruang phu'ng*.

\textsuperscript{143} That is, the whorl on the back of the head. Matthayat calls this type *athōkhamawät*, however this is clearly not consistent with the accepted theory that *athōkhamawät* blows in the opposite direction, from the head descending to the feet (Mulholland (1979a), p.94).
left side of the navel. Like a headless ghost\textsuperscript{144} it may establish itself anywhere.

The last two of these entries are clearly similar. Comparing the types of 'wind' described here with those usually recognised in Thai medical theory, it is apparent that two classes are omitted. They are the 'wind' which blows from the head to the feet (\textit{atthökhamañavañña}), and the 'wind' for breathing in and out (\textit{atsāsapañña}).\textsuperscript{145} It seems likely that the lack of clarity in this section of PKPS is due to the text having become disordered.

\textbf{Krasai Fai.}

The description which Matthayat provides for this 'heat' type of "element" \textit{kraśai}\textsuperscript{146} is again identical with one appearing in the list of "spontaneous" \textit{kraśai} in PKPS. In this case its position in the latter source is consistent with the sequence prescribed earlier in the text. There are, however, reasons for thinking that this entry may be a combination of two separate descriptions. These are, firstly, that, compared with the TP entry, the PKPS entry appears to have been augmented with symptomatic descriptions. Secondly, the PKPS text terminates immediately after this entry.\textsuperscript{147} This suggests that, together with the \textit{lom} entry preceding it, the \textit{fai} category may have been carried over, at least in part, into the spontaneous \textit{kraśai} list from the text which furnished the other element \textit{kraśai} entries, with a consequent coalescence of the two entries. The symptoms as they appear in PKPS are divided into three categories as follows:

\begin{itemize}
\item [i] \textit{Krasai fai} arises because of \textit{tēchō} [i.e. the 'heat' element \textit{tēchō thāt}] called \textit{aphitā}\textsuperscript{148} and \textit{pākhani}\textsuperscript{149}. Its effects are intermittent; it causes the eyes to become red and extremely painful, and the concentration of pain in the top of the chest like \textit{fi mareng suang}\textsuperscript{150}. Its onset in the afternoon swells the face, abdomen and feet\textsuperscript{151} and with these three types of swelling death occurs.
\end{itemize}

\textsuperscript{144} \textit{Phi hua duan}.
\textsuperscript{145} See list and description in Mulholland (1979a), p.94.
\textsuperscript{146} Matthayat (1970), p.212.
\textsuperscript{147} There is a note in PKPS to this effect (PS:2:215).]
\textsuperscript{148} PTS has \textit{abhita}, meaning "extreme heat" (p.64).
\textsuperscript{149} Probably from the Pali \textit{pākani}, meaning 'that which cooks' (PTS, p.449). I am grateful to Dr T. Rajapatirana for his help in determining the etymology of this term.
\textsuperscript{150} See above under \textit{kloñ nām} (PKPS, no.2).
\textsuperscript{151} The common word \textit{tin} is used here instead of the more polite word \textit{thāw} usually appearing in these texts.
[ii] The *krasai fai* called *parithayahakkhī* causes disorders in the heat which consumes food. When food is eaten it causes nausea and reflux, inability to pass wind, pain and tightness in the chest, and difficulty in swallowing.

[iii] The *krasai* arising due to the 'heat' element called *santappakkhī*, which causes coldness all over the body but a high temperature internally. It rises up from three *niw* below the navel, causing colicky pains, rumblings up and down, and sharp pains along the sides of the rib cage making it impossible to turn over, as if afflicted with *patthakhāt* as well as headaches and dizziness.

This information is included in TP as entry number fifteen in the list of "spontaneous" *krasai*. It differs from that given above primarily in that all three descriptions are combined as one. Other differences are the mention of one more heat element, *chiranakkhī*, its situation three *niw* above the navel, and the additional symptom of profuse sweating.

It is apparent from the inconsistencies in their descriptions that neither of these versions of the description of the 'heat' type of "element" *krasai* is completely reliable. The position of these last three types of *krasai* in the text as a whole would also appear to be somewhat uncertain. Without a more complete version of the text it is not possible at this point to determine their relationship to the other "element" *krasai*, and to the other group of "spontaneous" *krasai*, which will now be described.

5.4.2. "Spontaneous" Krasai


152 That is the heat which makes the body feel hot and uncomfortable. See Mulholland (1979a), p.94.
153 The heat which consumes food is usually termed *parināmakkhī* in Thai medical theory (Mulholland (1979a), p.95). There would thus appear to have been some disordering of the text at this point.
154 Mulholland (1979a) has "body heat which warms the body" (p.94).
155 See previous note p.126.
156 PS:2:214.
157 "The heat which causes senility, and causes the body to wither, dry, deteriorate, and lose condition" (Mulholland (1979a), p.95).
158 TP, p.310.
There are two other major versions of the *Khamphì krasai* which can be used to supply the details lacking from PKPS. In addition to TP, there is also the Royal Edition (CL) dated (A.D.) 1870, in two *samut khõi* volumes, held in the National Library, Bangkok. For the first entries, the description of "spontaneous" krasai in PKPS is almost identical with that in CL and TP, but after the twelfth type, at a point corresponding to the end of the first volume of CL, the accounts differ markedly in both order and content. It seems very likely that the remaining entries included in PKPS are derived from a different source, or sources, than CL or TP. For the sake of continuity, the descriptions of krasai types thirteen to eighteen included here will be based on CL which, though very similar to TP, contains more prescriptions and remains intact.\(^{159}\)

The symptoms of the eighteen types of spontaneous *krasai* are given as follows:

[1] *krasai lon*\(^{160}\) It is said that *krasai lon* ('overflowing' *krasai*) arises because of 'serum'\(^{161}\) which is blown by the power of 'wind' into a foam. It causes rumbling noises in the stomach,\(^{162}\) excessive flatulence and reflux.\(^{163}\) If it occurs during the waxing period of the moon, it causes heartburn. If during the waning period of the moon, it causes painful "dragging" in the suprapubic region.\(^{164}\)

These symptoms are indicative of an irritable colon, which may be due to hyperacidity, duodenal ulcer, gastric ulcer, or parasites, for example.

[2] *krasai râk* ('vomiting' *krasai*) arises due to the 'crying of the wind'\(^{165}\) causing dry retching and loud rumbling and gurgling noises in the belly (*čhõk*). The body becomes extremely tense and rigid, as if being strangled by a rope. The person groans ceaselessly, night and day, as if severely oppressed.\(^{166}\)

The symptoms are indicative of food poisoning, severe gastritis or colitis, or partial bowel obstruction.

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159 At least one entry in TP (*krasai* no. 17), has been transcribed from a dislodged, or ruined, plaque (p.312).
160 TP has *lorn* (p.300).
161 Nâm lu'ang.
162 Borborygmi.
163 Thõng khu'n.
164 PS:2:196.
165 Lom rõng.
166 PS:2:197.
This type causes aching in the supra-pubic region, and the lower abdomen becomes as hard as a slab of rock, making bending the body impossible. When it develops, the hardness spreads upwards to the top of the chest. This causes loss of appetite, deep aching and intense pain.

The symptoms are indicative of acute abdomen with peritonitis, and the possible causes are appendicitis, severe cystitis, perforated lower bowel, or pelvic abscess. There may be complete loss of peristalsis, leading to vomiting and obstruction.

[krasai pū ('crab' krasai)] is due to the coagulation of blood. Its appearance is as if a sea-crab had eaten its way into the stomach, causing considerable aching and pain in the lower abdomen. When food is eaten it quiets down, but when the food is finished it flares up again, like a cart-wheel rumbling within the intestines, accompanied by severe pain.

The symptoms are consistent with those of gastric or duodenal ulcer, or hiatus hernia with reflux.

[krasai chuk ('colicky' krasai)] is due to 'wind' making its way into the tendons as a "guest" wind and causes swelling of the tendons in the abdomen, resulting in severe colicky pains. If the person lies face down, he cries out continually, but it is also impossible to lie face-up. As one can see, there is a great deal of suffering.

The symptoms are consistent with some form of bowel colic, or possibly biliary colic, however there is insufficient data to attempt a diagnosis.

[krasai pla Jai ('eel' krasai)], when fully developed, causes afflictions by wriggling its tail, working its way down to affect the supra-pubic region, as well as the anus and urethra, causing obstruction of the faeces and the
urine. The urine\textsuperscript{174} becomes yellow like turmeric, or sometimes red like sappanwood dye or annatto dye.\textsuperscript{175} The body of the \textit{krasai} winds upwards along the intestines, the head rising up as far as the edges of the liver and the stomach. If food is eaten, the \textit{krasai} will always eat it, and if food is not eaten, the \textit{krasai} will bite the edge of the liver and the spleen causing great pain, sometimes causing aching and pain in all the joints, and sometimes causing the hair of the body to stand on end as in severe illness.\textsuperscript{176}

Again the data is insufficient to enable a diagnosis to be made.

\textit{krasai plā mō} ('doctor-fish' \textit{krasai}). The 'spirit'\textsuperscript{177} of \textit{krasai plā mō} arises in the intestines. If it develops during the waxing moon, the \textit{krasai} turns its head upwards to bite at the edge of the liver, spleen and lungs,\textsuperscript{178} causing colicky pains. If it arises during the waning moon, the \textit{krasai} turns its head downwards to the lower abdomen and the suprapubic region, causing obstruction to the faeces and the urine, and the person to suffer pitifully with extreme pain, crying and groaning.\textsuperscript{179}

The symptoms are suggestive of biliary colic, or gallbladder disease, for example gallstones and ascending cholangitis, that is an infection from the duodenum to the liver via the bile duct, causing pain, dehydration due to vomiting, and radiated pain to the chest, splenic area and lower abdomen. Other possible causes are typhoid and parasites.

\textit{krasai plā duk} ('catfish' \textit{krasai}), arises due to the mixing together of blood and serum. It has the spirit of a real catfish, arising in the stomach, or if a woman, in the womb. It manifests itself like an expectant mother in the seventh or eighth month of pregnancy. Sometimes it pierces the left or the

\begin{thebibliography}
\bibitem{174} CL, face 2, p.5. PKPS has "faeces".
\bibitem{175} See above, p.129.
\bibitem{176} PS:2:200. There are strong parallels between the behaviour of \textit{krasai} in this description and that of certain types of Tai 'spirits'. In particular, the \textit{phi pōp} of Northeastern Thailand is said to eat at the liver of its victims (Čhāruwan (n.d.), p.108.). See the previous note on the 'power' of the liver, Chapter 4, p.104.
\bibitem{177} Čhitwinyăn. The choice of this term is of interest, since the \textit{krasai} is depicted as having a "soul" subject to rebirth like other sentient beings.
\bibitem{178} CL has \textit{puat}, meaning 'deep aching' (face 2, p.11). TP has \textit{pōt}, 'lungs' (p.304). The appearance of the two words in Thai is such that they might be confused, especially when handwritten. A meaning of 'lungs' would be consistent with the context.
\bibitem{179} PS:2:201.
\end{thebibliography}
right. If it occurs in the waxing moon it presses up to the top of the chest, resulting in a feeling of suffocation or in chest pain, and causing gasping and choking for air. If it occurs during the waning moon it slides downwards to the lower abdomen and the suprapubic region, sometimes affecting the spine and causing tension in the top of the legs. If not aware of what is happening, one might think it were pregnancy. If the doctor wishes to treat it he must carefully examine the patient.\footnote{180}{The symptoms are consistent with those of ascites,\footnote{181}{which may be due to renal or liver failure. The consequent changes in blood protein concentration lead to pulmonary oedema. Another cause may be cardiac disease.}}

The symptoms are consistent with those of ascites,\footnote{181}{That is, fluid in the abdomen.} which may be due to renal or liver failure. The consequent changes in blood protein concentration lead to pulmonary oedema. Another cause may be cardiac disease.

\footnote{9}{\textit{krasai pluak} ('termite' \textit{krasai}) arises due to\footnote{182}{PKPS has \textit{mu'a} ('when') rather than \textit{phu'a} ('due to') in CL (face 2, p.24) and TP (p.306). The latter form has been adopted in keeping with the style of most of the other descriptions in both texts.} \textit{santhakhāi}\footnote{183}{See above p.124.} causing severe chest pain. It can appear to resolve itself, but after one to three months it recurs, and this may happen many times. When it develops, it causes the skin to appear pale and the flesh emaciated. It might not be realized that the 'termite abscesses'\footnote{184}{\textit{FI plualc.} This condition is said to cause the symptoms of chest pain, which starts in the region of the heart, then affects the back, emaciation, vomiting of blood, a cough, bad breath, inability to eat, and sleeplessness (PS:3:90).} differ: there are those with and without pus. Those of \textit{krasai pluak} have no pus. The doctor should exercise care in his diagnosis to check these symptoms.\footnote{185}{PS:2:203.}}}

The data is insufficient to enable a diagnosis to be made.

\footnote{10}{\textit{krasai linkrabū'} ('buffalo tongue' \textit{krasai})\footnote{186}{CL, face 2, p.30. PKPS has simply 'buffalo' \textit{krasai}. However, in the list of \textit{krasai} given at the beginning of PKPS, the tenth \textit{krasai} is termed \textit{lin krabū'} ('buffalo tongue'). TP also has 'buffalo tongue' (p.307). This name is consistent with the symptoms listed in this section, and also appears in the supplementary list of \textit{krasai} illnesses included later in PKPS. It would therefore appear that the name given at this point in PKPS is a misprint. It is also possible that some attempt has been made to conform to the other names of \textit{krasai} in this series and cast this type as a whole animal.} arises due to blood lodging in
the edges of the liver, as a long hard lump extending out from the right side of the body, resembling the tongue of a buffalo. It causes ague and an intermittent raised temperature, colicky pains and tightness in the chest, inability to eat, sleeplessness and emaciation. When developed it breaks down into blood and serum, which oozes out into the intestines, causing the abdomen to swell out. Owing to the symptoms described here, it has been termed mān krasai (‘oedematous krasai’), which is an atsāthiyarōk and is very difficult to treat. If it has reached the stage of breaking down then treatment is not possible, so treatment must be carried out in its early stages.

The symptoms indicate disease involving a hollow organ, infective and pyogenic. It is possibly cholecystitis due to obstruction of the common bile duct, which may lead to rupture of the gallbladder, peritonitis, and death.

[krasi] taw (‘turtle krasai’) arises due to lumps of mucus the size of duck eggs lodging on either side of the body cavity, these then spread upwards causing colicky pains in the top of the chest. There is continual reflux and the body becomes emaciated and sallow in appearance, as if turmeric had been applied. When fully developed it causes blood to be passed in the faeces and urine. These afflictions are the krasai breaking out as atsāthiyarōk.

The symptoms are consistent with those of hepatitis. Malaria may also cause the presence of blood in the faeces and urine.

[krasi] dān is associated with the upper part of the chest, and is hard like a piece of stone. If it moves down to be situated in the lower abdomen, it causes the person to cry and groan day and night. The person cannot

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187 CL, face 2, p.30. PKPS has 'across the right side of the body'.
188 CL (face 2, p.31) has māra krasai, meaning 'angry krasai' (PCR, p.633). TP (p.307) agrees with PKPS, having mān krasai, which is consistent with the symptoms given in all three sources.
189 According to PP, atsūthayarōk means "an incurable illness" (p.363).
190 PS:2:204.
191 As above. A sequence of prescriptions follows. It is said that if the illness does not respond to the second medicine in the sequence, then the krasai changes to 'hanging spleen' (mān yǒy yǒm) or both types together, sometimes like a turtle (taw: the meaning is unclear here; perhaps the shape of a turtle is intended) sometimes like pāng (enlargement of the spleen), sometimes causing an enlarged liver (PS:2:205).
tolerate cold, which is relieved a little on exposure to warmth, although the ache later returns. Causes colicky pains and tightness in the front of the chest, and inability to eat. If it moves down to the suprapubic region, it is an incurable illness and the doctor will be unable to treat it. If treatment is to be given it must be before it has descended to the suprapubic region. There is insufficient data provided to enable a diagnosis to be made.

[krasai thon (the 'overflowing' krasai), arising due to the eating of food. When the stomach is empty, krasai thon is placid, but when food is consumed, whether a little or a lot, then this overflows up into the top of the oesophagus sometimes with vomiting. This causes tightness in the front of the chest and along the sides of the rib cage, difficulty breathing fully, as if going to die. The tightness then rises up from the lower abdomen, accompanied by stomach cramps. The stomach "hangs upwards" and there is loss of appetite.

The symptoms are consistent with small bowel or pyloric obstruction. This may be the result of an acute gastritis, such as commonly induced by anxiety, poison, drugs, or alcohol.

[krasai siat (‘stabbing pain’ krasai) arises due to cramps, travelling from the big toe up along sen sakhriz, causing deep aching, pain and trembling all over the body. Then it rises up, causing stabbing, colicky pains along the ribcage on both sides. It causes the person to cry out as if going to die and intense pain over the whole body. To treat it, the doctor should first administer massage, then when the symptoms have abated, prescribe medicine.

192 PS:2:206.
193 Literally 'to the top of the chest (ygt ok).
194 Phkh kharawn khun pai wai.
195 CL, vol.2, face 1, p.11. PKPS adds "krasai thon causes colicky pains in the chest, sharp pains all over the body, and cold shivers like hailstones." (PS:2:211).
196 Lom sakhriz, or sakhriz 'illness'. The more common spelling is takhriz.
197 As with the other sen appearing earlier in this description (patthakhát, santhakhát, rattakhát, and muttakhat), sakhriz or takhriz are not among the major sen commonly listed in the various texts. Although beyond the scope of the present work, a closer examination of the subject of sen would seem to be warranted.
198 CL, vol.2, face 1, p.18.
The data is again insufficient to enable a diagnosis to be made.

[15] **krasai phlōeng**\(^{199}\) ('heat' krasai) which arises due to the three types of the 'heat' element,\(^{200}\) *asitāchiwapā'ankhī, santapakkhi, and parithai-hakkhi*. All three of these may be a cause of the afternoon onset of red eyes,\(^{201}\) upper-chest pain, *fi mareng suang*,\(^{202}\) with swelling of the face, abdomen and feet. The body feels cold [on the outside] but is hot inside, as if a fire were blowing. It is situated three *niw*\(^{203}\) above the navel, and there are colicky, stabbing pains in the chest, stabbing pains in the ribs, and inability to move the body, as in *patthakhāt*,\(^{204}\) with severe aching and deep pain. Eating is followed by flatulence and reflux, but with inability to belch or fart. There is loss of appetite, and profuse sweating.\(^{205}\)

This entry is not included in PKPS. The symptoms in CL and TP are almost identical to those already given for the eighth "element" krasai.\(^{206}\)

[16] **krasai nām** ('liquid' krasai), which arises due to blood, 'serum', and mucus, all three or any one of which can be a cause. It is said that [the type called] 'blood' krasai\(^{207}\) is the primary cause: in a woman it is situated three *niw* below the navel, as explained in the *Khamphi mahāchōtarat*; if in a man, it is three *niw* above the navel, as explained in the *Khamphi mutchāpakkhantikā*. Here only one type will be described. When it arises it causes deep aching, severe pain extending to the top of the chest, then [the illness] spreads upwards, like *fi mareng suang* and *fi pluak*. To treat, firstly administer a cleansing medicine, then prescribe medicine according to element theory.\(^{208}\)

If this illness occurs in a woman, it is said that the blood enters the

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199 The list in PKPS has *fai*, the less-formal term for 'heat'.
200 *Tēchōthāt*.
201 May also mean 'conjunctivitis'.
202 See above, p.123.
203 See note above, p.123.
204 See above, p.126.
206 See above, pp.136-137.
207 *Krasai lōhit*.
208 CL, vol.2, face 1, pp.32-34.
'womb'\textsuperscript{209} and sticks to the backbone. It may affect the mind, causing delirium. In a man, it causes the blood to clot\textsuperscript{210} in the chest, which may change to 'fī sīsā khw’am.'\textsuperscript{211} Sometimes it changes to oedema with 'blood',\textsuperscript{212} muttakrit, muttakhāt, or santhakhāt,\textsuperscript{213} since krasai nām may be due to haematoma.

This entry is also not included in PS. The symptoms given in CL and TP are the same as for the "element" krasai.\textsuperscript{214} 

[k17] krasai chu’ak ('rope krasai') rises from the suprapubic region towards the heart. It is hard like a piece of iron, causing a feeling of severe tightness in the chest, stabbing colicky pains, constipation, and difficulty in passing urine, which is black like oil. There is loss of appetite, and intermittent bouts of hot and cold. After massage it abates a bit. If massage is not given, the body becomes stiff and unable to be bent, as if a length of iron had been inserted into it. There is great suffering.\textsuperscript{215}

These symptoms bear close resemblance to those of the third in this group of krasai, the 'iron' type, the main differences being the urinary symptoms, the quality of pain suffered, and the specification of massage as a form of treatment. No description of krasai chu’ak appears in PKPS. There is, however, a brief description of a krasai chu’ak khwāi ('buffalo rope' krasai) in the last section of the text which is, according to Mattheyat, an alternative name for krasai chu’ak.\textsuperscript{216} The illness is said to:

form a coil near the side of the navel and cause the urine and the faeces to be yellow like turmeric.\textsuperscript{217}

The brevity of this description, as well as the irregularity in naming, would indicate that this part of the PKPS text has become disordered.

[k18] krasai lom ('wind' krasai) arises because of the entry of angkhārawat collecting together, to become located above the navel, about the size of a

\textsuperscript{209} The word fak, literally meaning 'pod', is used here to mean 'womb'.
\textsuperscript{210} The text has čhuk, literally meaning 'knotted'.
\textsuperscript{211} That is, fī hua khw’am. See previous entry, p.124, fn.50.
\textsuperscript{212} Mān lu’at.
\textsuperscript{213} See above, p.124.
\textsuperscript{214} See p.122.
\textsuperscript{216} Mattheyat (1970), p.216.
\textsuperscript{217} PS:2:217.
madu'a fruit.218 Causes stabbing, colicky pains, severe tightness in the front of the chest, breathing obstruction, with gasping and wheezing for breath. It is accompanied by loss of appetite, and "sensitivity" over the whole body, as if salt were being rubbed into it.219

The symptoms of the eighteenth type of krasai do not appear in either PKPS or TP. The symptoms described here are similar to those given for the lom type of the "element" krasai presented earlier.220

5.4.3. Unlisted Krasai.

In addition to descriptions of the eighteen types of krasai corresponding to those listed at the beginning of volume one, CL also includes descriptions of four additional types of krasai "arising from disturbance of the elements".221 These are classified according to the four elements, tēchō, ṭāyō, āpō, and pathawi, and are numbered consecutively to the eighteenth type of krasai described above. They are described as follows:

[19] krasai arising from disturbances in the 'heat' element (tēchōthāt). That is, when the four 'fire (phlōeng)' elements are not normal, their functions are changed in various ways. Sometimes they become situated in the navel and chest, causing tightness in the chest and loss of appetite. Sometimes they cause severe colicky pains to rise up,222 as if death were imminent, or heat, as if burned by fire. There may be profuse sweating, inflammation of the eyes, and acute pain in the upper part of the chest. Its onset in the afternoon causes swelling of the face, abdomen, and feet. If these three places are affected by swelling, then treatment is not possible.223

This description bears some similarity to that of klôn fai appearing in PKPS.224 There is an even more marked resemblance to the description of the eighth "element"
krasai, although the description here is somewhat condensed.

[20] krasai arising due to the 'wind' element (wāyōṭhāt). Increased activity of this type of wāyōkrasai may occur in either the waxing or waning phase of the moon. If it occurs in the morning, it abates a little, [so that the patient might be taken for] a well person. If in the afternoon, then it causes colicky pains to rise up, with severe pain "biting, grinding and nibbling" away at the front of the chest. The chest feels hot, while the rest of the body feels very cold. There are severe aching pains. If any food is eaten, provided it is hot, then the symptoms will abate a little.

This description bears a close resemblance to that given earlier for klōn lom, appearing in PKPS. This version is slightly more detailed.

[21] krasai due to abnormalities in the 'liquid' element (āpōṭhāt). There are three types, due to blood, 'serum', and mucus. Each of these types may occur separately, or all three together. It is termed 'blood' krasai, and if [it occurs in] a woman it arises from three niw below the navel. These symptoms have already been described in the Khamphi rōknī. If [it occurs in] a man it is situated three niw above the navel. As is the case for women, symptoms affecting men are described elsewhere, in the Khamphi mutchāpakkhānthikā. Here the Teachers only describe the symptoms of krasai rōk. When this type of krasai arises it causes deep aching and severe pain extending to the top of the chest. Sometimes it moves upwards to involve the liver and the heart, like mareng suang and ft pluaқ.

This description is similar to that given earlier for klōn nām, derived from PKPS. In comparison with that version, far less detail is given here.

[22] krasai due to the 'solid' element (pathawīṭhāt). The symptoms are of a lump which initially extends up from the pubic region, on both sides, then moves down to the testicles, enlarging, and accompanied by contusion. It is very

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225 See pp.136-137.
226 See p.125.
227 Lōhit.
228 Possibly Khamphi rōknīthān.
230 See p.123.
sensitive to the touch, even to that of a phānung. There is acute pain, twitching extending to the heart, stabbing pains along the rib-cage, and the middle of the chest. There is a severe aching chest pain, and pain all over the body. There is urinary obstruction, with a "dragging" feeling and tension in the front of the thighs and in the genital region. There is indigestion, loss of appetite, ague and fever, with a desire for sour and sweet, which are the things liked by the illness. [The symptoms] are similar in men and women. They say that the symptoms of this type of krasai are due to phandu'k, that is an expansion of patthakhāt, caused by the 'solid' element.

With some minor variations, this description is the same as that given in PKPS for klōn din.

Apart from these recognized krasai illnesses, a number of others appear in PKPS, the names of which do not correspond to those listed at the beginning of the text. Their descriptions are briefer than those of the eighteen listed types, and they are mainly located in the last section of the text, which we have already seen to be disordered. They are given as follows:

- **krasai** causing colicky pains, arises as lom bit with mucus and blood, affecting the sen and causing high temperatures. The lom krasai causing stabbing colicky pains.

- **lom** krasai causing a high temperature in the chest and abdomen. It arises due to 'wind' and mucus.

- **krasai** called krasai khon ('concentrated' krasai). It arises because blood lodges in the spine, causing unrelenting back pain.

- **krasai khu'n nāmman** ('rising oil' krasai) caused by 'wind' and liquid in the stomach which cause severe pain.

- **lom krasai** which causes vomiting, and rumbling in the belly, as if a fish were swimming in the cavity.

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231 That is, the sarong-like Thai lower garment commonly worn in the 19th century.
232 CL, vol.2, face 2, pp.31-33.
233 See p.121-122.
234 Diarrhoea accompanied by colicky pains. See Chapter 4, p.112.
235 Lom is used here, and in some of the following examples, in the sense of 'illness in general'.
lom krasai which forms a hard mass in the abdomen, like a board obstructing the floor of the belly, causing severe aching pain.

lom krasai which blows the blood into illness.\textsuperscript{236} It runs upwards, causing disorganization, like the wheel of a cart, and stabbing, colicky pains. It is due to 'wind' and blood.

krasai which arises because of 'wind' entering the bones. It causes pain all over the body, which seems never to cease.

lom which manifests itself as a hard lump about the size of a sugar palm fruit\textsuperscript{237} in the top of the liver. It causes pain over the whole body.

lom krasai where blood enters the en\textsuperscript{238} leading to stiffness of the joints or small lumps.\textsuperscript{239}

one of the seven types of krasai is called the krasai chu'ak khwâi (‘buffalo rope' krasai). It creates a coil near the side of the navel and causes the urine and faeces to be yellow, like turmeric.\textsuperscript{240}

lom krasai pla (‘fish' krasai)\textsuperscript{241} Its head causes sharp pains to rise upwards, and colicky pains to occur near the the top of the liver. The tail runs obliquely along the line of the navel, causing pain and diminishing the strength. The person can lie neither face down nor face up.

lom krasai called lin krabû (‘buffalo tongue' krasai). It arises due to blood which rises up in the abdomen when salāeng\textsuperscript{242} things are eaten. That blood turns black and and dissolves out, causing severe aching. If hot things are ingested it is relieved a little, then the aching returns.

\textsuperscript{236} The term used here is āphāt, from the Pali ābādhi, sickness. See Chapter 4, p.83.
\textsuperscript{237} That is, about 10-15 cm across.
\textsuperscript{238} Synonomous with sen, 'tendon'. See previous entry p.121.
\textsuperscript{239} Lāk.
\textsuperscript{240} This is the entry described as [18] above.
\textsuperscript{241} This appears to be the same as entry for plâ mō described above, p.140.
\textsuperscript{242} That is, proscribed things. See previous entry, p.124, fn.54.
krasai called 'blood' krasai. It blows hard blood in, causing abdominal pain, which is relieved with massage. When developed the illness causes the features to be pale, the eyes to be yellow and an emaciated appearance.

lom called krasai plā lai ('eel' krasai), affecting the head, and downwards as far as the legs. Causes pain in the back. After a day it will rise up along the sen, causing sharp colicky pains. When massage is applied the whole body starts to ache, and the person is unable to eat.243

krasai called 'blood' krasai244 It blows hard blood in, causing pain in the abdomen. When massage is administered the pain is relieved. When it develops it causes the features to be pale and emaciated in appearance.

lom called krasai chāe ('soaking' krasai). [there appear to be words missing in the text]... it then blows back about the size of a duck egg. If the person stands up, colicky pains affect the top of the liver. When it develops it turns back down and blocks the nine bodily orifices. When this happens death occurs.

For the reasons given above (that is, their brevity, and occurrence in an apparently disordered section of PKPS), it would appear that these entries have been added some time after the compilation of the earlier part of the text. Some of the entries, such as krasai chāe, which appears to have been longer than some of the others, may represent abbreviated or renamed entries from the main list. This is supported by its occurrence here amongst other entries bearing a strong similarity to items in the main list.

Other entries appear to have been added in order to include new prescriptions, possibly by practitioners trained outside the Royal tradition since the type of krasai is specified by description of the symptoms rather than by any of the twenty-six specified names. The use of lom as a prefix to krasai is significant, since in this context lom does not denote the element 'wind', but simply 'illness'.245 As has been observed in the previous chapter of this work, the use of lom as a general term for illness is prevalent among other Tai groups, notably the Northern Thai. Its occurrence here, rather than one of the Indic

243 See previous entry, pp.139-140.
244 Footnote in text: "named the same as the entry on page 366 [of the PKPS text], but included here as the medicine is different." See also the penultimate entry above.
245 See Chapter 4, p.85, fn.49.
terms usually employed in CL and TP, suggests connections with the folk medical tradition, more than the court tradition.246

5.5. Conclusion

Based on the above descriptions in PKPS, it is possible to deduce a taxonomy for krasai, included here as Table 2. It will be seen that the superordinate illness category krasai may be subdivided into two main categories, "element type" and "spontaneous". The element type is further divided into five types of kli)n and three types named for the 'elements'. There is no further division of the spontaneous type of krasai, other than into eighteen types. These eighteen spontaneous types, together with the eight element types, make up the twenty-six types of krasai listed in PKPS.

From the descriptions appearing in the Royal texts it is apparent that the term krasai encompasses a wide range of afflictions. The symptoms of krasai primarily affect the abdomen and the thorax, but krasai cannot be said to correspond to a specific illness category recognized in modern medicine. However the sub-categories into which krasai is ordered in the texts may approach more closely illness categories familiar to modern medicine, and, as we have seen, it is possible in some cases to make a preliminary diagnosis, although the type of information provided may not necessarily be sufficiently specific for this to be accurate. The questions of interpretation which these difficulties raise will be dealt with in detail in the following chapter, but, their inaccuracy notwithstanding, these diagnostic attempts do yield interesting information on the nature of the illnesses which confronted the Thai physicians who compiled these texts. It should be borne in mind, however, that the texts do not provide information on the frequency of occurrence of the illnesses they describe, and like modern textbooks, probably contained descriptions of both rare and common illnesses.

Another important point to consider at this stage is the relationship between the descriptions of krasai in the texts and the way the term is used in other contexts. Present-day physicians trained in the court medical tradition are, as a necessary part of their training, familiar with the twenty-six types of krasai mentioned in the texts. The extent to which these categories are actually employed by them in practice would appear to be variable.247 As mentioned at the beginning of this chapter, this does not appear to be the way in which krasai is generally conceived by Thais untrained in court medicine: Central Thai villagers versed in an "informal" knowledge of herbal medicine and 'massage' (nuat) defined krasai as meaning 'kidney disease' (rōk tai). While these symptoms are certainly

246 See Bamber (1982, pp.41-42) for a further discussion of this point.

Table 2. Types of *krasai* as classified in *Phrakhamphi krasai*¹

- **klōn**
  - **element** *(thāt samutthathān)*
    - [1] *din* ('solid')
    - [2] *nām* ('liquid')
    - [3] *phlōeng* ('heat')
    - [4] *lom* ('wind')
    - [5] *thaw* ('cord')
    - [6] *nām* [unlabelled]
    - [7] *lom*
    - [8] *fai* ('heat')
    - [9] *lon* ('overflowing')
    - [10] *rāk* ('vomiting')
    - [11] *ek* ('iron')
    - [12] *pū* ('crab')
    - [13] *čhuk* ('colicky')
    - [14] *plā lai* ('eel')
    - [15] *plā mō* ('doctorfish')
    - [16] *plā duk* ('catfish')
    - [17] *pluak* ('termite')
    - [18] *lin krabū* ('buffalo-tongue')
    - [19] *taw* ('turtle')
    - [20] *dān* ('lumpy')
    - [21] *thon* ('overflowing')
    - [22] *siat* ('stabbing-pain')
    - [23] *phlōeng*
    - [24] *nām*
    - [25] *čhā'ak* ('rope')
    - [26] *lom*

- **krasai**
  - spontaneous *(uppapatika)*
within the range of those appearing in the texts, they reflect a narrowing of the semantic range of krasai, approximating that of the modern medical category, "kidney disease".

From an examination of the major symptoms of the various types of krasai presented above it is apparent that 'emaciation' appears as a significant feature in only three of the twenty-six recognized types of krasai, as well as in one of the miscellaneous krasai (krasai lu'at) whereas symptoms indicative of urino-genital afflictions occur in eight of the categories. This is a finding consistent with the definition of krasai voiced by villagers, and appears to confirm the contention, made at the beginning of this chapter, that the interpretation of krasai in the major dictionaries follows the Indic meaning of the term rather than that in the vernacular.

Perhaps the most striking feature of the krasai illnesses to emerge from the texts is that many are serious illnesses. They appear, furthermore, to present at quite an advanced stage. Thus, although the illnesses may be recognizable to a physician practising in most western countries, and probably even in Thailand today, it is unlikely that he would encounter many of these illnesses in the form in which they are described in the ancient texts.

The main barrier to the assessment of the treatments which accompany these symptomatic descriptions, aspects of which will be discussed in a later chapter, would appear to be that raised by the intricacies of the classification system employed by the ancient physicians. Why, for example, are types of krasai compared in name and action to various creatures such as fish and insects, and what is the reason for the frequent and apparently redundant occurrence of the four elements theory? These are aspects of Thai illness classification which fit poorly with a taxonomic representation. In the following chapter the ways in which krasai is classified in the traditional texts will be examined in an attempt to answer some of these questions.

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CHAPTER 6

AN ANALYSIS OF THE CLASSIFICATION OF KRASAI

6.1. Introduction

From the descriptions presented in the previous chapter it is clear that some features are regarded as more salient than others in the classification of krásai. In this chapter these features will be examined in the context of some of the themes arising from the discussion of illness classification earlier in this work. This examination will be divided into three main parts, consisting of a consideration of: [i] symptoms and other diagnostic features; [ii] the number of categories into which krásai is divided; and [iii] the naming of these categories. This division is largely for the sake of convenience in discussion, for, as will be seen, these aspects of classification are strongly inter-related. It will in fact be argued that in all three areas of classification metaphor figures prominently, and that this role is closely linked, through the means which were discussed in Chapter 3, to the healing response.

A further aspect of the role of metaphor which will be explored in this chapter is way in which it may serve to adapt, or "localise", features derived from other cultures to the Tai classification system. As will be seen, features of Indic origin are significant in the three areas of classification listed above. The following examination will thus provide an opportunity to look at the extent and nature of the role which these features play in classification.

6.2. Symptoms and Background Cultural Features Influencing Diagnosis

Many of the symptoms appearing in the descriptions of krásai are similar to those considered salient in the description of illness in other cultures. Thus, in common with most medical systems, the Thai text characterises illnesses by such features as the occurrence of pain, its location and type; effects on the appetite; changes in appearance, for example swelling, emaciation, and colour; temperature variations; sounds; and the loss

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1 Some of the material included in this chapter has been published in Bamber (1987).
2 See Chapter 2, p.12.
of competency of certain organs. There is also often a close similarity in the semantic ranges of the Thai and English terms for these symptoms. For example, in the Phrakhamphi krasai there are several words which can be used to describe 'swelling', such as: phông, used in the text to denote the swelling of hollow organs; buam, and kamrōep, both of which denote 'expansion'; and fok, meaning 'contusion' (i.e. inflammation). These terms offer approximately the same degree of differentiation as do their English equivalents. However, when certain other domains are contrasted, there may be markedly different degrees of discrimination between Thai and English.

One of the most prominent examples of disparity between Thai and English symptomatic description is in the domain of pain. A summary of the pain\(^3\) words occurring in the Phrakhamphi krasai is given in Table 3. One of the readily-apparent features of this table is that the Thai texts appear to allow a much finer discrimination to be made between different types of pain. As Diller has indicated in reference to modern Thai, this may be achieved in several ways: in addition to the availability of a large number of discrete pain words, these may also be compounded, either with other pain words, or with words not ordinarily associated with pain. These combinations may retain the discrete sensations, produce a blend, or define a sequence of pain perception.\(^4\) As may be seen from the descriptions in the previous chapter, this may apply to the usage of pain terms in the medical texts: in addition to their occurrence individually, pain words used in the description of krasai are frequently compounded. Also, several of the words associated in the text with feelings of discomfort would not usually be so-regarded in English, or, at times, in Thai. This is the case with words such as mu'n, tu'ng, and thuang which occur in the Phrakhamphi krasai as single words or in compound expressions, clearly meaning specific types of pain. In the usage of these terms in other contexts, however, there need be no suggestion that pain or affective discomfort is intended.

The descriptions in the Thai texts also emphasise other symptoms which are not generally accorded much prominence in modern medicine, for example sound and taste. Thus reference is made to 'the rumbling noise of gas in the intestines' (lar),\(^5\) 'noises in the

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\(^3\) 'Pain' here is taken of the very wide sense of 'discomfort', and the list therefore includes sensations which do not, in the strict sense, denote 'pain' in English. There would appear to be marked intercultural variation in even the sensations which are considered to be painful.


\(^5\) PS:2:196, 214. See Chapter 5, pp.138-139.
Table 3. Pain words occurring in *Phrakhamphi krasai*.

<table>
<thead>
<tr>
<th>Thai</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>tăi (ตาァ)</td>
<td>'loss of sensation'</td>
</tr>
<tr>
<td>mu'n (มัณ)</td>
<td>'stunned'</td>
</tr>
<tr>
<td>tu'ng (ตง)</td>
<td>'tension'</td>
</tr>
<tr>
<td>khat (ขัด)</td>
<td>'obstruction'</td>
</tr>
<tr>
<td>naen (นาเอ่น)</td>
<td>'tightness'</td>
</tr>
<tr>
<td>thuang (ทาง)</td>
<td>'dragging'</td>
</tr>
<tr>
<td>mu'ai (มัธย)</td>
<td>'muscular aching'</td>
</tr>
<tr>
<td>rabom (ระบาด)</td>
<td>'dull pain, soreness'</td>
</tr>
<tr>
<td>puat (ปวด)</td>
<td>'deep ache'</td>
</tr>
<tr>
<td>khop (ขพ)</td>
<td>'gnawing ache'</td>
</tr>
<tr>
<td>yōk (ย๊ก)</td>
<td>'severe pain'</td>
</tr>
<tr>
<td>čhep (เจ็บ)</td>
<td>'intense pain'</td>
</tr>
<tr>
<td>thāeng (แทง)</td>
<td>'stabbing pain'</td>
</tr>
<tr>
<td>siat (เจ็บตัว)</td>
<td>'sharp pain'</td>
</tr>
<tr>
<td>čhuk (จุ๊ก)</td>
<td>'colicky pain'</td>
</tr>
<tr>
<td>dāek (แตก)</td>
<td>'colicky pain'</td>
</tr>
<tr>
<td>siaw (เสียว)</td>
<td>'sensitivity'</td>
</tr>
<tr>
<td>sadung (สะดุง)</td>
<td>'twitch'</td>
</tr>
</tbody>
</table>

a This entry appears only in KKK.
stomach or chest' (rǒng),6 'gurgling noises' (čhōk),7 and the patient's expressions of distress, such as 'groaning' (rǒng khrang).8 With regard to taste, apart from the noting of lack of interest in food, reference is made to the distinct flavours which are preferred, for example the desire for things which are sweet and sour.9

Apart from symptoms which are common to the description of illness in most cultures, there are several diagnostic criteria the salience of which is more culture-specific. In the krasai text this aspect of illness classification may be manifested as [a] spatial relations within the body, [b] the time of onset of illness, and [c] the involvement of blood. As will be seen, these three areas appear to be strongly linked to Thai cosmological beliefs.

6.2.1. Spatial Relations within the Body

One of the most prominent Thai diagnostic criteria appearing in the descriptions of krasai is the spatial displacement of symptoms within the body. Spatial displacement is of course an essential component of symptomatic description regardless of culture, however, in Thai descriptions of illness certain orientations are clearly more salient than others. The main examples from the text are the location of symptoms in the sagittal plane (that is in relation to the long axis of the body) and the transverse (or horizontal) plane.

In the sagittal plane, emphasis is placed on the location and movement of symptoms in relation to the navel, lying midway between two poles represented by the head and the feet. As we saw in Chapter 5, this orientation is particularly apparent in the case of krasai lōn,10 krasai plă mō,11 krasai plă duk,12 and krasai nām.13 The salience of the sagittal plane in the description of symptoms may also be evident, to a lesser extent, in some of the other types of krasai, although their involvement of sagittally-oriented organs, such as the gastro-intestinal tract, makes this difficult to determine. In addition, for the first three of the examples above, the movement of symptoms is linked to the phases of the moon: upward during the waxing period of the moon, and downward during the waning phase.

In the transverse plane, the location of symptoms is expressed in terms of a left-
right dichotomy. This may be seen in the description of kłon thaw,\textsuperscript{14} where the sen are said to swell and harden on either the left or the right side of the pelvic region. This distinction is also made in the case of kłon hin,\textsuperscript{15} and krasai plak duk.\textsuperscript{16} As with sagittally-displaced symptoms, those described in terms of the transverse plane have further associations. In this case the link is to gender: in a male they appear on the right, and in a female, on the left. Such linkages are not confined to the description of krasai: in another PS text, Khamphi prathom chindā, the development of birth sāng, which is related to the lunar phases as mentioned above, is also governed by gender, being located on the left side if a girl, and the right if a boy.\textsuperscript{17}

The two types of spatial differentiation observed here are not unique to the classification of illnesses. The emphasis on sagittal orientation reflects a dichotomy widely observed in Thai culture in which high or auspicious things are juxtaposed with low or inauspicious things.\textsuperscript{18} In terms of the spatial relationships between the various parts of the body, this means that various parts of the body differ in importance. Thus the head is treated with most respect, which diminishes as the waist is approached, below which the body parts are regarded with decreasing esteem until the least respected part of the body, the feet, is reached.\textsuperscript{19} One reason which has been given for this is the association of the feet with the unclean, and therefore "dangerous", substances in the environment surrounding the traditional Thai village house.\textsuperscript{20} Such substances include human and animal excreta, earth, and blood, particularly menstrual blood, and the reason for their being considered as "dangerous" is their antagonism towards the "beneficial power" which enables a person to ward off malevolent powers.\textsuperscript{21} More will be said of the relationship of these beliefs to illness classification later in this discussion.

The use of a left-right classification has also been observed elsewhere in Thai culture, in particular among the Northern and Northeastern Thai. For example, Davis noted its occurrence in Northern Thai, as one of a series of related divisions including:

\begin{itemize}
  \item \textsuperscript{14} Ibid., p.126.\textsuperscript{[5].}
  \item \textsuperscript{15} Ibid., p.132.\textsuperscript{[e: iv].}
  \item \textsuperscript{16} Ibid., p.140-141.\textsuperscript{[8].}
  \item \textsuperscript{17} TTP, p.39.\textsuperscript{[5].}
  \item \textsuperscript{18} The dichotomy between "high" and "low" was briefly mentioned earlier in this work, in connection with "power" in Chapter 2.\textsuperscript{p.20}, and with language in Chapter 4.\textsuperscript{p.89.}
  \item \textsuperscript{19} Terwiel (1979), p.91. A distinction between upper and lower in the description of illnesses is also an important feature of the medical classifications of other Asian peoples, for example the Sakhalin Ainu, described by Ohnuki-Tierney (1981a, p.40).
  \item \textsuperscript{20} Terwiel (1979), p.93.
  \item \textsuperscript{21} Ibid., pp.50,93,142. See also previous discussion in Chapter 4.\textsuperscript{p.89.}
\end{itemize}
north-south, east-west, male-female, senior-junior, and village-forest. The Northeastern Thai, according to Tambiah, regard right as auspicious and associated with the male, and left to be inauspicious and related to the female. Gerini has also noted that the orientation of the unalōm painted on the forehead during the "topknot cutting" ceremony of the Central Thai corresponds to the sex of the child: if the child is a female it is turned to the left, and if male it is turned to the right.

This type of dualism in Thai culture is, as we have seen in Chapter 3, also a common feature of symbolic classification in other cultures. The linking between the various dichotomies which result, such as of right with male, and left with female, has also been widely observed. For example amongst the Burmese the association of the female with the left, and the male with the stronger right side appears to be prevalent. The phenomenon has been noted in Brahmanic literature, and also exists in the African continent. One explanation which has been advanced as a reason for this association is based on the observation that in each pair of categories one is defined in some way superior to the other. As Lévi-Strauss explained, right is associated with male, and what comes first; left is associated with female, and what comes after. So as well as classifying, the dual division also ranks the categories. This adds another dimension to the contrast, involving the subject in a qualitative assessment, and enabling the determination of priority.

The pre-eminence of the right has been observed by Davis in Northern Thai culture (although he notes that this is not always the case), and by Anuman in respect to the Central Thai. The theory that these associations entail rank is, however, difficult to reconcile with the classification of krasai. On examination of the symptomatic descriptions in the Phrakhamphi krasai, it is apparent that no value judgement is intended as to the

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24 Gerini (1895), p.55. As noted in Chapter 2, a left-right classification was also employed in the organisation of the Thai administrative bureaucracy (p.33).
25 See p.58.
27 Oertel (1905), pp.188-190.
29 Lévi-Strauss (1972b), pp.144-145.
prognosis. An exacerbation of the symptoms, or an unfavorable outcome is not indicated by the fact that in a male symptoms occur on the right side of the body, and in a female on the left. Similarly the direction of an illness upwards or downwards in the body appears to have no prognostic implications. The use of a dual classification appears to be simply for the purposes of description. It is nevertheless possible that by the simple choice of terms such a value judgement might be made implicit, however there appears to be no evidence in the texts to support this possibility.

6.2.2. Time and Symptomatic Description

An emphasis on binary classification is also seen in the second of the Thai diagnostic categories mentioned above, that of "time". As we have seen above, the course of an illness upwards or downwards in the body is related in some cases to the phases of the moon, that is its waxing (khāng khu'n) or waning (khāng rāem). The phase of the moon is in fact considered to be of sufficient importance in the description of an illness for the text to comment on exceptional cases where it does not affect the course of the illness. This relationship between the moon and illness is not confined to Phrakhamphi krasai, but has been observed in the description of illnesses elsewhere in PS. For example the Khamphi prathom čhindā states that a "pustule of birth sāng" will develop above the navel at the time of the waxing moon, and below the navel at the time of the waning moon.

The use of a lunar calendar was formerly widespread among Tai peoples, and may still be employed by people in some parts of Thailand. According to this system the Siamese divided the month into halves of fifteen days, named as above, the waning half of which was shortened to fourteen days for the odd-numbered calendar months which were reckoned as twenty-nine days. Because of this common use of the lunar phases in time-reckoning, it would be unwise at this stage to overplay any suggestion, albeit tempting, that the moon and the body might possibly be directly linked in Thai folk belief. For, although it would appear plausible that Thais may have believed that, like readily-observable external phenomena such as tides, the internal workings of the body should also respond to the influence of the moon, there is little other evidence available to support this. Although Thais may regard certain days of the lunar month as auspicious, or

33 See for example krasai plā mō and plā duk.
34 See for example the description of klo:n lom (Chapter 5, p.125, [4]).
35 MTP, p.39.
37 Ibid.
inauspicious, these are evenly distributed between both phases. Furthermore, the effects of transgressions of these behavioural guidelines on actual pathology are rarely articulated. For example, Davis describes the Northern Thai belief that the performance of certain activities on some days, termed "sick days" (wan pua) which may occur in either of the lunar phases, will lead to illness. However, he does not specify the types of afflictions arising on these days and their location in the body.

There are some data, however, from Tai peoples elsewhere in Asia that appear to lend support to the notion that there is a link between lunar phases and the workings of the body. These data, from the Ahom people of Assam, suggest that during the lunar month the 'soul' (khwan) may be located at different sites within the body. This notion runs contrary to the widely-held belief that Tais consider each of the body's organs to possess an individual 'soul'. When it is remembered that in ancient (pre-Indic) Tai medical belief sickness was thought to result from "soul loss", then the relevance of this finding for the establishment of a link between the moon and illness in Tai culture is apparent. The link between lunar periodicity and khwan, if substantiated, may also contribute to an understanding of another important feature of the descriptions presented in the previous chapter: the role of menstrual blood in the onset of illness.

6.2.3. Blood and Illness

The pervasion of Thai culture by beliefs regarding the polluting nature of menstruation has been widely reported in the academic literature, and in journalistic accounts of Thai society. Menstrual blood, and things with which it may come into contact, such as clothing, are considered to be dangerous, and antagonistic to men's "beneficial power". Thus, for example, men must exercise particular care in passing beneath clothes hung out to dry, lest they include some garment worn by a woman. Menstruating women should also not enter the precincts of a temple.

These beliefs may not be confined to menstrual blood. There is evidence to suggest that in the past "clean" blood, such as that from fresh wounds was also considered to be as dangerous as menstrual blood. These beliefs are illustrated in accounts of the attempts by Westerners to introduce bloodletting and surgery to the Thai. Despite the fact that on
some occasions, such as the bloodletting of King Narai at the hands of a French doctor, such practices were carried out, bloodletting and surgery involving the flowing of blood were generally regarded with great fear by Thais. The "abhorrence" felt by Thais towards blood and the possible links between this belief and the lack of surgery in Siam was recorded in the seventeenth century by La Loubère, who also noted that the practice of bloodletting was confined to the Chinese, but even then performed by a European.45 These observations were later confirmed in the mid-nineteenth century by the American missionary doctor Bradley who, writing of his treatment of a generalised oedema,46 said:

I proposed bleeding from the arm. This was approved at once, although it is a thing never done by Siamese physicians and appears very dreadful to them. I have never to my recollection been able to perform the operation on a Siamese out of my dispensary from their great fear of flowing blood.47

The enhanced symbolic value of blood in Thai culture is reflected in the krasai texts by the elaboration of the descriptions of its pathological role. For example, in klōn nām, blood is said to enter the uterus, then adhere to the spine and pelvis, and sometimes affect the mind, making the person crazy.48 Elsewhere in the text illness is said to result from the entry of blood into the en ("tendons"),49 its clotting in the chest,50 and from its concentration or coagulation in one place,51 described in some places as being 'blown' together.52

The involvement of the mind, in the first example given above, and the harmful effects resulting from the "blowing of blood" to mix together with 'serum', are combined in one of the other PS texts, the Khamphi chawadān, to comprise a more consistent theory. This runs as follows:

iom is used to drive up a poison53 in the blood, just as iom [i.e. the wind

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45 La Loubère (1691), pp. 62-63, 90, 126.
46 The patient was an elder brother of the head physician Krom Luang Wongsathirat (see earlier note, Chapter 4, p.78, fn.7), possibly Phra Ong Čhaw Chāirēnū, since Bradley notes in his Journal entry for 11th February 1847 that he had received a visit from the man, whom he had been "enabled by the Lord" to cure of "an old and severe case of dropsy" two months previously.
47 Bradley (journal), December 7th, 1846.
48 Chapter 5, pp.123-125 [2].
49 Ibid., p.149.
50 Ibid., p.145, [16].
51 Ibid., pp.124, 139 [4].
52 Ibid., p.150.
53 The use of the term "poison" (phit) here is of interest because of the similarities in its use with the
outside the body] works to whip up waves which dash against the shore and the mountains. The blood which is beaten up causing both men and women to die is similarly affected by these lom. The blood then becomes a foam, as if the person were roasted by a fire, one hundred or one thousand times over. This creates a vapour which is wafted upwards by means of the power of [internal] wind (wayô) to the heart (thai), gall bladder, liver, and spleen. The blood then becomes a foam, as if the person were roasted by a fire, one hundred or one thousand times over. The mention of "heat" in this paragraph is of interest since, at least in Northern Thailand, it is thought that during menstruation a woman emanates a "dangerous and destructive heat", which therefore makes sexual intercourse taboo. Conversely, during pregnancy when blood is retained in the womb to nourish the foetus, external heat is believed to endanger mother and child. Sexual intercourse is permissible during pregnancy, but becomes taboo again during the post-partum 'lying by the fire' (yû fai) where heat is utilized to dry the womb of remaining blood.

Beliefs regarding the polluting nature of menstrual blood are common to many cultures, but they are particularly prevalent in the cultures of the Indian subcontinent and Southeast Asia. In both Javanese and Malay culture menstrual blood is considered to be polluting. In Burmese culture, menstrual blood has similar connotations to that which it has for Thais: the vagina is thought to be polluting and dirty, and therefore repulsive to sight and touch, and contact with menstrual blood is also believed to be polluting, threatening the hpoum, the source of a man's strength and power. As in Thai sexual culture a man should not assume a spatially inferior position to a woman. In Hindu culture there are similar taboos relating to menstruation which may be even more strongly

Malay term bisa. Both words are apparently derived from the Indic viša, meaning "poison" (PTS, p.638). Wilkinson (1959) defines bisa as "blood poison", giving examples, such as the venom from snakes, insects, and infected wounds, which accord with the Thai use of the term (vol.1, p.145). However, as Laderman (1981) has shown, the usage of the word bisa is rather more broad, with strong connotations of "power", and fitting into a complex of beliefs about food (pp.483-488).

Remembering that in Thai tradition the heart was associated with the mind and emotions. The term thai appearing in the text is an abbreviated form of haru' thai, derived from the Sanskrit term for heart, hridaya (MMW, p.1302).

54 PS:2:86.
56 Ibid.
observed than those in Burma. Although illness may be believed to result from their transgression these beliefs generally do not appear to extend as far as incorporation into the theory contained in the medical texts where the role played by blood is primarily as one of the 'liquid elements' of humoral theory.

Much has been written about the reasons for the attachment of beliefs regarding power and danger to menstrual blood. According to Douglas this concept of power and danger reflects the necessity to mark the boundaries between named categories, and account for the anomalies which inevitably result from arbitrary classifications:

...all margins are dangerous. If they are pulled this way or that the shape of fundamental experience is altered. Any structure of ideas is vulnerable at its margins. We should expect the orifices of the body to symbolise its specially vulnerable points. Matter issuing from them is marginal stuff of the most obvious kind. Spittle, blood, milk, urine, faeces, or tears by simply issuing forth have traversed the boundary of the body.

One of the problems with this type of structuralist approach, as with the question of anomalous animal categories discussed previously, is that there is considerable variation regarding which marginal substances are associated with taboos. As Ohnuki-Tierney points out, the symbolic meaning which attaches to something is not derived simply from its marginal status. Thus not all cultures regard menstrual blood as polluting, and not all "marginal matter" need be avoided. A comparison of beliefs relating to the "power" of menstrual blood with those relating to other types of bodily excretions shows that this is also the case in Thai culture.

Of the bodily excretions, it is to menstrual blood that the greatest taboos are attached. While other types of excreta, such as faeces (khi), urine (yiaw), nasal mucus (khi mük), eye secretions (khi tā), and ear wax (khi hū), are considered to be "dirt" and may

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62 Gould-Martin (1978) gives the example of a Chinese illness category ch'ung-hung, literally meaning "offend red", believed to result from intercourse with a new mother or menstruating woman (p.42).
63 See Chapter 4, p.93, and fn.81.
65 Chapter 3, pp.50-51.
67 Douglas (1966) cites the example of the lack of beliefs regarding menstrual pollution amongst the Walbiri of Central Australia (pp.141-142).
68 For example tears, as Douglas (1966) herself points out (p.125).
be regarded as having "power"," they do not appear to be accorded the same symbolic "power" as menstrual blood. Further, fresh blood from a high-ranking male, as seen above in the case of Narai's bloodletting, which should by this logic be "cleaner" than other marginal substances (i.e. it is only defacto "dirt") appears to be regarded as more polluting than these other excreta par excellence? To ascribe Thai beliefs regarding the danger of menstrual blood simply to its status as a "marginal substance" provides an explanation which is unsatisfactory in either of these cases.

There is clearly a relationship between heat, blood, and sexual intercourse for which current theories provide an inadequate explanation, since, although they explain the link between "power" and menstrual blood, they explain neither why heat should be considered dangerous nor its effects on the blood. A more exhaustive study of the symbolic role of blood in Thai medicine is clearly warranted, and regrettably beyond the province of the present work, since it would entail the correlation of much ethnographic data with an analysis of texts from various Tai groups. A possible beginning for such a study might be to explore the role of menstrual blood as prototypical bodily excretion: other types of blood thus become "dangerous" by the processes of metaphoric association which were discussed in an earlier chapter.

6.3. Significant Numbers and the Categorisation of Krasai

A second major feature of the classification of krasai is the number of divisions specified in its description. As seen from Table 2, the texts divide krasai into two main types, consisting of eight and eighteen components respectively. The Thai texts are often precise as to the number of constituents in illness classifications, and the specification of the krasai categories is indicative of a pattern common throughout the medical texts, and in other literature related to medicine and the body where certain numbers are favoured above others. Among the most favored of these "auspicious" numbers are those which are

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69 As will be seen in Chapter 7, this may be a reason for their inclusion in medical prescriptions.

70 Interestingly, with the exception of urine, these other types of bodily excretions take the prefix khi, which used alone refers to "faeces", followed by the name of the body part. In these cases the extension of the term khi is apparently metaphoric. In modern Thai menstrual blood may be either named euphemistically with the term pracham du'an, which is equivalent to the English "periods", or with a term probably borrowed from English, men. In the traditional medical texts the word "blood" (lu'at, or lōhii) is used, and it must generally be inferred from the context that it is menstrual blood which is intended.

71 That is to say, while blood lost in bloodletting is "marginal" by virtue of its being outside the body, it is not excreted from bodily orifices like other "marginal substances".
multiples of four: reference is made to the 'thirty-two' body parts. The Buddhist precepts followed by laymen are eight in number, as are the number of compass directions, and the constituents of several lists of illnesses such as those of puang ('cholera') and pradong ('skin afflictions').

The other number widely employed in the Thai medical texts is the number one hundred and eight, being given for example as the number of "wind" illnesses. This number also appears in the Phrakhamphri krasai, in the description of the heat element krasai, where it specifies the amount of ingredients to be used in a prescription for treatment. In these contexts it appears that the number one hundred and eight is not intended to signify that there are literally one hundred and eight types of these particular illnesses, or that this is the exact amount of an ingredient to be used. Rather, it is a metonym which signifies "many". This is also its meaning in other non-medical contexts, such as in the topknot cutting ceremony where one hundred and eight varieties of blossoms are specified, and in everyday language, as in the titles of books (108 Professions) and radio news (Khâv rôi pâet). In certain contexts, though it still serves to symbolise the greatness or vastness of a thing, the number one hundred and eight may nevertheless be applied literally. For example, the Bangkok 'city pillar' (lak mu'ang) measures one hundred and eight 'inches' (niw) in height.

This phenomenon of numerical metonymy involving multiples of four is almost certainly of Indic origin, where its occurrence in literature is widespread, particularly in the texts of Tantricism, and dates back to the ancient past. The numbers one hundred and

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72 Heinze (1977), p.92. However, the total number of the types of each of the four 'elements' making up the body is given as forty two. See Mulholland (1979a), p.90.
74 PTS, pp.712-713.
75 PS:1:47.
78 PS:2:214.
79 Field notes, Nakhon Pathom, May-June 1984; PCR, p.671. Terwiel (1980-81) notes that for the Ahom, and in Ancient Tai religion, it is the number one hundred and one which appears to have signified "many" (vol.2, p.62).
80 Gerini (1895), p.72.
81 Rôi pâet ãchip.
82 'Miscellaneous News'. I am grateful to Dr A.V.N. Diller for this observation.
83 Kluaimai (1982), p.22. This is the "new" lak mu'ang erected during the 4th Reign.
eight and sixteen occur frequently in Hinduism\textsuperscript{85} and Ayurvedic medicine recognized eight divisions,\textsuperscript{86} which were adopted by Buddhism.\textsuperscript{87} The number eight occurs elsewhere in Buddhism, for example as "the Noble Eight-fold Path".\textsuperscript{88} The number one hundred and eight is also common in Buddhism, this being the number of beads in the rosary,\textsuperscript{89} klesas\textsuperscript{90} recitations, practices, and strikes of a bell, and it is still significant in the title by which one addresses a saint: Sri Sri 108.\textsuperscript{91} The significance of the figure one hundred and eight has been given various explanations ranging from it being a multiplication of the twelve months by the nine planets to the result of an equation based on another auspicious number, three, as follows: \((3+3)(3+3))3=108.\textsuperscript{92}

Gonda has suggested that the frequency of numerical argumentation and classification in Hinduism is due to the "well-known Indian propensity to classification, speculation, and categorizing".\textsuperscript{93} However, since, as was discussed earlier in this work, classification is an act common to all cultures, a more fruitful approach might be to question why a culture shows a preference for a particular type of symbolic classification.

draws attention to Aristotle's use of the number 10,000 to indicate "many" (p.91), a meaning also present in Mandarin. In Mandarin another number, 250, also counts as an insult (Dr V. Dyer, personal communication, May 1988), and the number 4 is considered unlucky, being similar in sound to the word for death. The numbers 3, 5, and 7 are significant in Chinese medicine (Wong and Wu (1936), pp.20-21)). The number 7 is also significant in both Khmer (Porée-Maspero (1962-1969), vol.3, p.690), and Lao medicine (Pottier (1972a), p287).

Gonda (1977), p.131.,

According to Takakusu (1970) these were: (1) the treatment of sores, divided into two types, inward and outward, (2) illnesses above the neck, that is on the head and face, (3) diseases of the body, that is below the neck, (4) demonic disease, the attack of evil spirits, (5) the agada ('antidote', MMW, p.4) medicine, which is medicine for countering poisons (corresponding to no. 6 of the Ayurvedic list), (6) the diseases of children, from the embryo until the age of sixteen, (7) the means of lengthening one's life, the maintenance of the body so as to live long, while "invigorating the legs and body", and (8) methods of invigorating the body to keep them strong and healthy (pp.127-128.).

Heinze (1977), p.98.
Skt.: "pain, affliction, pain from disease, anguish" (MMW, p.324).
Ibid.
The reasons for the adoption of a predominately numerical classification, rather than the other types discussed in an earlier chapter, are not readily apparent, and the speculation to which the scope of this present work is limited would not do justice to a subject deserving of careful examination. The fact that the Thai data reflect a utilization of several modes of classification tends to support the hypothesis that the adoption of a symbolic classification is an arbitrary matter, however to establish this would necessitate the comparison of data from different areas of Thai culture, in addition to the field of medicine to which this study is confined.

The second group of krasai comprises eighteen illnesses, a number which has not previously been encountered in Thai medical texts. This number is also not common in the texts of Indian medicine. However, as Obeyesekere has noted, the number eighteen occurs in the Sinhalese "ritual of the Sanni demons", and in medical texts where it is the number of sanni ("delirious states", or 'convulsions")94 The origins of the Sinhalese texts were traced by Obeyesekere to medical texts in Malayalam, a South Indian language, where, in addition to eighteen types of sanni, there are eighteen types of other illnesses such as unmada ('lunacy'), and apasmara ('epilepsy').95 The number eighteen is said to be "not derived from a Sanskrit source, but from a prose medical text written in Malayalam."96 Apart from the symbolic interest, these data also have implications for the determination of the origins of the Indic component of Thai medicine, since they lend support to the theory of a South Indian origin of the krasai text.97

Another feature of the use of numbers in the classification of illnesses in Thai texts is that the lists are often unfilled, or overfilled. That is, while a fixed number of illnesses is specified, this is frequently not matched by the number of names or descriptions actually provided. For example, in the Phrakhamphi chantasat twelve expansion afflictions are specified, but only ten are provided,98 the Khamphi chawadān specifies six poison lom
but provides twelve, and a Northern Thai text reduces ten specified illnesses to seven. As we have previously observed, the krasai texts also contain discrepancies of this nature, and these would appear to be due to the loss or addition of sections of the text subsequent to its compilation. The perpetuation of such characteristics in further editions of the text would indicate either (1) its compilation by a person unconversant with the underlying theories, (2) an intention to produce a faithful copy of the text in its fragmentary form, or that (3) to the compiler there was no necessity to correlate the contents of the text with its form. That is, the fact that a certain number of illness categories were recognized was of greater importance than their contents. Accordingly, information would have been classified on the basis of the number of categories to be filled, rather than by means of other criteria. The most important aspect of the classification was that the final number of illnesses match a "significant" number.

It is quite likely that all of these possibilities may have played a part in the evolution of the krasai texts which survive today. Certainly much of the transcription of texts was undertaken by scribes who were unversed in medical knowledge. The second possibility is unlikely, since it is clear that the texts were changed by the addition of additional prescriptions at some point in time. The final possibility is in accordance with the role played by symbols in the belief systems of other cultures, and therefore should be kept in mind during the following discussion of the names of the illness categories.

6.4. The Names of the Categories of Krasai

The names of the illness categories will be discussed in two sections: [1] element-based, and [2] spontaneous, reflecting the major divisions of the text, although, strictly speaking, some of the types in the second section are also named after the elements.

6.4.1. "Element" Krasai

It will be recalled from the discussion in Chapter 4 that in Thai medicine there are two humoral theories of Indic origin, a tertiary theory and a quaternary theory. The first of these theories involves the elements 'wind', 'heat' (manifested as 'bile'), and 'liquid' (manifested as 'mucus'). In the quaternary theory the four elements, 'wind', 'heat', 'liquid', and 'solid', are involved. The Phrakhamphi krasai contains no explicit references to the

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99 PS:2:146-147.
100 PLTSP, p.46 2:3.
101 See Tambiah (1968) for an account of literacy in a Northeastern Thai village.
tertiary theory of Ayurvedic medicine, utilizing only the quaternary theory of Buddhism in its theoretical explications, however from Table 2\textsuperscript{102} it will be seen that three of the four elements are repeated both within the first "element" type of krasai, and again in the "spontaneous" type. These three elements happen to be those which correspond to the the tridośa, that is to the elements 'heat', 'liquid', and 'wind'. The Phrakhamphī krasai, while appearing to be based on a quaternary classification of illness, may therefore also implicitly recognize a tertiary classification as well. This may provide at least a partial explanation for the appearance of the "elements" in both of the major divisions of krasai.

Five of the eight entities within the "element" type represent a further subcategory, that of klōn. As we have seen, in the Phrakhamphī krasai the term klōn is generally applied to afflictions affecting the reproductive or urinary tracts. Of the four types of klōn named according to the elements, only two, the liquid and heat types, have symptoms which bear any relationship to those which would be predicted on the basis of the "four elements" theory. With respect to the remaining two types, the 'solid' type has symptoms affecting hard structures, but also includes symptoms such as pain, dizziness, dimness of the sight, and phlegm, which could just as easily characterize afflictions involving the other elements. The 'wind' type similarly includes symptoms which could be attributed to the 'heat' element.

The other three members of the first division of krasai, apart from their correspondence to the tridośa are also distinguished by the lack of an accurate or unique description in the texts. Their descriptions either duplicate those found elsewhere under different headings, such as the 'heat' or 'wind' types, or else may be simply omitted altogether, as is the case with the 'liquid' type. Of the two hypotheses which were considered above to be the most likely explanations for these inconsistencies, the first would appear to be inadequate in this case: it is unlikely that the absence or repetition of sections of the text is an artefact of the destruction or rearrangement of the material originally included, since although this may account for the missing entry, the two entries which are described are much fuller than those which appear in the highly inconsistent latter part of the text and are sequentially correct.

The second explanation for these inconsistencies, that the three entries have been included simply to fill the category out to a full eight entries, provides a more satisfactory explanation: it is the completion of an auspicious eight which is the important fact, with an underlying common symptomatic similarity being a secondary consideration. In view of the prevalence of such symbolism in the texts, this should be taken seriously into consideration. Similarly the necessity to employ all the "elements" in the utilization of the tertiary and quaternary classification systems: for example, using the tertiary system, if the

\textsuperscript{102} Chapter 5, p.152.
'heat' and 'wind' types of a particular illness exist, it follows that there should also be a 'liquid' type; if a manifestation of the illness cannot be found which corresponds to this type, then the category is included just the same. The "element" theories thus provide blocks of illness types which, as in the second major group where the 'heat', 'liquid' and 'wind' types also occur, can be slotted in amongst other types of the illness. Seen from this perspective, the first group of krasai illnesses consists of the four elements, the three tridoṣa, and, to complete the auspicious "eight", one more type, thaw, or, in the case of the Wat Pho inscriptions, hin. The names of these latter two types, seemingly out of place in this context, have more in common with those of illness categories in the next section to be examined here, "spontaneous" krasai. Elsewhere in this collection of texts, however, krasai thaw is given as an alternative name for krasai lōhit,¹⁰³ which fits better with the other "elements" in this section.

6.4.2. "Spontaneous" Krasai

The spontaneous krasai are eighteen in number, which as noted previously, may also regarded as symbolically important. Although three types are named according to Indic theory, the names of the remaining categories in this section do not resemble, either in name or symptoms, Indic classifications. While it is tempting to suggest that these represent indigenous Thai categories, it is more likely that the various names of illness taxa in this group may simply represent the translation of Indic terms into Thai. If this is so, then this instance is significant, for in other texts, even those belonging to a more rural tradition¹⁰⁴ where, to a certain extent, the introduction of indigenous terms would be anticipated, there is a tendency to retain Indic illness names, at least in the titles of descriptive passages.

A more likely explanation for the general dissimilarity between the names of categories in the spontaneous section and those of the previous "element" krasai may be provided by a closer examination of the names themselves. As noted elsewhere, Tai folk taxa are generally named by the utilization of "outstanding characteristics of the organism's natural history".¹⁰⁵ This is characteristically polythetic, for example in zoological classification, where features employed in naming may include details of the creature's habitat, colour, food, quality as food, folklore, shape, sound, habits, and taste.¹⁰⁶ This also holds true for the naming of the different types of spontaneous krasai:

¹⁰³ PS:2:166.
¹⁰⁴ For example those of Thai Lanna. See PLTSP for example.
¹⁰⁵ Chamberlain (1977), pp.35-36.
¹⁰⁶ Ibid.
of the eighteen types of spontaneous krasai, three, as we have seen, are named after the "elements", six are symptomatically descriptive, for example 'overflowing', 'vomiting', and 'lumpy', and the remaining nine are metaphors, which, with the exception of the 'iron' and 'rope' types, are animal-related. Thus the naming of the spontaneous krasai, although incorporating some Indic terminology, bears a closer resemblance to other types of Tai classifications.

The utilization of metaphor in the naming of illness taxa in this section is also in striking contrast to both the naming in the "element" section, and within the spontaneous section. As shown in Chapter 3 of this work, the use of metaphor in naming is in many cultures an important part of the cognitive processes associated with illness and healing. The occurrence of this phenomenon in Thai medicine is therefore significant. Of particular interest is the use of animal-related metaphors, for in animals may be symbolically invested much of the burden of rationalizing those phenomena which defy the human intellect, pre- eminent among which is illness. As Tambiah has written:

...animals are effective vehicles for embodying highly emotionally charged ideas in respect to which intellectuality and affectivity cannot be rigidly separated as representing human and social modes of conduct. If we are to answer adequately the question why man has a ritual attitude to animals, why values and concepts relating to social relations are underpinned to rules about eating animals, we have to inquire for the society in question why the animals chosen are so appropriate in that context to objectify human sentiments and ideas.107

Despite the reservations expressed earlier in this work regarding the extent to which generalisations concerning edibility might be related to the classification of animals, the basic point is valid. For this reason a closer examination of the animal types employed in the naming of krasai would be warranted here.

The question of the interpretation of the symbols employed by a given culture presents difficulties for the researcher, and the present study is additionally handicapped by the historical perspective, since it is necessary to construct a model which explains Thai beliefs regarding animals for the period during which the medical texts were compiled.108 Many beliefs will of course have remained the same since that time, however there remains the problem of distinguishing between these and those that have changed, and it is probable that in the following interpretation the symbolic importance of some features will be over, or underplayed. In so far as this is possible, given the nature of the material with which we are working, the method outlined by Turner will be adopted in the

108 See also the previous discussion of the utilisation of synchronic data in Chapter 1, pp.7-10.
placement of the symbols in context. That is, the operational meaning (the meaning in the use of symbols) and the positional meaning (or meaning in relationship to other symbols in a totality) will be examined, rather than relying simply on the exegetical meaning (the meaning as explained by the users of the symbol) which is the variable in the present case. In practice this will involve the determination of the salient characteristics of the animals concerned, using both contemporary Thai, as well as comparative Tai data, where available, and then the comparison of these with those features highlighted by the text.

The types of animals for which the different krasai are named possess certain features in common. These are of two general types which are linked together: their edibility, and their habitat. Although, as Chamberlain stresses, the belief in what is edible varies markedly within cultures, and even between households, certain cultural generalizations can be made regarding diet. In Thai culture, the class of water-associated animals (sat nām) constitutes much of the everyday diet. With the exception of 'buffalo-tongue' krasai and 'termite' krasai the 'animal krasai' belong to this category. The 'crab', despite being ambiguous in that it is sometimes regarded as an 'insect' (māeng, malaeng), is also classified as a 'water creature'. In addition to inhabiting an aquatic environment, the creatures which designate krasai also have the ability to move between environments. In the case of the 'tortoise' (taw), and the 'crab' (pū), this is readily apparent, however the 'catfish' (plā duk), 'eel' (plā lai), and 'doctorfish' (plā mō), also have the ability to survive out of water. The 'catfish' is capable of leaving one water system and wriggling its way to another, the 'doctorfish' may similarly leave the water, and has been known to climb trees, and the 'eel' may bury itself in mud to

112 Ibid., p.457.
113 Clarias batrachus, L., Clariidae (Davidson (1975), p.58; McF, p.331).
116 Davidson (1975), p.74. See also Pallegoix (1854), p.193. The edibility and climbing prowess of the 'doctor-fish' are both illustrated in a folk story related by Kingkeo (1968). The story concerns the exploits of the prankster Ai Tone who has a sexual encounter with a girl in whose vagina a "climbing-fish" had become lodged. The biting of this fish had been the cause of a certain amount of physical distress for a number of previous lovers. Ai Tone (having presumably survived the encounter unscathed) succeeds in removing the doctorfish with a hook baited with a cotton seed. Not knowing what to do with the fish, he roasts it to keep. Guests are coming and the roasted doctorfish
survive the drying up of streams or ponds.

The other two members of this category, 'buffalo-tongue' and 'termite' may also be accommodated in this schema, since they both involve two environments: the buffalo tongue moves within the wet internal medium of the mouth; and the termite, though not occupying a moist medium, does dwell within nests built either above or below the ground, and therefore, if one considers the important criterion to be internal as opposed to external habitation, fits in with the other members of the class.

Descriptions elicited from Central Thai informants emphasized another characteristic which the creatures whose names are employed in the naming of krásái have in common, that of 'kinesis'. In other words, they possess distinctive types of movement. The 'wriggling' of the eel, catfish and doctorfish, the slow shuffle of the turtle, the scuttling of the crab, the crawling of the termite, and the strong, muscular action of the buffalo tongue were all regarded as distinctive features.

In categorizing krásái the adoption of such names stresses an internal-external, or at least a wet-dry dichotomy, a movement within those media, and a compatibility with the body by virtue of edibility. Taken together, an image is generated of illness caused by the passive invasion of the body by a creature capable of movement between two media, whose presence is manifested by kinetic sensations of different types. If this is the case, that is that Thais may envisage illness as the entry into the body of a creature of some sort then it would anticipated that this would be supported by the symptomatic descriptions in the text. This is indeed the case, and some types of krásái are, as we have seen, spoken of in terms consistent with the presence of an animal inside the abdomen. For example, the 'crab', 'eel', 'doctorfish', and 'catfish' types, are described as having the movements of the creatures they represent. Also the 'eel' type has an appetite for the food ingested by the sick person, and the 'doctorfish' type is said to eat the organs, specifically the liver (tap) of the patient.

The occurrence of 'animal categories' is not unique to krásái: other Thai illness taxa appearing in PS also take their names from animals. For example sāng ('children's

...is the only fish available, so it is used to make a curry. The result is a delicious aphrodisiac, and it affects first the cooks who taste it, then the owner of the house, guests, district court officer, and finally the Governor of the province (pp.308-310).

117 The common swamp eel, Fláta alba, Zuiew, Monopteridae (McF, p.953; Davidson (1975), p.89).
118 The prominence of a "wet-dry" dichotomy has been observed in the classification systems of other ethnic groups of the Southeast Asian region. See Manderson (1981), pp.510, 518 (fn.12), (1986), p.134; and Anderson and Anderson (1975), p.146.
disease\(^{119}\), has 'cow' (wua, khō), 'buffalo' (khwāi), 'horse' (mā), and 'elephant' (chāng) types,\(^{120}\) and puang ('diseases incident to indigestion', 'cholera\(^{121}\)\), has eight types\(^{122}\) including 'snake' (ngii), 'monkey' (ling), and 'baby bird' (liūk nok).\(^{123}\) Another illness taxon, pradong (a type of skin complaint) also has eight types, all but one of which named for animals.\(^{124}\)

In these other taxa, despite the resemblance to krasai through being named after animals, there does not appear to be an emphasis on the description of the illness as behaving like an animal, with which some types of krasai are accredited. The repetition of category names and the lack of descriptive passages supporting them, tend to argue against any further similarity with the krasai categories beyond that of bearing animal names. However, elsewhere, in Thai language and in spirit belief, there is strong evidence to support the notion that illness was conceived by Thais as resembling the entry of an animal into the body.

The general classifier for animals in Thai is tua which was, and still is, used by many Thais to classify illnesses.\(^{125}\) Tua is also taken to generally classify most objects possessing legs, thus its use in connection with illness serves to emphasize the nature of illness as a living entity, or something resembling a living entity. As mentioned in Chapter 4, one of the general terms for illness, phayāt, may also be used to refer to worms or

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\(^{119}\) See previous discussion of this term, Chapter 4, pp.96-103.

\(^{120}\) PS:1:91, 113.

\(^{121}\) McF, p.513.

\(^{122}\) See earlier discussion of the significance of numbers, pp.164-169.

\(^{123}\) PS:1:28. The full eight types of puang are: (1) 'snake', (2) 'monkey', (3) 'wind' (lom), (4) 'stone' (siā), (5) 'baby bird', (6) 'blood' (lu'at), (7) 'water' (nām), and (8) kōt (possibly a type of tree).

\(^{124}\) McFarland defines pradong as a rash or skin disease characterized by excessive itching or burning, a form of eczema (McF, p.499), however it would appear to refer to a wide range of skin affictions. The commonly recognized types of pradong, include a 'blood' (lu'at) and 'wind' (lom) variety (NMT, p.175; PCR, p.496); the eight, types listed in PS are: (1) 'ant', (2) 'elephant', (3) 'buffalo', (4) 'cow', (5) 'monkey', (6) 'cat', (7) 'rhinoceros', and (8) fai ('heat') (PS:1:186-187). These are said to result from khai kān (i.e. kānlarōk. See Chapter 4, pp.2-3). In the North-East dialect this illness is known as pāndong, which as Wijeyewardene (in Khamman (1982)) states, literally means "the mark of the forest" (p.89-90). Pān usually refers to naevi rather than affictions involving inflammation (McF, p.524.).

\(^{125}\) Conklin (1981), p.130-132; Tambiah (1969), p.457; Sukpracha (1983), p.361. Tua may also mean 'body' or 'torso', as in the term for 'towel' (phā chet tua which literally means 'cloth to wipe the body') and 'agent', in the sense of someone (or something) which effects actions on behalf of some other person or thing, as in tuathāen ('representative').
parasitic afflictions and intestinal parasites may be may be referred to as tua phayāt. The animal-like qualities of illnesses may also be enhanced by the use of the classifier tua in conjunction with the names of other illnesses, as for example in the reference to tua krasai in the Phrakhamphi krasai. As will be discussed in Chapter 7, the medicine for krasai is similarly referred to in terms evocative of a living creature.

The possible links between the illness category sāng and certain illnesses which the ancient Chinese believed to be caused by worms were discussed earlier, in Chapter 4. The idea that illness may be caused by the entry of worms into the body may also be seen elsewhere in Thai medicine, for example in the cause of dental caries, where it was said that mīēng kin fan (literally 'insects eat the teeth'). This concept, still prevalent today in some areas of Thailand has also been observed among the Shan as well as in other cultures, for example that of the Malays, and the English at the time of Shakespeare. Campbell attributes the prevalence of this belief in England to the influence of Arabic medicine. It is likely that the belief that worms cause dental caries arose from the observation that, owing to the hardness of the surface enamel of teeth, advanced decay may reveal only a "pinpoint" surface cavity, concealing the inner destruction, similar in appearance to the way in which fruit is spoiled by insects.

The belief that illness may be caused by the entry of worms into the body is of

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126 Chapter 4, p.82.
127 PS:2:200.
128 For example tua yā and chāp kin etc.
129 Chapter 4, p.99.
130 Mulholland (1979a.), p.90.
131 See for example, the article 'The dentist of the Sanām Luang' in Thai Rat, 6th November, 1983.
133 According to McFarland, the latex of the rak tree was believed by the Malays to kill the worm that causes toothache (MTP, p.700).
134 In Much Ado About Nothing (3: 2: 25) Leon says: "Where is but a humour or a worm?", a reference to Benedick's toothache which is both metaphorical and literal. In Vpon Bartholome, Stephen Batman says of toothache: "The cause of such aking is humors that come downe from the heade,...Also sometime teeth be pearced with holes & sometime by worms they be changed into yellow colour, green, or black." (In Humphreys (1981), p.150).
135 Arabian Medicine, vol. 1, pp.203-204. According to popular Arabic medical belief, worms were also believed to be the cause of nymphomania: in The Book of the Thousand Nights and a Night a case of nymphomania is treated by the removal of two worms, one yellow, the other black, from the vagina by means of the vapours from a steaming potful of "virgin vinegar and a pound of the herb pellitory called wound-wort" (Burton (1885), vol.4, pp.298-299).
course not without foundation. Evidence of parasitic infestations is often readily apparent in the faeces, and some nematodes common in Southeast Asia, such as the "guinea worm" may burrow beneath the surface of the skin, and be visible through surface ulcerations. A case with symptoms consistent with those of guinea worm is described in the novel Khrū bān nōk ('Upcountry Teacher') where an elderly woman suffers intermittently from abdominal pain and general aching of the body, which is originally diagnosed by the village doctor as pāndong. Later, after much discomfort, pain, and weight loss, a worm bores its way out from her knee, which the teacher Piya extracts and preserves to show his students.

The concept of illness in terms of the invasion of the body by animal-like agents also has strong parallels in Tai 'spirit' beliefs. Thai folklore maintains that certain types of spirits (phi) may enter the human body and consume the organs. Thus the phi phāī, or 'vampire spirit' of Northern Thailand and Laos, lives off the blood of an individual and saps his energy, and the phi pōp, prevalent in the same region, eats the internal organs, especially the liver. The behaviour accredited to this latter spirit has strong affinities with the behaviour of the 'doctorfish' krasai in the text, which, it will be recalled, is also partial to 'biting at the liver'. It seems very likely that the description of illness in terms suggestive of animals may have had a basis in Tai these beliefs relating to the behaviour of spirits. As will be seen in the following chapter, this is supported by some of the terms and techniques which are employed in the treatment of illness.

136 Also spelt pradong. See above p.166.
137 Khammān (1980), pp.109,158. Despite the strong support lent the belief that worms are responsible for illness by the readily observable signs of parasitic infestations, it would appear that the Arabian medical theorists did not give credence to this theory. In one case they persisted in the belief that the affliction dracontiasis, infestation by the nematode Dracunculus medinensis which is frequently subcutaneous (Maegraith (1980), pp.103-108), was in fact not a worm, but a vein or a nerve (Ullmann (1978), pp.81-83). Although in the above quotation from the One Thousand Nights and One Night the existence of a black worm is attributed to sexual congress with a negro, and the yellow to congress with an ape, the choice of these two colours is more suggestive of an integration of the black and yellow bile of the humoral theory of Arabic medicine (See Ullmann (1978), pp.58-59) with folk belief.
138 Halpern (1963), p.194. Similar types of phi are recognized by other Tai groups, for example the Red Tai of Laos who believe that the phi-phā, or phi-xan-phu feast on the blood of injured people (Boutin (1938), p.77).
6.5. Summary

In summary, an analysis of the illness category *krasai* shows evidence of three ways in which its classification is linked by imaginative processes to the Thai belief system and to aspects of the immediate environment. These are: [i] the differentiation between symptoms on the basis of symbols which have widespread cultural importance; [ii] the utilisation of numerical metonymy in the sub-division of categories; and [iii] the use of metaphor, especially animal-related, in the naming of illnesses.

In addition to sensory perceptions common to most cultures, in the recognition and differentiation between symptoms of *krasai* emphasis is placed on their spatial displacement within the body, and temporality. In both these aspects, the classification allows a metaphoric association to be established with other symbols which are important in Thai culture. Thus the binary distinction between left and right, which is explicitly related to female and male in the text, is also common in many other areas of Thai culture. Similarly the upper-lower distinction between the symptoms of *krasai* which is linked to the phases of the moon is also fundamental to Thai cosmology. In the light of these findings, the prominence of blood in the descriptions of *krasai* also becomes more understandable, since it too plays an important symbolic role in Thai culture.

Another way in which the classification of *krasai* is linked to Thai cosmology is by the use of significant numbers, chiefly multiples of four. Thus in the texts the numbers four, eight, and one hundred and eight, frequently occur. Eighteen is also a symbolically important number appearing in the *Phrakhamphi krasai*. There are two processes by which these numbers may become significant. The first is metonymic, where a small number signifies "many", as in the case of one hundred and eight. The second is metaphoric, as in the use of eight and eighteen, where the number symbolises "power", most probably because of their importance in the Indic tradition.

Metaphor also figures prominently in the naming of illnesses. The names of the four "elements" used in naming most types in the first sub-category of *krasai* are of metaphoric origin. As mentioned in an earlier chapter, though there are literally "earth", "wind" "fire" and "water" categories, in Indic theory they in fact refer to the essential qualities of these phenomena, that is, 'solidity', 'movement', 'heat', and 'liquidity'. There is a further dimension to the usage of these names in the classification of *krasai*, which may be tied to the fact that they are four in number, which is that the elements appear to be used as "blocks" in naming. They readily fit into a classification scheme in which divisions are based on multiples of four. However, where a classification is based on other significant numbers, such as eighteen, there may be problems in adaption. As was argued, this may help to explain apparent contradictions or discrepancies in the descriptions of some types.
of krasai. In any case, though an illness may not always have symptoms which fit all four categories, they may nevertheless be included to help fill out the number of categories to an auspicious number.

Two observations may be made about the use of animal categories in naming the different types of spontaneous krasai. The first of these is that the names are drawn from the variety of creatures inhabiting the familiar Thai village environment. Thus, for the most part, they represent creatures which are actively sought after as food, and whose habits are well-known. Therefore, in the light of what has been said in Chapter 3, it might be reasoned that in ascribing to the illness such a name, the unknown and potentially life-threatening is also incorporated into the realm of the familiar.

The second observation follows from the first, and it is that, having named the illness for a creature, predictions may also be made about its behaviour. In so-doing a link is established with a body of Tai folklore which seeks to provide explanations for the onset of illness, that is the belief that illness is due to the malign influence of spirits. Similarly, certain therapeutic pathways are also opened, which will be considered in the following chapter. Both this and the preceding observation would support Kleinman's contention\textsuperscript{140} that the identification of an illness is the initial therapeutic act, since in both cases an attempt is made to provide explanations for what Thais, at least in the time at which the texts were compiled, regarded as two equally important aspects of illness: what is happening, and why.\textsuperscript{141}

Aside from a consideration of the importance of these three aspects, several other observations may be made with respect to the classification of krasai. These include the importance of certain types of symbols and other diagnostic categories in the classification of krasai, and the affinities which it has with other types of folk classifications. However these points are subsumed in a more general observation, which is that with krasai we are dealing with at least two different systems of classification. One of these, represented by the upper part of the list presented earlier as Table 2, is clearly Indic in origin, being based on the theory of the elements. The other, lower, half of the chart has features, primarily

\textsuperscript{140} See Chapter 3, p.64.
\textsuperscript{141} As Maclean (1971) points out, the emphasis given these varies widely between cultures and "the 'real' reasons for illness may be divined rather than defined" (pp.26-28); the observation made by Reid (1983), that to the Yolngu of Central Australia "any explanation of a sickness or death which does not identify a proximate or ultimate cause is incomplete" illustrates this well (p.55). The compatibility of the two aspects from a therapeutic point of view is also exemplified in the comment made by a young Yolngu woman in response to a question as to the best treatment for nephritis: "Go to a marnqggitj [Yolngu 'healer'] to see what caused it and then go to a [western] doctor for medicine" (ibid., p.97).
consisting of the names of the "terminal" illness categories and their descriptions, evocative of Thai folk, or village beliefs. The general form of the krasai classification is apparently also Indic in origin, utilizing Indic names and numerations. At the level of diagnosis and illness description however, there are strong affinities with indigenous mainland Southeast Asian beliefs such as spatial concepts, the menstrual blood taboo, and the preference of certain illness-causing spirits for consuming the entrails of their victims. Though such general beliefs may also be prevalent in the Indian sub-continent, they are not conspicuously included in Indic medical texts, or differ in forms. The synthesis of these different methods of diagnosis is exemplified in the meaning of the word krasai, since, although Indic in origin, its meaning in both the texts and among Thai villagers differs from the literal meaning of "emaciation".

In respect to this inclusion of additional systems of classification, krasai differs markedly from the other types of folk classifications discussed in Chapter 3. In the Tzeltal botanical classification studied by Berlin, some Spanish names were employed, mainly in the labelling of exotic species, although in some cases they replaced in part or in full, or were compounded with indigenous names to produce compound primary lexemes. However this does not appear to generate the complex classification problems occasioned by the phenomenon when it occurs in the medical context. The resulting situation in Thai medicine, and indeed in any pluralistic medical setting, is that a number of what Mulholland has termed "contrasting diagnostic alternatives" are presented when interpreting the symptoms of illness. Thus in the Thai court doctors' ordering of krasai in a taxonomic form, as summarised in Table 2, there is the possibility that a given set of symptoms may occur simultaneously on both upper and lower sections of the table. That is, the membership of categories need not be exclusive. Such "taxonomic looseness" is a feature of Thai classification in other domains, for example that of pain, and it has been suggested that rather than indicating flaws in the system, it is a fundamental attribute.

In the following chapter where the active therapeutic aspect, the treatment of krasai will be presented, it will be possible to determine the extent to which these diagnostic alternatives are reflected in the management of the illness.

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143 MTP, pp.94-105.
CHAPTER 7

IMAGINATIVE PROCESSES AND THE TREATMENT OF ILLNESS

7.1. Introduction

The classificatory processes which have been described in the previous chapters are of course not an end in themselves. Although, as has been argued, the Thai classification of illness in terms of the familiar may in itself be a form of therapy, illness classification is also linked to practices which are explicitly therapeutic. The purpose of this chapter will be to examine some of these practices. In particular the discussion here will focus on these practices in relation to krasai, as a representative example of the illness categories appearing in PS.

It is not intended to make any assessment of the clinical efficacy of the treatments examined here. Nor will any attempt be made to correlate the pharmacological properties of ingredients with their uses according to textual descriptions. This is partly because of the poor correspondence between traditional Thai illness categories and those of modern medicine, as well as for other reasons which will become more clear in the course of the discussion. Rather, the focus of this examination will be on the extent to which the processes which we have seen to be important in the classification of illness play a role in its treatment. It will be seen that the imaginative processes involved in classification also play a significant role in the subsequent management of illness. This has important implications for the understanding of the efficacy of traditional Thai medicine, and of the utilisation of the traditional pharmacopoeia in conjunction with modern medicine.

To begin, some general comments will be made concerning the types of traditional treatment, employed by Thais and appearing in the medical texts. This will be followed by a discussion of the term yā ('medicine') as a complex term, from which an approach is developed which will be useful in the examination of the prescriptions in the texts. Using this approach, the subsequent discussion then addresses synergistic effects of yā, taste, treatment based on the concept of illness as an entity which invades the body, and, lastly, analogy.
7.2. Types of Treatment Appearing in Traditional Medical Texts

The texts included in PS belong to the genre known as *tamrā yā*, which literally means 'a collection of medicinal prescriptions'. Although the prescription of medicine, either ingested or applied externally in the form of paints, sprays, or compresses, is the main form of treatment specified in these texts, other practices also appear. These include massage (*nuat*), the recitation of "powerful" words (*khāthā* and *mon*), the use of cupping or leeches to draw blood, and the performance of specific ceremonies. Some of these practices may be the subject of specialist texts in their own right. The techniques are also of diverse origins, for example the use of magically powerful words and some aspects of massage (*nuat*), are apparently Indic, while cupping and the use of leeches appear to have come from China or the West.

As was the case for the illness categories discussed in Chapter 4, it is unlikely that

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1. See earlier note on these terms, Chapter 2, p.19.
2. In cupping a small amount of a herb or other suitable substance is placed inside a cup and set alight. The cup is then placed on the skin of the patient, to which it becomes attached by the suction effect created by the burning of the substance inside. The action of the suction produces round areas of bruising due to the extravasation of blood. Gervaise (1688) recorded the use of cow horns in conjunction with, or perhaps in place of (the text is ambiguous), cupping glasses (p.138).
3. Massage is described in the Wat Pho inscriptions, as well as in a considerable number of texts. Similarly there are large numbers of texts devoted to the use of *khāthā* and *mon* in healing.
4. The origins of Thai massage are unclear. Certainly the theoretical aspect of the art owes much to Tantricism, for example the theory of the *sen-en* which resemble the 'channels' (*nadi*) of Indic theory (see Chapter 5, pp.121-122).
5. These techniques have a long history in Indic medicine: in the Artharva Veda reference is made to the treatment of illnesses using amulets and the administration of herbs, accompanied by the recital of incantations. Fever (*taksman*), for example, is treated with the herb *kustha* (*Costus speciosus* or *arabicus*), invoked by the following verse:

   Thou that wast born on the mountains, strongest of plants, come, O Kustha, effacer, effacing the fever from here. (Whitney (1962), vol.I, book 5:4, p.227.)
6. Thai beliefs regarding blood and the description of the practice of bloodletting by foreigners, noted in the previous chapter (pp.161-162), which revealed a degree of apprehension regarding the flowing of blood, indicate a probable foreign origin for the drawing of blood by cups or leeches. As noted earlier in Chapter 2, the incorporation of foreign techniques in Thai manuscripts was also not unknown. As Yuwadee (1979) has pointed out, there is some evidence that the technique of bloodletting may also have been known in ancient India (p.43).
PS is exhaustive in respect to the inclusion of details of all types of therapy practised in connection with the prescription of medicine.\textsuperscript{7} It is probable that certain types of treatment employed by Thais in the past were not included in the medical texts, or were described in texts which no longer survive. It must also be assumed that the treatment practices appearing in the texts fitted into a complex of behaviour patterns associated with the onset of illness. These include actions taken in response to illness before, or in addition to, consultation with a doctor, such as changes in dietary and bathing habits. Some of these practices, in particular food prohibitions, are briefly alluded to in the tamrā yā, but in general they are known only from historical accounts, present-day practices, and inference from the descriptions of the therapeutic practices of other Tai peoples.

The discussion here will be largely confined to prescriptions for medicine, a technique which appears to be common to most Tai groups. However, the treatment of illnesses by medicine described in the texts should not be seen as isolated from the other forms of therapy mentioned above. Information derived from non-textual sources, including observations of dietary and illness-related behaviour, and the practices of other Tai peoples, may also provide important background information to the discussion here.

The integration of a diverse range of treatments is perhaps the feature most characteristic of Thai medicine. As will become evident in the course of the following examination of the relationship between the illness category krasai and the materia medica employed in its treatment, this diversity is also reflected in the contents of the prescriptions themselves.

7.3. Yā

As in most other medical texts, the format of prescriptions in the Phrakhamphi krasai consists of the introductory phrase "medicine to treat...(yā kāe...)" followed by the names of one or more symptoms or illness categories, then a list of ingredients. This list is characteristically followed by a phrase exalting the qualities of the prescription, and sometimes a re-statement of the illness categories it is intended to treat.\textsuperscript{8} In all, approximately three hundred and seventy seven separate ingredients are mentioned in the Phrakhamphi krasai of which three hundred and twenty seven are vegetable in origin, forty two are derived from animals, and eight are of mineral origin.\textsuperscript{9}

\textsuperscript{7} Chapter 4, p.78.
\textsuperscript{8} The format of prescriptions and the system of weights and measures used have been described in detail by Mulholland. See MTP, pp.106-117.
\textsuperscript{9} The distinction between animal and mineral is somewhat indistinct in several cases where the animal parts are highly calcified organs such as teeth and bones.
This wide range of ingredients appears to result from a variety of theories and conceptions of illness. In introducing the discussion of these variables it will be helpful to first look briefly at the meaning of the Thai word yā, then consider some of the approaches which have been taken elsewhere in relation to the interpretation of the efficacy of materia medica.

The word yā is as complex a term in Thai as its counterpart "medicine" is in English. On the one hand the term yā, either singly or as the compound terms tua yā and khru'ang yā, may be used to refer to the individual ingredients used in the treatment of illness. This is the intended meaning when, for example, particular plants are pointed out by Thais as "being medicine" (pen yā). Another example is the usage of the term in the title of one of the texts included in PS, Sapphakhun yā kāe khai thoraphit ('Properties of Medicines for the Treatment of Smallpox').

On the other hand, yā may refer to the combination of a number of ingredients in prescriptions or preparations, as in the names of the various patent medicines available in Thailand, such as yā hōm ('fragrant medicine'). This is also the meaning which is intended by the use of the term yā in the texts to specify the treatment of particular illnesses. For the most part context determines the appropriate interpretation. However, as in the use of the English word "medicine", there may often be a degree of ambiguity in the use of the word yā. Thus yā thāi may refer to a particular ingredient having purgative properties, or to a preparation having these effects.

In both of the above cases yā is defined by its function in a particular context, that is as a substance, or substances, used in the treatment of illness. However the usage of the term, at least in modern Thai, may extend beyond the domain of medicine. Yā may also refer to substances such as tobacco (yā, yā sūp, that is 'yā for drawing in') and poison (yā phit, yā sang, meaning "conditioned poison") the effects of which may be drug-like rather than curative.

In other cases, such as for the calk, or dammar, used in ship repair (yā), toothpaste (yā sī fan,), and shoe polish (yā khat rōng thāw), the meaning of yā appears to be unrelated to any medical or drug-like effect. Here the meaning of yā seems to be that of a substance having some chemically potent ingredient, as indicated by its action or taste. This is also the sense underlying the use of yā in certain other compound terms, such as nām yā, which literally means 'yā liquid'. Nām yā may refer to a "washing detergent", or

12 PCR, p.655.
13 Anuman (1965a), p.137.
similar liquid preparations of chemicals, as well as to the spicy aromatic sauce which accompanies the popular dish khanom chin.

This meaning of 'potency' may extend to other domains, in particular to the mind. Thus a further meaning of nām yā is 'ability' or 'prowess', as in the expressions mai mī nām yā, meaning 'to have no ability', and mot nām yā, 'to have exhausted [one's] capabilities'. The application of yā to mental faculties is also to be seen in the expression yā chai, literally 'yā for the mind', which is used in reference to something, or someone, which refreshes or sustains one. In this case the meaning seems to involve both a metaphorical application of the sense of "a medicine", that is something which "cures", as well as the more abstract meaning of "potency".

These few examples seem to indicate that of the usage of the term yā in modern Thai is based on a core meaning related to the possession of some sort of potent effect or attribute. This core meaning appears to serve as a type of cognitive model which can be applied in various situations where the sense of 'potent substance' is appropriate, not only in the medical context, but also in the other areas mentioned above. As will be seen, the application of this model to the domains of food and the emotions is of particular relevance in the examination of the attributes of the materia medica used in the treatment of krasai.

Given the broad range of meanings for the term yā, it is not surprising that the analysis of the materia medica used in traditional Thai medicine has presented difficulties for commentators versed in Western medicine. Three features of traditional medicine stand out as especially problematic in Western accounts. These are the large number of ingredients included in prescriptions, the use of one prescription for many ailments, and the use of animal parts, in particular those derived from dangerous or powerful animals.

Of the three features noted above, perhaps the most striking to Western observers has been the wide range of substances used in the materia medica and the large number of ingredients often combined together in a single prescription. Bradley, for example, noted this to be the case in the latter part of the nineteenth century:

One is inclined to think, on reading over their books of materia medica, that but few of their native plants and trees, wild or cultivated escape enlistment,
and actual service, profitable or useless, in the war of subduing and exterminating bodily disease... The dependence of Siamese physicians, in waging war with disease, is more upon great combinations of ingredients in a single prescription, than upon the power of any one or two individuals of the same. Hence they oftentimes have tens and even scores of kinds in a single dose.21

One reason for the emphasis on these features might be that the diverse, "exotic" nature of the ingredients in Thai prescriptions tended to fit with certain popular Western preconceptions regarding "primitive" cultures. Another reason might be that these features tended to run counter to the more specific relationship between medicines and illnesses found in Western medicine. This is particularly evident in Bradley's view, where the reason for the abundance of ingredients was seen as something akin to the "shotgun" effect: the larger the number of ingredients, the greater the chance that one of them would prove effective in resolving the affliction. While they reveal much about Western attitudes, these explanations say little about the choice of particular materia medica in Thai prescriptions.

In more recent investigations, attempts have been made to establish a basis for the composition of prescriptions in traditional Thai medicine based on more complex theoretical grounds. For the most part, these studies have been from a standpoint consistent with the meaning of the term "medicine" in its scientific sense. Such studies appear to be guided by the assumption that medicine possesses pharmacological efficacy, and that analysis of prescriptions will reveal certain ingredients which are "active" and others which serve as "vehicles".22 For example, in reference to Northern Thai prescriptions, Brun and Schumacher write:

An important question is which of the ingredients in a prescription are essential, that is, which of them contain bio-active principles that may cure the disease?23

According to this approach, the inclusion of other ingredients in a prescription is seen as based on a variety of reasons related to the management of the "active principles". These may include such functions as the preservation of the mixture, making it acidic, alkaline, or neutral, or to dissolve or suspend other drugs.24

As the literature testifies, a considerable number of the ingredients utilized in the

21 Bradley (1865a), p.106.
22 MTP, p.229.
24 MTP, p.230.
Thai *materia medica* do in fact contain pharmacologically active compounds. Some of the more well-known examples of such substances are exotic in origin and their properties have been recognised for centuries in medical systems across Asia and Europe. Their use in traditional medicine is generally conventional, that is consistent with their use in modern medicine. Opium (*fin*), which occurs in prescriptions for the treatment of dysentery, pain, and cough, is probably one of the best known examples of this type of ingredient. Opium, together with cannabis, is also among the ingredients mentioned in PKPS, in a prescription for "cutting the root of all types of krasai". Other examples of pharmacologically active substances used in Thai medicine are rauwolfia (*rayom*) containing reserpine which is used in the treatment of hypertension, and krabaw (chaulmoogra), the oil of which is used in the treatment of leprosy.

The inclusion of substances having pharmacological efficacy in prescriptions need not mean, however, that this is their intended effect. It is not always possible to differentiate between efficacy related to the inherent pharmacological properties of ingredients and that attributable to culture-specific factors. This is a problem which has been the subject of considerable attention in studies of traditional medicine.

Addressing the question of the degree to which the pharmacological properties of ingredients were recognised in traditional medicine, Ackerknecht distinguished between ingredients selected on "rational" scientific grounds and those whose effect was attributable to "magico-religious" factors. However, as he points out, the use of the term

25 See Monthirâ (1982) for a compilation of publications on the pharmacology of traditional Thai medicine.
26 See for example MTP, p.156.
27 *Papaver somniferum*, L., Papaveraceae.
28 See PS:1:241 where opium is included in a prescription for *bit* ("severe abdominal pain, dysentery").
29 *Kanchâ*, *Cannabis sativa* L., Cannabaceae.
30 PS:2:213.
33 MTP, pp.185-186.
35 The distinction, which is of course relevant to both contemporary scientific research and the development of primary health care programmes, was also an issue in the broader debate in anthropology early this century concerning reason, magic and religion. See for example Malinowski (1925), pp.33-35.
36 Ibid., p.135.
"rational" in this context is "far from satisfactory" and magic "is logical in its way too".\textsuperscript{37} If certain initial premises concerning pathology and etiology are accepted then treatment based on magico-religious grounds is also rational, since it follows logically from these ideas.\textsuperscript{38} This has been noted by Pottier in respect to Lao medicine\textsuperscript{39} and would also appear to be the case with Thai medicine.

According to Textor, Thais recognise certain substances as being "good in themselves" (\textit{di nai tua}).\textsuperscript{40} The extent to which this expression reflects a differentiation between their pharmacological efficacy in healing illness and their magical power is difficult to determine. It would seem that in some cases medicinal plants are employed for quite different ends to those which might be predicted on the basis of their pharmacology. Some indication of these differing values may be seen in the use of the inclusion of modern pharmaceuticals in traditional prescriptions.\textsuperscript{41} Such drugs may also be administered in the form of injections and pills without regard for duration or amount of dosage in a similar way to that in which traditional medicines are used.\textsuperscript{42} The lack of correspondence between traditional concepts of efficacy and pharmacological efficacy may be also be clearly seen in the case of at least one prominent group of "active" ingredients, the purgatives.

The Thai use of purgatives, which were also an important part of early Western medicine, was noted with some approval by La Loubère in the seventeenth century.\textsuperscript{43} Bradley, writing in the nineteenth century, commented, in this case disapprovingly, on the "disastrous freedom" with which "drastic cathartics" were used by the Siamese, and described their use in the treatment of smallpox.\textsuperscript{44} Purgatives are also reported to have

\textsuperscript{37} Ibid.
\textsuperscript{38} Rivers (1924), p.51.
\textsuperscript{39} Pottier (1971), p.265.
\textsuperscript{40} Textor (1960), p.152.
\textsuperscript{41} Landon (1939) cites an example where quinine is used in this way (p.146). Gosling (1985) mentions the use of tobacco in the treatment of a wound, remarking that tobacco has neither antiseptic nor curative properties (p.785). It seems very likely that the use of tobacco in this instance was based on the fact that in Thai tobacco is named as a type of medicine (\textit{ya stp} or \textit{ya sen}, literally 'smoking medicine' or 'fibrous medicine'). From a Thai point of view its application to a wound might therefore seem quite logical.
\textsuperscript{42} Boesch (1980), pp.10-11; see also Cunningham (1970a). Westermeyer (1988) has reported a similar phenomenon in Laos (pp.771-772).
\textsuperscript{43} La Loubère (1691), p.63.
\textsuperscript{44} Bradley (1865b), pp.85-86.
been administered in conjunction with "lying by the fire" following childbirth and are still commonly employed by traditional doctors.

A number of the ingredients appearing in prescriptions in PS also have pronounced purgative properties. For example croton (salūṭ), which has a violent purgative action, is used in the treatment of several types of krasai. Croton is included in medicine to treat krasai pū ('crab krasai'), in a prescription said to "cut the roots of all types of krasai", krasai lin krabū ('buffalo-tongue krasai') and krasai thaw ('vine krasai') amongst other illnesses. Two other ingredients with purgative or laxative properties appearing in PKPS are maka which is used in the treatment of krasai pluak ('termite krasai') and rāţchapru'k which is included in a prescription to treat krasai dān.

Some of the prescriptions in which purgatives and laxatives are included are referred to as yā thāi ('purgative medicine'). For the most part, however, the distinction between purgatives and other types of medicine is not made explicit, although the latter may include ingredients which have purgative properties in sufficient dose to be effective.

Though the effects of purgatives appeared to have been well-understood there remains doubt as to whether these substances were intended to treat similar conditions to those for which drugs having such an action might be employed in modern medicine. For example the types of krasai which are treated with prescriptions containing purgatives are for the most part not characterised by constipation. However, in the case of one such illness, krasai lin krabū, a major symptom mentioned in the text is the lodging of blood in the liver. In this there is a striking resemblance to the use of purgatives to remove "stale" blood from the womb post-partum, a use to which yā thāi may be put following

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45 Beyer (1907), p.5.
47 Croton tiglium L., Euphorbiaceae (McF, p.826).
48 PS:2:199.
49 PS:2:204.
52 PS:2:203.
54 PS:2:206.
55 See PS:2:210 for example.
56 Besides yā thāi PKPS also refers to a 'curry medicine' (yā kāeng) and yā pračhu (literally 'charging medicine', meaning unclear). In most cases medicine is not differentiated into types.
57 In this context probably referring to swelling in the area of the liver.
childbirth in the Northeast for example.\textsuperscript{58} It would thus seem that in a type of analogous healing the purging of the gastro-intestinal tract is believed to also act on other organs. Such a belief fits neatly with certain other types of treatment which appear to be directed towards the removal of an animal-like entity from the body.\textsuperscript{59} This practice also accords with the uses of purgatives in the medical systems of a number of other societies.\textsuperscript{60}

From these examples it is clear that the simple division of treatment into "rational" and "magical" is not adequate for the examination of the relationship between illness classification and treatment in traditional Thai medicine. Such a division also tends to obscure important differences between the bases for the inclusion of \textit{materia medica}, such as analogy and the removal of animal-like entities from the body, both of which are "magical" and "rational".

Similar objections may be raised to the approach suggested by Foster who has classified medical systems into "personalistic" and "naturalistic" based on the aetiology of illness.\textsuperscript{61} According to this division, personalistic treatments would follow from theories of causation which involve the intervention of supernatural agents, including other humans, spirits, or deities. Naturalistic treatments would be based on an explanation of illness in "impersonal, systemic terms".\textsuperscript{62} While this approach works well for treatment based on the humoral theories employed in Thai medicine, as well as that for 'spirit'-caused illness, it does not adequately handle treatment based on analogy. We might ask, for example, whether the post-partum avoidance by Southern Thai women of foods with names containing the word 'child' constitutes a "naturalistic" or "personalistic" treatment.

One approach which does take such factors into account is the division of \textit{materia medica} on the bases of practical efficacy, analogy, and ritual value proposed in Ohnuki-Tierney's recent study of the Sakhalin Ainu.\textsuperscript{63} Practical efficacy might include knowledge gained from observation, as for example in the use of tree resin to treat wounds.\textsuperscript{64} Analogy includes treatment based on a resemblance between the medicine and the illness, as in the use of red berries to treat the coughing of blood.\textsuperscript{65} The high ritual value of certain other substances, such as the leek for the Ainu, also confers their efficacy in the treatment

\textsuperscript{58} Čho (1979), p.8.
\textsuperscript{59} See also Golomb (1988), p.763, 765, and fn.10 (p.767).
\textsuperscript{60} See Ackerknecht (1946), p.150.
\textsuperscript{61} Foster (1976), pp.774-775.
\textsuperscript{62} Ibid., p.775.
\textsuperscript{63} Ohnuki-Tierney (1981a), pp.44-46.
\textsuperscript{64} Ibid., p.46.
\textsuperscript{65} Ibid., p.44.
This latter division of treatment is to a certain extent also unsatisfactory as it does not allow for the possibility that the practical efficacy of a substance may in fact ultimately rest on some form of analogous association. Similarly ritual value may be derived from analogy. It is also conceivable that ritual value may act as the basis for the recognition of an analogous relationship between substances. Medicinal value appears to reside in a complex in which imaginative devices such as analogy serve to link substances or objects on the basis of various properties, of which practical efficacy and ritual value are but two. This network of associations makes a neat division of materia medica into the three categories above a difficult task.

The situation is further complicated in the Thai case by the diverse range of criteria which govern the inclusion of ingredients in prescriptions. These reflect the apparent influence of several different traditions on the composition of the materia medica and include such attributes as taste, pharmacological efficacy, and properties accredited by various humoral theories. Though these factors may be based on sophisticated premises, and would thus fit into the category of "practically efficacious" ingredients, they are no less "rational" than those whose effect rests on analogy or ritual value.

With some modifications, the approaches suggested above may nonetheless serve as a basis for the examination of the ingredients of Thai prescriptions. Taking the meaning of yā in its wide sense of "potent substances", the discussion of its efficacy will be divided here into four main sections: [i] synergistic effects, that is factors relating to the combination of ingredients, [ii] taste, [iii] substances or practices based on the notion that illness resembles the entry of an animal or 'spirit' into the body, including ingredients which are believed to be effective on a ritual or propitiatory basis, and [iv], ingredients or practices whose effect is based on analogy, that is those aspects of treatment whose efficacy is based on perceived similarities, in name or form, with some aspect of the illness.

It is still quite possible that ingredients may fall into more than one of these categories, or perhaps none. Such a division may nevertheless be expedient in their examination, and also allow the discussion of the links between the materia medica and some of the other forms of treatment which appear in the medical texts.

7.4. Synergistic Features of Yā

One factor which contributes to the large size of prescriptions is the inclusion of ingredients as groups, rather than as individual items. As Mulholland points out, despite

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66 Ibid., pp.45-46.
the fact that one ingredient may produce the desired effect, for various reasons it cannot be administered alone. In practice there appear to be two main systems of classification of ingredients which favour their inclusion as groups. One of these is based on similarities in types and properties, and the other based on taste. The discussion here will be concerned only with the first of these systems, taste classification being the subject of the following section.

Certain ingredients appearing in prescriptions are grouped according to three classes (phikat), consisting of the čunlaphikat ("small class"), phikat yä ("large class"), and mahāphikat ("great class"). According to Matthayat the purpose of the classification is for convenience in remembering and to simplify prescription. Thus the čunlaphikat groups materia medica on the basis of their possession of similar properties, the phikat yä on their relationship as fixed compounds based on equal weight, and the mahāphikat on their relationship as fixed compounds with differing proportions.

The overall role which this system of classification plays in determining the composition of prescriptions in the texts of medicine appears to be limited. As in the case of the treatment of the illness category sāng described by Mulholland, this classification appears to play only a relatively minor part in the selection of ingredients in prescriptions for krasai. Nevertheless examples of at least two of the three classes listed above may be found. They include, amongst a large number from the čunlaphikat class, som kung thang sōng, which refers to the two common types of som kung, lek ("small som kung") and yai ("large som kung"), and khi lek thang sōng, referring to khi lek bān ("garden khi lek") and khi lek pā ("wild khi lek"). In most cases the classification as čunlaphikat serves as an abbreviation, grouping a number of varieties of a species, the properties of which are similar.

The classes phikat yä and mahāphikat differ mainly in the proportions of ingredients used. Without additional information regarding variables such as season and age it is thus difficult to differentiate between these two categories. However a number

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67 MTP, p.230.
68 Sri Sawaphang (1918), p.229.
70 Matthayat (1972), pp.317-318.
71 MTP, p.127.
72 Rubus moluccanus L., Rosaceae (PSYT:3:162).
74 Cassia siamea Britt., Leguminosae (Sa'at (1982), p.81).
75 Unidentified.
76 In addition to factors given here, the proportions used in the mahāphikat class also vary with the
of types which are mentioned in the *Khamphi krasai* might fit either class. These include *trikaduk* (‘the three spicy substances’), and *triphala* (‘the three fruits’). Both of these groups occur in several prescriptions in *Khamphi krasai*, *trikaduk* being the more common of the two.

Matthayat, in his commentary on the principles of Thai pharmacy, gives three guiding principles for the grouping of ingredients in classes. These are [i] the tastes should not conflict, [ii] the properties should be equivalent, allowing substitution, and [iii] that there are certain ingredients which help control (*khum*) the properties of others in the prescription. This latter point is significant for it throws light on a remark made by the Phrakhlang, quoted in an entry in Bradley’s journal.

Commenting on the size of Thai prescriptions, Bradley describes how Chuang Bunnäk, thinking he was poisoned, wished to be given a mixture of epsom salts, without the addition of other ingredients:

> A great multitude of native physicians in attendance dared not give it alone, they must in every other dose have many ingredients that one of them may chance to be [the] thing that will do good...Again and again did the Prakhlang enquire of me if there was not danger that the 7 salts alone would prove poisonous.

The comments above indicate that, for at least some nineteenth century Thais, there was an expectation that medicine be composed of many ingredients. Further, from the final

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77 These consist of *khîng* (Ginger, *Zingiber officinalis*, rhizome), *phrikthai* (Black Pepper, *Piper nigrum* L., seeds), and *dlîpî* (Indian Long Pepper, *Piper longum* L., flowers) (Mulholland (1979b), p.35).


80 Chuang Bunnäk, also known as Si Suriyawong, was a son of the then Phrakhlang (Treasurer) Dit Bunnäk (Terwiel (1983), p.162). He was later to become Kâlâhmôm, that is head of the Ministry responsible for the military and administration of the southern provinces, at the beginning of the Fourth Reign in 1851 (ibid., p.167) and in the late 1860’s became Siam’s Regent.


82 This is in fact a single ingredient. Epsom salts is a common name for the heptahydrate of magnesium sulphate, which may explain Bradley’s reference to “7 salts”.

83 Bradley (Journal), July 25th, 1839.
comments, it appears to have been believed that there was some relationship between the quantity of ingredients and the safety of the prescription. It seems that the Thai physicians may have included some ingredients to ameliorate the adverse effects, or perhaps potency, of others.

Unfortunately the texts yield little further information on these "controlling" relationships between ingredients. Certain substances included in prescriptions are recognised as being able to 'nourish' (bamrung) the body's elements (thāt), for example, from the Khamphi krasai, plaw thang sōng which nourishes fai thāt (the heat element), and khī lek thang sōng which nourishes lōhit (blood). Such ingredients might serve to indirectly counter the adverse side-effects of other ingredients in prescriptions. However, while certain procedures may be carried out to reduce the strength or toxicity of substances in order to prepare them as materia medica, no mention appears to be made of specific relationships between the ingredients themselves.

One possible means by which ingredients might interact is through the combination of their tastes. As indicated by the statement above by Matthayat, care is taken that tastes of materia medica included in phikats do not conflict. It may also be that by a judicious blending of tastes, the effects of the medicine as a whole may be "controlled". In the following section the role of taste in the selection of the materia medica will be examined in closer detail.

7.5. Taste

In traditional Thai medicine, as in modern medicine, it is likely that certain measures were taken to make the preparation palatable for the patient. For this reason groups of ingredients were probably included for the purpose of improving the taste, smell and possibly colour of mixtures. Certainly, pleasant smelling or flavoursome plants such as basil, mint, lemongrass and ginger form an important part of many prescriptions in PS, but the reasons for the inclusion of these ingredients may be rather more complex than the simple purpose of making the mixture palatable.

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84 That is plaw nōi (Croton longissimus Airy Shaw, Euphorbiaceae (Sa'at (1982), p.295)) and plaw yai (Croton oblongifolius Roxb., Euphorbiaceae (Sa'at (1982), p.294)). Matthayat (1972), p.389.
85 (See above) Matthayat (1972), p.416.
87 Matthayat (1972, pp.382-384) mentions 'killing' (khā) or 'reducing the power (ru'ā)' of toxic ingredients such as salīt (Croton tiglium, L. See above, p.189.).
88 Ibid., p.230.
Like the general terms for other domains discussed in an earlier chapter, rot, the Thai word which corresponds to the English term "taste", is of Indic origin, being related to the Sanskrit rasa. 89 The more specific taste terms in modern Thai, apparently of Tai origin, include: wān ('sweet'), khem ('salty'), phet ('spicy'), khom ('bitter'), khūn ('bitter'), fāt ('astringent'), fu'an ('astringent'), priaw ('sour'), som ('sour', mainly in the Northeast), man ('oily', 'nutty'), rōn ('hot'), and yen ('cool'). In addition, there is a term Čhūt, meaning 'bland' or 'tasteless'.

As with their English equivalents, the status of some terms is ambiguous. For example rōn ('hot') and yen ('cool') are in most situations considered to refer to thermal sensations. Other terms, such as man, fu'an and fāt, which do not correspond well with terms in English, appear to lie between taste and tactile sensations. This ambiguity is also increased by the compounding which may be seen in the usage of some of the taste terms listed. While in the case of terms such as khomkhūn ('bitter'), and fu’anfāt ('astringent'), the meanings of the individual words and resultant compounds appear to be similar, in other cases compounding may link different domains. Thus, in the term phetrōn ('spicy'), the compounding may serve to link taste to thermal sensations, and in the compound hōmyen the combination of the word yen with hōm ('fragrant') may link taste to both smell and thermal sensations. 90

The variation encountered here is indicative of a general "fuzziness" in the differentiation of tastes. The domain of taste appears not to be clearly differentiated from other perceptual domains, in particular smell, temperature and touch. It is apparent from the information provided above that the Thai medical vocabulary embraces sensations which are either not commonly regarded as tastes, or are a poor fit with categories occurring in English. Furthermore, some tastes are represented by more than one term, and compounding is a prominent characteristic. These features may help in the understanding of the role taste plays in the classification of ingredients in traditional medicine.

Taste is the basis for one of the major classifications of ingredients in traditional Thai medicine. Although medicines are identified in Thai pharmacy by various characteristics including appearance, colour, smell, and name, as well as taste, it is taste which indicates their effects.91

Thai pharmacy recognizes three primary tastes and nine secondary tastes. The

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89 MMW, p.869.
90 In some cases there may be room for considerable individual variation in classification. Central Thais may, for example, debate whether the taste of ginger belongs in the category of 'hot' or 'spicy' (field notes, Rātburi, May 1984).
91 Mulholland (1979a), pp.106-7; MTP, pp.24, 127.
primary tastes consist of rôn ('hot'), yen ('cool'), and sukhum ('mild'). The secondary
tastes are: fît ('astringent'), wăn ('sweet'), maw bu'a ('toxic'), khom ('bitter'), rônphet
('hot and spicy'), man ('oily'), hûmyên ('cool and fragrant'), khem ('salty'), and priaw
('sour'). To these may be added a bland taste (č̄hût). The "secondary" terms here differ from those listed above from modern Thai in the
addition of the terms maw bu'a, sukhum, and the compounds rônphet and hûmyên, and
the omission of fu'an and khû'n. Perhaps of greater interest is the emphasis, in both
primary and secondary classifications, on a division based on multiples of the number
three. In addition to the three major tastes, and nine secondary tastes mentioned above,
there is also a secondary division into six. Further variation is seen in other texts where
the classification of taste is based on multiples of four. As noted above, a division
into three is also a feature of the phikat system of classification.

Information from modern spoken language sources suggests a wide variation in the
number of secondary tastes. While Central Thai village practitioners interviewed in the
course of the present study were familiar with the number "nine", the number of tastes
they listed on questioning usually did not total this amount. Tastes often omitted were
maw bu'a, and sukhum, bringing the list more into line with those of everyday use.
Golomb, using data from Songkhla in Southern Thailand, notes that the number of taste
categories employed by "herbalists" may vary from two to ten. He lists a total of thirteen
tastes, including the "bland" taste and splitting the combinations of "hot" from "spicy" and
"cool" from "fragrant" to account for thermal sensations.

As will be recalled from the discussion of the importance of auspicious numbers in
the classification of illness in the previous chapter, the numbers "three" and "four" are
both "significant". While they appear to indicate that taste is well-defined, these
numbers may however be at variance with the number of taste terms actually employed in
everyday speech. It is possible that, like their use in the classification of illnesses,
significant numbers serve to define a domain which is in some respects poorly defined, not only within itself but in relation to other sense faculties such as smell and thermal perception. This is in accordance with the use of numbers in the classification of tastes in the medical systems of other cultures where certain numbers are regarded as significant. In Œurvedic medicine, for example, six tastes are recognised\textsuperscript{101} and in Chinese medicine the number of tastes is five, a number of wide cultural significance.\textsuperscript{102}

According to the Thai theory of Indic origin, tastes are related to the various types of illnesses by their effect on the "elements". Different tastes thus effect changes in the different qualities of the body which cause illness. For example 'fevers' (khai), which result from an abnormal increase in the action of the 'heat' element within the the body, may be treated with medicines which are 'cool'. Illnesses resulting from disturbances of the 'wind' element (wāyōthāt) may be treated with medicines which are 'hot'.\textsuperscript{103} There may well be links here with the "hot-cold" theory discussed in Chapter 2 of this work.\textsuperscript{104}

As Golomb has pointed out, there is also a close association between Thai taste terms and affective states.\textsuperscript{105} Taste terms provide the vehicle for the description of a range of emotions and of personality types. Whereas in English affective states such as anger may be expressed in terms of a metaphorical association with "liquid in a confined space" for example\textsuperscript{106}, in Thai the dominant metaphor is something akin to the blending of tastes in an "emotional curry". Anger is thus čhai rōn ('hot headed' or 'impatient'), even-temperedness is yen čhai ('cool headed'), a woman with an abrasive personality is priaw ('sour') and a desirable quality in young women, widely-expressed by Thais of both sexes, is to be čn wān ('tender and sweet').

The other senses may also be linked to taste in the manipulation of the emotions. Golomb, for example, cites the use by Southern Thai "magicians" of a variety of metaphorically related devices including melody, language, and plants, to manipulate affective states. Thus "love", which is 'sweet' is induced through a charm made from things which are sweet-smelling, sweet-tasting, or contain words for these properties.\textsuperscript{107}

Similar processes to those described by Golomb may also function in relation to the prescriptions included in Central Thai medical texts. One function of taste is that it may

\textsuperscript{101} Caraka (1949), vol.5, pp.6, 61.
\textsuperscript{102} Wong and Wu (1936), p.20. See also Mulholland (1979a), pp.108-109.
\textsuperscript{103} Matthayat (1972), p.313 (see pp.329-379 for a list of the taste properties of common medicinal substances).
\textsuperscript{104} See p.21.
\textsuperscript{105} Golomb (1985), pp.143-145.
\textsuperscript{107} Golomb (1985), pp.144-145.
serve to designate a preparation as "medicinal", that is as something which has curative properties. This is reflected in the Thai idiom *khom pen yā wān pen lom*, literally 'medicine is bitter, wind is sweet'.

By the inclusion of bitter-tasting ingredients, a preparation conforms to the patient's expectations regarding what a medicine should be and thus contributes to healing.

To taste may possibly be added other attributes which might serve to designate a preparation as "medicinal". These include its smell, appearance, and any discernible physiological effects it has on the body. This might also serve to explain the reported preference of Thais for medicines which have purgative or laxative properties, although in this case the psychological benefits would need to be weighed against the debilitating effects of the agents concerned.

The use of persuasive devices may be seen in other features of prescriptions. One of these is the labelling of prescriptions with pleasant-sounding or auspicious names. 'Turtle' *krasai* may be treated, for example, with a medicine called 'food of Brahma' (*Phromaphak*). Other medicines appearing in the *Khamphi krasai* include 'ambrosia medicine' (*amru't ōsot*) and 'heart of the moon' (*čanthahru'θhai*). In these cases the names may serve to enhance the belief of patient and doctor alike in the potency of the medicine. In the same way that the provision of a diagnosis may be therapeutic, the prescription of something recognised as "medicine" may thus also contribute to healing.

Some observations concerning the relationship between medicine and food are also relevant here. As noted in Chapter 2 of this work, there are close affinities between foods and medicines: they may be prepared in similar ways, in pots on the kitchen stove; in medicine, as in cooking, much depends on the manipulation of a number of different tastes, frequently sharp or "hot", in order to produce a desired flavour; and many of the

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108 That is 'the truth may be unpleasant, while fine-sounding words are often empty'.
109 This is not to say that taste is unrelated to pharmacological activity. There are good reasons why bitter-tasting substances are associated with medicines. As Mulholland points out, a bitter taste is characteristic of poisons and alkaloids, which are very important in medicine (MTP, p.130) However, in this case it is quite likely that possession of a "medicinal taste" serves as a guide for the selection of ingredients, rather than, or in addition to, any pharmacological value they might possess.
110 See above, p.189.
111 Sri Sawaphang (1918), p.228-229.
112 PS:2:204.
113 PS:2:219.
114 PS:2:220.
115 See also MTP, p.108.
ingredients are the same. For example ginger and black pepper, which were mentioned above as medicines, form along with other spices some of the basic curry ingredients figure prominently in the everyday Thai diet. Other common curry ingredients, such as lemon grass, galangal, and garlic, will also be found amongst the *materia medica* appearing in the *Phrakhamphi krasai*.

There may be good reasons for this overlap between food and medicine, based on nutritional grounds. As Etkin and Ross have indicated, a narrow view of medicines simply in terms of their pharmacological efficacy may result in a failure to recognise the contribution they may make as dietary constituents. The ingestion of a "medicinal" preparation containing many ingredients, including those with nutritional value, may thus contribute significantly to a patient's health. The importance of this dietary effect is such that in recent times some scholars have come to question whether the distinction between "medicinal plants" and "food plants" can serve a useful purpose.

However, while there may be similarities between food and medicine at the level of their means of preparation or the individual ingredients included in prescriptions, at the level of their combination as mixtures the domains appear to be distinct. This may be determined by context, but other more specific features such as those described above may also be significant. Among these, taste is one of the most important characteristics which may serve to mark a mixture as a whole as either "food" or "medicine".

There are nevertheless situations where "medicines" appear to be eaten as foods, and "foods" are prescribed as medicines. An example of the former, noted earlier in this chapter, is *nām yā*, or 'medicinal sauce', which accompanies the popular dish known as *khanom čhīn*. In this case it seems to be a metaphoric extension of the word *yā*, made possible by the inclusion of a number of aromatic herbs, rather than a bitter "medicinal" taste, which gives the sauce its name.

An example of the use of food terms in a medical context may be found in the *Khamphi krasai*, where number of prescriptions for the treatment of *krasai* are given in the form of recipes for curry (*kaeng*). In this case the meaning of "food" appears to be intended and, as will be argued in the following section, is closely linked to the conception of illness as an entity.

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119 See pp.184-185.
7.6. Treatment Based on a Concept of Illness Being Due to an Entity Invading the Body.

As discussed in the previous chapter, there is evidence in the medical texts which suggests that at some time illness was considered to resemble the invasion of the body by an animal-like entity. This notion is also very evident in the domain of treatment, and can be seen in the terminology used in connection with prescriptions, the ingredients used, and in certain therapeutic practices mentioned in the texts. The conception of illness as either being, or caused by, a spirit or similar malign entity is particularly evident in one ceremony mentioned in PS, the *sia kabān*. It is convenient to commence with a discussion of this form of treatment before examining the *materia medica*.

In Chapter 4 the therapeutic ritual known as *sia kabān*[^120] was mentioned as an example of a practice which fits with the notion that illness is an external entity which has invaded the body of a child.[^121] The *sia kabān* is a ritual performed in the past by Central Thais for the expulsion of malign 'spirits' from a seriously ill person.[^122] The ritual involves the arrangement on a tray made of banana stems of several objects including dolls, rice and other foodstuffs.[^123] The tray and its contents are brought into close proximity to the sick person, sometimes accompanied by the recitation of magic words and the (gentle) beating of the patient with "camphor plant" leaves (*bai nāt*[^124]). The tray is then taken from the vicinity, sometimes being floated away down a stream, or placed at a crossroad. A line may also be marked with a stick across the road back to the house of the sick person, and all doors and windows may be shut.[^125]

Rituals resembling the *sia kabān* have been recorded amongst a wide variety of Tai groups, including the Black Tai,[^126] Ahom,[^127] Shan,[^128] Northern and Southern Thai.[^129] This widespread occurrence amongst Tai groups indicates that it might have been an

[^120]: Sometimes also spelt *krabān*. The term appears to be derived from the Sanskrit *kapāla* meaning "dish" (MMW, p.250).
[^121]: Chapter 4, p.99.
[^123]: Bradley (1865a), p.118.
[^124]: *Blumea* sp., Compositae (PSYT, vol. 2, pp.113-114).
[^126]: LaFont (1959), p.832.
ancient Tai therapeutic ritual. However a similar ritual has also been described among the Malay. While not necessarily precluding the possibility that the ritual was introduced to the Malay Peninsula with expanding Tai settlement in the region, the use by Malays does argue for further careful examination of the use of similar rituals in other parts of Southeast Asia.

Although there is evidence from other Tai groups to suggest that the *sia kabān* may have had a more general application, among the Central Thai its use appears to have been confined to the area of illness. This usage goes back to ancient times, as *sia kabān* dolls have been found in pottery kilns at Sukhothai. These dolls reportedly depict a mother or father cradling a baby, indicating their use in connection with illness associated with childbirth or the newborn child. Images fashioned in the shape of a mother cradling a baby are also a part of a *sia kabān* ritual described in the Wat Pho inscriptions for the treatment of *sāng* due to *māe sū*. It is also in connection with pregnancy that the ritual appears in PS.

In the *Khamphi prathom čhindā*, a text concerned mainly with illnesses affecting children and the pregnant mother, there are descriptions of a series of rituals very similar in nature to the *sia kabān* as outlined above. There are nine variations in all, related to illnesses affecting the mother at different stages of pregnancy. Unlike the ritual as described by Anuman, the tray in the PS description, which is made from the sheath of a banana flower, may be round, five or three-cornered, or multi-tiered. The main areas of difference are, however, in the types of figures placed on the tray, and in its subsequent disposal.

In the PS description of *sia kabān* the figures are made from dough which is rolled across the abdomen of the woman before being shaped. A *mon* is said while the rolling takes place. There may be several images placed on the tray, and though human figures (both male and female are mentioned) are included there may also be others shaped like

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131 Skeat (1900), pp.414-418.
133 Yuwadee (1979), p.12. See also Quaritch Wales (1933), pp.443-444.
134 TP, pp.102-106. The inscriptions also describe the use of other figurines for the treatment of *lambὸṅ rāhā* (pp.107-111). According to Anuman (1965c) the *māe sū* (literally "purchasing mother") are 'spirits' which come to molest and abide in the bodies of newborn children (pp.155, 173-185). In an argument based on the probable Proto-Tai meaning of the word *sū*, Mulholland suggests a more appropriate interpretation might be "bartering spirit" (MTP, pp.49-50, fn.3).
135 PS:1:52-56.
animals. Among the animal figurines specified in the text are the chicken, cat, rabbit, vulture, green snake, horse, cow, tiger, vulture, lion and garuda.\footnote{A mythical bird, having the head, wings, talons and beak of an eagle, and the body and limbs of a man (McF, p.183).} The image of a hill also appears in one description. Although Anuman does not mention the use of animal figures in Central Thailand, he does note their use in Northern Thailand. They include domestic animals, such as elephant, horse, buffalo, cow, pig, and dog.\footnote{Anuman (1958), p.5.} Animal images also appear in the Malay variant of this ritual. They include owl, buffalo, stag, ground dove, crab and (rarely) horse.\footnote{Skeat (1900), p.417.}

After assembly, the tray, which also includes rice together with fixed numbers of fruit, flowers and vegetables, is placed in a particular direction relative to the patient. There are no instructions given regarding placement in streams or at crossroads, or of precautions such as marking lines and closing windows. The various descriptions of sia kabān are however followed by a number of prescriptions for use in the event that the illness does not resolve. Significantly, one of these prescriptions features the ingredient bai nāt which, as noted above, has been reported as a feature of the sia kabān, though in this case it is ingested, rather than used to beat the body, and follows rather than accompanies the ritual.

The purpose behind the performance of the ancient ritual of sia kabān seems to have been to induce the 'spirit' causing illness to leave the body. This may be effected by arranging things which are attractive to the 'spirit', such as flowers and foodstuffs, on the tray and then bringing it into close contact with the patient. The 'spirit' then leaves the body of the sick person to partake of the offerings, sometimes with the added encouragement of the beating with the offensive-smelling bai nāt leaves. The purpose of the human figurines appears to be to deceive the 'spirit' into mistakenly entering the image rather than the body of the patient after partaking of the offerings.\footnote{Damrong (1948), p.82.} By the time the spirit realises the deception, the tray has been taken far away. The various precautions mentioned above are to frustrate its attempts to return.\footnote{According to Quaritch Wales (1933) this is also the reason why many pottery dolls are found with the heads broken off from the bodies (pp.443-444).}

In the PS version of sia kabān it appears that the 'spirit' is induced to enter the
dough before it is moulded into a figurine by rolling it across the pregnant woman's abdomen. At the time of rolling a *mon* is recited to effect the transfer of the 'spirit' from the womb to the dough which is in close proximity.

The inclusion of figurines shaped like animals is problematic. The 'spirit' could hardly be credited with such a lack of awareness as to mistake an animal for a human figure. It is thus unlikely that the animal figures are designed to deceive it in this way. As some of the animals are domestic they may be included in order to make the tray more like a common household scene. The image of a hill may also contribute to the effect of a village environment. These figurines thus help deceive the 'spirit' into believing that the accompanying human figure is in fact the patient. A problem with this approach is that human figures are not always included on the tray. It also does not explain the inclusion of images of other animals such as those from the forest, for example the vulture, lion, tiger, rabbit, and snake, or which are mythical, such as the garuda.

An alternative explanation for the inclusion of animals on the tray is that they serve as a metaphor for transport. Like domestic animals, wild or mythical animals are strong and mobile and could transport a 'spirit' away to the forest or elsewhere. By their inclusion on the *kabân* they may thus act as a metaphor for the process of removal. Such an explanation fits with variations of the *sia kabân* seen in Central Thailand and amongst other Tai groups, such as the use of a model of a bullock cart in Râtburî, and the Shan *pōi khaw (kh9)*, the sending away of disease on an animal or the image of an animal.

Another possibility is that the use of animal images is related to the use of animal names in the labelling of illnesses. The variety of animal species mentioned here is similar to that which occurs in the naming of certain types of illnesses, some of which were described in Chapter 6. For example there are cow, buffalo, horse, and elephant types of *sāng*, and elephant, buffalo, cow and cat types of *pradong*. Anuman has also described a belief which attributes illnesses affecting infants and children to 'spirits' transforming themselves into shapes which are a cross between various animals. These include types having a crow's head and a dog's body, a dog's head and elephant's feet, and a deer's head and a crow's body. It is possible that images of animals were employed to

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143 Anuman (1958), pp.5-6.
144 Ibid., p.6.
145 Cushing (1914), p.429.
146 See p.172-174.
147 Chapter 6, p.174-175.
148 Ibid., p.175.
149 Anuman (1965c), pp.155-156. These illnesses are given in an invocation to the *māe sū* to free the child from illness. The illness caused by the 'spirits' which Anuman describes is termed *saphan* or
represent the illnesses with which their names were associated. The removal of the images to a distant place would have thus been a metaphor for the cure of the illness.

Although there does not appear to be a direct correspondence between the animal figures mentioned in PS and the names of the illnesses with which are associated, the possibility that classification is in some way related to the sia kabān ritual cannot be discounted. PS includes only descriptions of the sia kabān rituals used for certain illnesses during pregnancy. It may be that at one time there were specific sia kabān rituals linked to other illnesses such as sāng and pradong, types of which bear animal names.

In the sia kabān ritual two main techniques may be seen which serve to remove the illness or 'spirit' from the patient's body. These may be broadly termed antagonistic, or exorcistic, and propitiatory.\(^{150}\) The antagonistic processes consisted of treatment designed to force the 'spirit' from the body, by beating with 'camphor plant' leaves. The main technique employed in encouraging the 'spirit' to leave the sick person was that of propitiation, using foods and sweet-smelling flowers and perfume.\(^{151}\) These two techniques also play an important part in the prescriptions for medicine included in PS, not only in the selection of materia medica, but also in certain practices associated with its preparation and in the terminology used.

The concept of an antagonistic relationship between medicine and illness fits well with concepts prevalent in modern medicine, where drugs are frequently directed towards specific micro-organisms. Although in traditional Thai medicine the microbial origin of some illnesses was not known, certain terms used in Thai prescriptions reflect basic conceptual similarities between the two systems. An example of such terms occurring in PS is in the prescription of medicine which is said to "cut the root" (tat rāk) of the illness.\(^{152}\) The choice of terms suggests that illness is a living entity, in this case a plant, or a plant-like thing. This notion of an antagonistic relationship between medicine and illness also appears to be carried over into the selection of some of the animal and plant ingredients contained in prescriptions in PS.

\(^{150}\) Davis (1984), p.104.
\(^{151}\) See PS:1:52.
\(^{152}\) PS:2:210.

\(taphan\) (see PS:1:137; McF, p.839) These terms appear to be cognate with the Malay sawan which refers to two children's illnesses, 'oral thrush' (candidiasis) and 'convulsions' (Wilson (1985), pp.125-127). In the Thai case, though saphan has been translated as "convulsions" (Anuman (1965c), pp.155-156), the description of the illness indicates a more complex condition. The symptoms include loss of colour or blueness of the hands and feet, trembling of the body and a rigidity of the jaw. Death may result.
The efficacy of ingredients included for the purpose of expelling 'spirits' appears to be related with their beneficial "power". These substances form part of the pattern of Thai beliefs mentioned earlier in this work involving "power", and "high" and "low" things.153 "Powerful" substances play an important role in connection with Thai beliefs regarding 'spirits', since it is believed that they may protect the individual or the household from their harmful influence. Amulets, yan154, tattoos, and a variety of other sacred objects, including some made of certain types of plants and from parts of animals, are all believed to be effective in warding off 'spirits'.155 Most of the ingredients of animal origin and a number of those of plant origin included in the prescriptions also possess some "powerful" quality.

The animal parts included in prescriptions in PS are almost without exception derived from animals which are powerful or dangerous. For example, the ingredients used in the treatment of krasai include parts of tiger (teeth, bones),156 rhinoceros (horn), elephant (tusk), reticulated python (bones, bile), and crocodile (teeth). Of these animals the parts which are utilised generally appear to be those most associated with their power.157 Even the parts which are derived from domestic animals, or others not generally

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153 See Chapter 2, p.20, and Chapter 6, pp.163-164.
154 From Sanskrit yantra, "a mystical diagram supposed to possess occult powers" (MMW, p.845).
155 Anuman (1965b), pp.283, 284, 289, 291; Anuman (1954), pp.104, 107-108, 110, 117, and 146; Terwiel (1979), pp.74, 75, 77. Some of these substances were believed, as Textor (1960) has indicated, to be inherently powerful (p.152); generally, however, the investment of substances with "power" is accomplished by the performance of various ritual practices, conferring the power by the association with powerful things (Terwiel (1979), p.75). This process of pluksëk may consist of the recitation of verses (khâthâ) while preparing the medicine, or of blowing over the substance (ibid., p.77). Blowing over the substance is also practised in Lao medicine (Pottier (1972b), p.177). Objects, particularly amulets, may also be "charged" through the Phutthaphisek ceremony (See Terwiel (1979), p.78). The identity of the person preparing or prescribing the medicine is also important, as he should be in possession of some esoteric knowledge, a good reputation, or be otherwise distinguished in order to enhance the effects of the prescription (ibid. p.251).
156 Although often taken to mean simply "tiger", the term su'a which appears in prescriptions may refer to most of the genus Felidae.
157 One notable exception seems to be bile. As its popularity among some Thais as a tonic medicine for the treatment of chronic illnesses shows, snake bile is still used widely as a medicine. The gallbladders of snakes and other animals, especially bears, dried specimens of which are often seen on display in traditional medicine shops and at up-country markets, are also believed to have medicinal value. One possible explanation for the particular value placed on the gallbladder is that the bitter taste of bile is associated with medicine. As will be seen later in this discussion, taste is a
regarded as fierce, usually represent strength or some unusual or powerful attribute. For example from the buffalo, horns and bones are used, from the cow, bones, dung, and urine, from the pig, the tusks, from the goat, bones, musk from the civet or musk deer, and horns from other types of deer.\footnote{158}

There may be links with Chinese medicine in respect to this use of animal parts. Substances of animal origin are not among the usual constituents of Indic prescriptions, although they may be used in exceptional circumstances.\footnote{159} Animal parts do play an important part in the Chinese materia medica, however. The fossilised bones of animals, sold as "dragon bones" are, for example, highly valued in traditional Chinese medicine.\footnote{160} Among living animals the tiger in particular is considered to be a valuable ingredient in folk medicine:

The tiger is an animal of the \textit{Yang}, the principal among the hundreds of species of quadrupeds. It can grasp spectres, tear asunder and devour them. People nowadays, if they suddenly meet with ill, burn or roast some tiger's skin, and consume it with water, a claw or nail of the beast, if bound to the body, may also avert evil and is very efficient.\footnote{161}

In addition to the use of the body parts of the tiger, its image was also regarded as effective in the treatment of illness, and obstinate fevers are said to have been sometimes treated by reading treatises on tigers.\footnote{162}

Some of these practices may also be seen in Thailand. For example, among Central Thai villagers a treatment for mumps (\textit{khāng thūm}) includes the drawing of the Chinese character for tiger (\textit{ffu}) on the swollen cheek.\footnote{163} The character may then be covered with

\footnote{158}{prominent feature of Thai medicinal classification. While the power of the animal appears to be the primary basis for its selection as medicine, taste may well serve as an important criterion in the subsequent choice of the part of the animal possessing the most value.}

\footnote{159}{Certain other animals, usually whole, not mentioned here are also used in specific prescriptions in PS. The basis for the inclusion of some of these will be discussed later in this chapter.}

\footnote{160}{See Zimmerman (1982) for a detailed examination of the role of meat in Indic medicine (esp. pp.212-213).}

\footnote{161}{Andersson (1934), pp.74-76, 81-82. Jones (1942) commenting on the medicinal value accorded to fossilised bones in America as well as China, noted that this was centred on their fortifying or strengthening powers (p.163). It seems likely that this is an example of analogous treatment based on the durability of the bones. More will be said of this type of treatment later in this chapter.}

\footnote{162}{Ying Shao \textit{Fung-suh t'ung i} (in De Groot (1910), vol.6, p.955).

De Groot (1910), pp.963-964.}

\footnote{163}{Mr Preecha Juntanamalaga, personal communication, April 1984.}
an adhesive plaster.

Included among the substances of animal origin are excreta. As Leach has observed, such substances as blood, faeces, urine and semen are valued as medicines in many cultures, which he attributes to the power derived from their polluting nature.\textsuperscript{164} The Ainu, for example, believe that the offensive smell of menstrual blood smeared onto the lesions of smallpox expels the demons responsible for that disease.\textsuperscript{165} Interestingly, in the light of the discussion of polluting substances in the previous chapter, in Thai medicine not all excreta are used in this way.

Though the urine and faeces of certain animals are used in treatment, other excreta, in particular blood are not included in the materia medica of PS. Also it is only animal excreta which are utilised, and human faeces and urine are absent from the prescriptions. The reason why human blood and other excreta were not used may have been because they were regarded as being too powerful, and likely to endanger the life of the patient.\textsuperscript{166} However this does not seem to explain why animal blood was also not utilised. It may be that the basis for the inclusion of animal urine and faeces is simply their unpleasantness, rather than because of any "powerful" qualities which may be attributed to them.

A number of the common plant ingredients found in prescriptions also appear to have been accredited with a high magical value in ancient Thai belief. This is often reflected in stories regarding the origin of knowledge regarding their medicinal properties. For example the combination of medicines named \textit{benčhakūn} is said to have been discovered by six \textit{ru'sī} ('hermit sages'). Five of the sages each contributed a medicinal herb (\textit{dipli}, \textit{chaphlū}, \textit{sakhān}, \textit{chéttamūnphlōēng}, and \textit{khing})\textsuperscript{167} each of which treated a different affliction. The sixth \textit{ru'sī} is said to have combined the five in a single compound which could be used to treat a wide range of afflictions.\textsuperscript{168} In another story, four sages are said to have imparted the knowledge that the combination of \textit{nāt} leaf,\textsuperscript{169} \textit{bōraphet} vine,\textsuperscript{170}

\begin{footnotesize}
164 Leach (1964), p.38. See also the discussion of Thai beliefs regarding the power of excreta in the previous chapter, pp.164-165.


166 Terwiel (1979) notes that excrement, menstrual blood, and a substance derived from corpses (\textit{namman phrāl}) are invested with dangerous magical power because they are polluted and offensive. These substances are usually employed in "very aggressive magical practices" (pp.93-94).

167 That is, fruit and flowers of long pepper (\textit{Piper longum} L., Piperaeeae), leaves of wild betel (\textit{Piper rostratum} Roxb., Piperaeeae), wild pepper vine (\textit{Piper} sp., Piperaeeae), \textit{Plumbago} root (Plumbaginaceae), and ginger.


169 See above p.200.

\end{footnotesize}
matūm leaf,\textsuperscript{171} and phakkhrat\textsuperscript{172} leaf are beneficial in the prevention of aging and the prolongation of life.\textsuperscript{173} These stories have something in common with the expression ṣā phī bōk ('medicine told by the spirits') which villagers still give as an explanation for the origin of some medicines.\textsuperscript{174} The prescription is usually said to be imparted by the spirit in a dream, vision, or in an encounter in an isolated place in the forest.\textsuperscript{175}

Some plants, for the most part members of the family Zingiberaceae, including ginger (khing)\textsuperscript{176} mentioned above, appear to have a ritual significance across a number of Tai groups.\textsuperscript{177} In Lao medicine ginger is believed to be effective in the killing of spirits.\textsuperscript{178} While there is little evidence for this belief among the Central Thai, ginger is certainly included in most of the prescriptions in PS. Rather than for reasons of its pleasant flavour, this may in fact be because in ancient Tai medicine it was valued for its power to kill 'spirits'.

Another important plant substance used in traditional Thai medicine is wān. The term encompasses a broad category of tuberous or succulent plants which does not match any one scientific genus.\textsuperscript{179} Many plants included in the category wān are believed to

\textsuperscript{171} Aegle marmelos (L.) Corr., Rutaceae (Ibid., p.401).
\textsuperscript{172} Spilanthes paniculata Wall. ex DC., Compositae (Sa'āt (1982), p.317).
\textsuperscript{173} Mulholland (1979a), pp.105-6.
\textsuperscript{174} Sri Sawaphang (1918), p.232; Anuman (1954), p.100. See also Textor (1973), vol.2, p.111.
\textsuperscript{175} A text included in the royal edition, the Khampī hat hu'at, begins, for example, with the explanation that it was "compiled by a Phrarii'sī whose name is not known". There are also similarities here with a story appearing in the Khampī prathom ķhindā concerning Rōkkhāmarit, the teacher of Chiwokkōmāraphath who is said to have been Buddha's physician. Whenever he walked in the forest the plants are said to have called out to him, telling him of their properties. Only he could hear them. In this way Rōkkhāmarit is said to have acquired a knowledge of the medicinal properties of forest plants (PS:1:49-50). This mode of acquisition of knowledge of medicinal knowledge appears to be widespread among peoples throughout the world. See Ackerknecht (1946), p.151.
\textsuperscript{177} Pottier (1972a), p.287; (1972b), pp.176,190.
\textsuperscript{178} Pottier (1972a), p.287.
\textsuperscript{179} Textor (1960), p.64.A large number of plants termed wān have tubers or bulbous roots such as sedges and flags (MTP, p.125; NMT, p.114). This is not always the case since the category also includes a number of succulents. Aloe vera (wān hāng čhɔrakhē or 'crocodile tail' wān, Aloe vera L., Liliaceae) is one type of wān which has recently been widely promoted in Thailand as a traditional medicine. The popularity of Aloe vera in Thailand, which appears to have followed the recent promotion of in the West, may also owe much to the reputation of the broad category wān as being
have medicinal properties. The association of this group of plants with medicine is such
that in some cases the word wān appears to be used to represent the class in general, as
seen in the compound expression wānyā.\textsuperscript{180} Some types of wān are said to be
pharmacologically effective, being employed for example to counteract the effects of
poison.\textsuperscript{181} Others are believed to have magical power, and this is probably the reason for
the use of certain types as antidotes to snake bite, and for the conferring of
invulnerability.\textsuperscript{182} This is also a likely reason for its place among the great variety of
materials used by the Thai for the fashioning of amulets.\textsuperscript{183} In some Central Thai
communities certain types of wān are believed to afford protection against 'spirits', and are
consequently worn on the body in the form of amulets.\textsuperscript{184} According to Anuman wān
may also be used as poisons.\textsuperscript{185} Harmful effects of some types of wān were also noted
by Textor:

There is a traditional belief [at Bang Chan], now almost dead, that the
winter's east wind produces sickness — not because easterly winds are a
symptom that the cold season has arrived, but because these winds are
believed to blow from forests where wān grows wild.\textsuperscript{186}

In contrast to other powerful substances, which generally derive their potency from
practices carried out to "charge" them or from symbolic associations, the efficacy of plant
substances such as wān and ginger seems to be related to their biochemical properties.\textsuperscript{187}
In particular smell is an important feature, since the rhizomes of many members of the

\textsuperscript{180} PS:1:50, 261.
\textsuperscript{181} Anuman (1965a), p.139-140; McF, pp.769-770.
\textsuperscript{182} Textor (1960), pp.64, 96-98. Archaimbault (1958) notes a similar belief in the efficacy of tubers of
wān against 'spirits' in Laos (p.321).
\textsuperscript{183} See Terwiel (1979), p.74.
\textsuperscript{184} Textor (1973), p.752, note 7.1.
\textsuperscript{186} Textor (1960), p.66. Anuman (1954) describes how in the Northeast it is believed that the potent
effects of a certain type of wān may turn a person into a phi phŏng, a 'spirit' which may be attracted
to the areas underneath houses at the time of childbirth. If speared, the weapon may be seen when
recovered at daybreak, to be embedded in the stalk of a wān plant (pp.107-109).
\textsuperscript{187} Textor (1973), for example, noted only two wān items which were perceived primarily in
supernatural rather than natural terms (vol.2, p.96).
wān category are aromatic. This also applies to other plants included in the materia medica. For example bai nāt, mentioned above, is regarded as effective in the repulsion of 'spirits'. Other ingredients appearing commonly in prescriptions in PS including camphor, and herbs such as basil, mint, and lemongrass also contain volatile oils. In the past the smell of burning bones, shells or animal hair may also have been employed to ward off 'spirits'. The association between smell and ritual and medicinal value is also a feature of other cultures, and plants with these properties may be regarded as effective in expelling or warding off malign spirits. The juniper, for example, is employed by the Sakhalin Ainu as a purifying agent to remove the contamination of sickness or death.

Speaking of Lao beliefs regarding the use of ginger and related substances, Pottier has similarly attributed their ability to kill 'spirits' to their intrinsic properties:

The essence of a medicinal plant, the "subtle part" in which resides its efficacy, is designated ...by the word phit, which also signifies "poison", or "toxic substance".

The use of the term "poison" here to refer to the active principle of the plants is of interest. As noted in the previous chapter, the meaning of the word phit is problematic in Thai, having a range of meanings, from "poison, venom, anything actively injurious" to "power, effect". The modern spelling of the word (วิส) appears to be recent in origin and corresponds to the Pali vis, meaning "poison, venom". In the Bradley Dictionary of 1873 the word is spelt differently, as วิส, and though it is defined as "poison" this spelling corresponds to a different Pali word, visama, which has a wide semantic range including "uneven, disharmonious, disagreeable, and badness". The Malay word bisa

188 Anuman (1962a), p.243. Anuman adds that unlike the smell of another plant used in the repulsion of 'spirits' sāp lāeng sāp kā (Blumea aurita DC., Compositae (Sa'at (1982), p.537), that of bai nāt is not totally offensive. The smell is more akin to the strong odour of kārabūn (camphor, Cinnamomum camphora (L.) J.S. Presl., Lauraceae (PCR, p.90)), which is disagreeable to 'spirits'.
189 Kārabūn (see previous note).
192 Pottier (1972a), p.287.
193 Chapter 6, pp.162-163, fn.53.
194 MCF, p.590.
196 PTS, p.638.
197 Ibid., p.639.
which is also apparently derived from Sanskrit may also mean "power". Comparing this range of possibilities with the ways in which medicinal plants such as kbing and wän are used in the management of 'spirits', it would appear that "power" might be the most appropriate gloss for phit.

The relationship between illness and medicine is sometimes described in terms suggestive of propitiation. Pottier, speaking of Lao medicine, has juxtaposed offerings, those things designed to appease or propitiate the spirits (Thai liang phít), with medicines, the purpose of which is to kill them. In the case of Thai prescriptions, however, this distinction is not so readily made, since there is strong evidence to show that the contents of prescriptions are, in part, intended to "please" the illness. For example, in the Phrakhamphi krasai, the illness is described as "liking" (chöp) certain medicines which are the most effective. In this context the usage is consistent with both the naming and description of krasai which, as will be recalled, depicted the illness as animal-like. The use of the term chöp is not restricted to the illness category krasai, however, and appears in other texts and in relation to other illness categories, such as säng. The inference seems to be that just as the symptoms of the illness resemble those of an animal, so does it prefer certain types of foods. Treatment consists of feeding the illness with these foods, so satisfying its appetite and causing it to release its grip on the patient.

There is further evidence which indicates that perhaps even the medicine itself may be regarded as animate. For example in another section of the Phrakhamphi krasai the medicine is said to "like" the illness. This usage also occurs with other illness categories such as rammanät ('gingival and periodontal diseases') and ritsiduang ('chronic illnesses').

The concept of medicine as propitiatory may well help to explain why many of the ingredients of Thai prescriptions are those used in everyday cooking. A cursory examination of the prescriptions in PS reveals a number of familiar herbs and spices. These include mäengrak ('basil'), kraphraw ('mint'), khā (galangal), ginger, nutmeg, lemon grass, black pepper, kaffir lime leaves, tamarind, and sesame seeds. The importance

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200 PS:2:212
201 Phrakhamphi prathom čhindā, PS:1:140.
203 Khamphi sappakhun, PS:1:277. See Chapter 4, pp.104-105, for a discussion of rammanät.
204 Khamphi sappakhun, PS:1:283. Ritsiduang was previously discussed in Chapter 4, p.96.
205 The case of ginger is somewhat ambiguous since as argued above it also appears to have value in warding off 'spirits'. Perhaps it is antagonistic towards some 'spirits' and propitiatory for others.
of taste in making the medicinal preparation palatable, and in the selection of medicines has already been noted earlier in this work, as have regulations regarding which foods may be eaten during illness. In the context of the discussion above the role of these criteria in enhancing the appeal which medicines may hold for animal-like entities should also not be discounted. In fact the idea that medicine is a form of propitiation of the illness fits well with certain precautions which appear to be taken during its preparation to ensure that 'spirits' do not come and rob the mixture of its goodness.

Among the precautions taken to ensure that medicine retains its properties are the placing of a chalew over the pot during preparation, and the prevention of shadows from falling across the mixture or plants during collection, a practice also prevalent in the Northeast. It has also been reported that in Central Thailand medicine was believed to lose its virtues in the presence of death.

The obvious attraction which the medicine holds for 'spirits' and the care which is taken to ensure that the goodness is retained until it is ingested suggests that the preparation is intended for a 'spirit' inside the patient. In a way which resembles the offering of delicious foodstuffs to the 'spirits' in other contexts, the taking of medicine may, at least in part, consist of the feeding of the illness. The text may thus be read as if the medicine were a form of propitiation for the illness.

The mechanism by which medicines are thought to act on illnesses is therefore complex in nature, and there is evidence for both a role as food for the illness as well as that of an antagonist. The description of the relationship between illness and medicine is in either case consistent with the conception of illness as a living entity of some sort, as presented in the previous chapter. As will be seen this conception is further exemplified in the third category of constituents of prescriptions, those included through analogy.

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207 The chalew which is also known, mainly in northern areas, as talew, is an interdiction symbol consisting of a star-shaped device made from interwoven bamboo splints (Anuman (1954), pp.146-148; Terwiel (1980-81), vol.2, pp.115-116; Davis (1984), pp.159-164.). In the context of therapeutics it is attached to the opening of the pot in which medicine is prepared, apparently to ward off 'spirits' which might come to consume the essence of the medicine before it is taken by the patient.
209 Anuson (1931), p.3.
210 Mrs Phaengdi Sinhota, personal communication, March 1984.
7.7. Treatment of Illness by Analogy.

The use of analogy in the treatment of illness is a feature of traditional medicine in many cultures. The first detailed examination of the phenomenon was probably that of Frazer in the nineteenth century. Under the label of "sympathetic magic" he described the treatment of illness by means of attempts to transfer the desirable qualities of certain objects to the human body. Frazer recognised two ways in which this could be achieved, which were by "homeopathy" and by "contagion".\textsuperscript{212} By homeopathic magic Frazer meant the "association of ideas by similarity", that is one object shares an aspect of the object's existence or state.\textsuperscript{213} By contagious magic he meant that an object may derive its potency simply from close physical contact, or have been part of another object.\textsuperscript{214}

When applied to the treatment of illness sympathetic magic usually involves the selection of materia medica, or other therapeutic practices, on the basis of their relationship to some salient characteristic of the illness. To use an example given by Frazer, the treatment of a case of jaundice might include things which are yellow,\textsuperscript{215} together with things which are red to restore a healthy red complexion.\textsuperscript{216} In this respect, the effect is homeopathic. As the source of red, however, the hairs of a red bull were used, an effect derived through their "contagious" relationship to the red object.\textsuperscript{217}

Treatment and illness are thus related on a symbolic basis. As Turner concluded in his study of the role of symbols in the Lunda treatment of illness:

\begin{quote}
The pharmacopoeia for each disease is nothing less than a description of the disease in symbolic terms and a statement of the attributes of health and wholeness.\textsuperscript{218}
\end{quote}

Thus Turner saw the purpose of the Lunda's use of red medicine in the treatment of bilharziasis, an affliction characterized by the presence of blood in the urine, as to "reveal the essential character of the disease".\textsuperscript{219} In this regard Turner's view is more consistent with the role which we have seen metaphor play in Thai descriptions of illness.\textsuperscript{220} Indeed, even Frazer's description of magic closely parallels the classifications of metaphor which

\textsuperscript{212} Frazer (1936), part 1, vol.1, pp.52-53.
\textsuperscript{213} Turner (1967), p.304.
\textsuperscript{214} Ibid., p.305.
\textsuperscript{215} Frazer (1936), vol.1, part 1, pp.79, 81.
\textsuperscript{216} Ibid., pp.78-9.
\textsuperscript{217} Ibid., p.79.
\textsuperscript{218} Turner (1967), p.304.
\textsuperscript{219} Ibid., p.304.
\textsuperscript{220} See Chapter 6.
were presented in Chapter 3, "homeopathic magic" being equivalent to "similarity" and "contagious magic" to "contiguity".

Metaphor, of the visual variety, has also played a role in some of the major medical systems including Western medicine. Their similarity to the human form was seen as an explanation for the use of ginseng by the Chinese for the treatment of impotence, and of mandrake by the Hebrews and the Greeks for the treatment of sterility. Similarly the basis of the so-called "Doctrine of Signatures", which played a an important part in Western medicine during the early Renaissance, was the recognition of a resemblance between the medicine and the illness. According to this theory the Creator, in providing herbs for the service of man, had marked on them the sign of their medicinal value. As Paracelsus wrote:

Behold the Satyrion root, is it not formed like the male privy parts? No one can deny this. Accordingly magic discovered it and revealed that it can restore a man's virility and passion. And then we have the thistle; do not its leaves prickle like needles? Thanks to this sign, the art of magic discovered that there is no better herb against internal prickling.

As in the metaphoric associations which were discussed in an earlier chapter, the relationship between medicine and illness may also be indirect. The Ainu use of menstrual blood in the treatment of smallpox on the basis of its offensive smell has already been mentioned above. As an alternative, however, red bog moss may be substituted for menstrual blood in the treatment of smallpox owing to its similar appearance. Although the initial association was olfactory, the secondary association was based on visual criteria.

Analogy may also play another important role in the selection of materia medica which is the linkage of the treatment to the name of the illness. In this case, rather than the appearance of the illness determining the substance selected, ingredients bearing the name of the illness or derived from an object so-named are included in a prescription. For example among the Sakhalin Ainu a "dog headache", named for its resemblance to the sound of a dog gnawing on a bone, is treated by a paste made from a dog's skull ground into a powder.

Most of these processes are also evident in Thai medicine. As well as affecting the

221 Wootton (1910), vol.1, p.183.
222 Ibid. See also Foucault (1970), pp.25-28.
224 Chapter 3, p.60.
226 Ibid., p.39.
inclusion of certain items in the *materia medica*, analogic effects also determine other forms of treatment, and practices associated with illness and childbirth such as the dietary regulations discussed earlier in this work.\(^{227}\) For example in Northern Thai culture, during pregnancy bananas are avoided since they would cause the baby to become too fat and make delivery difficult.\(^{228}\) A wind (*lom beng*) is believed to effect childbirth, thus water in which has been soaked plants whose names contain the word *lom* may be administered to strengthen contractions.\(^{229}\) Post-partum, white foods are eaten to enhance the mother's milk supply.\(^{230}\)

In Southern Thailand a treatment for a back sprain (*khlet*) also involves analogy. The patient sits with his back to the 'doctor' who takes a length of cloth\(^{231}\) and holding it along the spine, crumples it tightly into a ball close over the site of the pain. While this is done the 'doctor' whispers a *khīthā* which is continued as he subsequently pulls the cloth taut again along the length of the spine.\(^{232}\)

Treatment by analogy has also been reported in Central Thailand. Landon has remarked on the treatment of urinary calculi using crushed calculi passed in the urine.\(^{233}\) McFarland notes the use of a charm in the form of a ring made from the tendrils of a climbing shrub *kōng kāep* for the treatment of toothache.\(^{234}\) The probable reason for the use of this plant is that the tendrils resemble small worms in appearance. The origin of the association between worms and toothache lies in the Thai expression for toothache, *māeng kin fan*, which literally means 'worms eat the teeth'.\(^{235}\)

Analogous associations are also to be found in prescriptions included in the texts of traditional medicine. In the treatment of the types of *krasai* named after animals, discussed in the previous chapter, such ingredients are especially noticeable. For example, one of the prescriptions for the treatment of 'catfish' *krasai* involves the preparation of a curry (*kāeng*) of catfish.\(^{236}\) One prescription for the treatment of 'termite' *krasai* specifies the use of [a piece of] termite mound (*pluak thāen nu'ng*) and one ants' nest (*rang mot lī*

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227 See Chapter 2, pp.21-25.
228 Mougne (1978), pp.72-73.
229 Ibid., p.75.
230 Ibid., p.79.
231 In this case a *phākhāwmā*, an item of male apparel similar to a sarong which is also used by villagers for a variety of other purposes such as carrying things.
232 Field notes Bān kradang ngā, Sathingphra District, October 1986.
233 Landon (1939), p.147.
235 See previous chapter p.176.
Similarly 'eel' krasai may be treated with an eel curry, and 'doctorfish' krasai with a curry incorporating several 'doctorfish'. 'Doctorfish' curry also includes a plant called 'doctorfish gills' (ngu'ak plā mō). The use of materia medica which share some aspect of the condition they are used to treat is found elsewhere in the texts. For example in a prescription for the treatment of an illness called ru'an kin kradāk (literally 'ru'an which eats the bones') are the bones of an elephant, goat, white buffalo, and a black dog. Prescriptions for the treatment of hat ('measles') may include the plant phak hōm hat, apparently on the basis of its name. Included in a prescription for dysmenorrhoea are the flowers and pollens of a range of plants such as ćhampā, mali, kradang ngā, bua luang, dōk kham fōi, fāng sen, and lu'at rāet. These flowers are either sweet-smelling or red. Their use appears to be based on an association with the term dōk lōhit ('blood flowers') which is used in the

237 PS:2:203. According to PCR, mot ī is "a type of nest-building ant" (p.714).
238 PS:2:201.
239 Acanthus ebracteatus Vahl., or A. ilicifolius L., Acanthaceae (PSYT, vol.1, p.155; Perry (1980), p.1). The illness is said to result in an arthritic condition (hai khat nai khō). Ru'an usually refers to parasitic or chronic skin diseases. Included in this category is leprosy (khī ru'an, rōk ru'an) and perhaps also ringworm (klāk).
240 The illness is said to result in an arthritic condition (hai khat nai khō). Ru'an usually refers to parasitic or chronic skin diseases. Included in this category is leprosy (khī ru'an, rōk ru'an) and perhaps also ringworm (klāk).
241 Text has sāng which is a NE Thai or Lao cognate of the Central Thai chāng. Rather than indicating that this text is of NE Thai origin, the spelling here is probably a printer’s error due to the similarity between the letters ɬ (s) and ɬ (ch).
242 PS:2:98.
243 In the traditional texts the semantic range of the term hat also includes rubella and a number of similar conditions which modern medicine categorises as separate illnesses.
244 Khamphi hat hu'at, cat.no. 1, Medical Catalogue 3.
245 PS:2:71.
246 Michelia champaca L., Magnoliaceae.
248 This term may refer to trees in the genera Artabotrys and Cananga, Annonaceae most of which have sweet-smelling flowers. See PCR, p.24.
250 Bixa orellana L., Bixaceae, commonly known as annatto. This plant is an important source of red colouring for which it is used as a dye and in food preparation.
251 Caesalpinia sappan L., Leguminosae. The wood is an important source of red dye.
252 A small shrub with red flowers (unidentified, possibly Knema globularia Warb., Myristicaceae (Sa'at (1982), p.483)).
text as an alternative term for the ovaries (tūm lōhit, literally 'blood glands').

7.8. Conclusion

To briefly sum up the findings presented in this chapter, it is clear that the treatment of illnesses in the texts of Thai medicine is heterogenous in nature. Treatment may involve a variety of strategies including the administration of medicine, dietary regulations, and ritual practices. In all of these areas imaginative processes similar to those which affect the classification of illness were found to play an important role. These imaginative processes serve to both confirm and consolidate the diagnosis, the close link between classification and treatment supporting Kleinman's claim that therapy begins with the naming of the illness.

These findings also have important implications for the interpretation of the efficacy of ingredients occurring in prescriptions. The first of these is that they help explain the large size of prescriptions and the wide variety of ingredients used in traditional Thai medicine. A second implication is that efficacy may be based on a number of grounds. In addition to the pharmacological action of a particular ingredient, these include selection on the basis of Indic humoral theory, taste, analogy, and on the concept of illness as the invasion of the body by an entity of some sort. From this it follows that the occurrence of a substance in a prescription per se does not indicate that it either has pharmacological properties, or that its inclusion is based on any pharmacological properties it may possess.

Just as there were found on close examination to be no distinct boundaries between "symptoms" and other non-pathological phenomena, so do the boundaries separating medicine, magical practices, and food appear to be poorly defined. As Van Esterik has noted, "The issue is not whether they [ingredients] are foods or medicines, but rather that they are all part of the same system which strengthens and refreshes the body." In linking these various domains imaginative processes such as metaphor and metonym serve to relate the experience of illness to other aspects of life. This identification of illness with the familiar environment may contribute significantly to the healing process.

253 PS:2:69.
CHAPTER 8

GENERAL CONCLUSIONS

My point is that illness is not a metaphor, and that the most truthful way of regarding illness – and the healthiest way of being ill – is one most purified of, most resistant, to metaphoric thinking. Yet it is hardly possible to take up one's residence in the kingdom of the ill unperturbed by the lurid metaphors with which it has been landscaped. (from Illness as Metaphor, by Susan Sontag)

The forests and rivers of the kingdom of the ill depicted in the texts of traditional Thai medicine, to extend Sontag's imagery to the findings of the present study, abound in a rich diversity of plant and animal life. In Thai medicine, the kingdom of the ill is a world in which flowers are skin diseases, climbing fish are gallbladder disease, crabs are gastric ulcers, and cholera roams in the form of elephants and buffaloes. Illness resides even in the earth, wind, water, and the heat of the sun. The kingdom of illness is, in fact, a world which closely resembles that of the well, at least for the time when the texts were compiled.

Where for Sontag metaphor represents a "lurid" intrusion onto the landscape, in traditional Thai medicine, as this study has shown, oftentimes metaphor is the landscape. In contrast to the kingdom of the ill described by Sontag, to "purify" the Thai landscape of metaphor would be to dissolve it into a primordial soup. It is this question of the contribution made by imaginative processes to the world of the ill, and the reasons why this might be so, which has guided the exploration of Thai illness classification in this work.

In concluding the study it will be well to first summarise the main findings, and say something of the practical implications these might have for classification theory and notions regarding the efficacy of traditional medicine. Finally, some consideration will be given to the direction of further research in this area.

8.1. Summary of Findings

This study began with a review of some of the work which has recently been done on human categorisation and illness classification. On the basis of the findings of that review it was suggested that illnesses are, like categories in other domains, mental constructions owing their definition to cognitive processes. It was argued that the application of a taxonomic model, which has been a widely-used means to depict the relationships between categories, was inappropriate in the domain of illness. Such a model could lead to the assumption that illness is a well-defined domain, clearly differentiated from non-pathological phenomena.

A taxonomic model also appeared to obscure certain important aspects of illness classification. Prominent among these were the relationship between classification and context, and the role of imaginative processes, particularly trope. Trope, it was argued, could be an important means by which cognitive processes are linked to the body's physiology, especially the immune system. From these findings a hypothesis was developed that the identification of illness in terms of the familiar natural and social environment may represent an important first step in the initiation of the healing response.

With these ideas in mind, an examination was made of the classification and treatment of illness in traditional Thai medicine. The method used in this study involved the comparison of information obtained from two main sources: descriptions of illness and treatments contained in traditional medical texts, and interviews with contemporary practitioners of traditional medicine, their patients, and other people conversant with traditional medical beliefs and practices. These sources were supplemented with information on the medical terminology and practices of other Tai peoples, and historical accounts. An understanding of some of the processes by which Thais classify and treat illness was provided by a comparison of information derived from these different sources.

The primary textual basis for the study was provided by Phāetsāt songkhro, a representative collection of traditional Thai medical texts, with particular attention being given to one text, the Phrakhampī krasai. In general the classification of illness appearing in these texts was found to bear little relation to that of modern medicine. The traditional illness categories described mapped poorly onto those of modern medical science. It was apparent from a comparison of the present-day usage of some illness categories, for example krasai ('kidney disease') and mareng ('cancer'), with their usage in traditional texts that they had undergone a narrowing in semantic range, bringing their meanings closer to those of illness categories of modern medicine.

Superficially the court tradition of Central Thai medicine appeared to be dominated by forms which are Indic in origin. But, as Pottier has observed in Lao medicine, at a deeper level there is considerable evidence of the influence of beliefs which are apparently
of indigenous, or at least Southeast Asian, origin. Thus while the theory, language, and appearance of the medical texts owed much to Indic medicine, on close examination it was apparent that these forms are not necessarily reflected in the contents of the texts.

Differences between features in their Indic and Thai contexts may be found in a number of areas of illness classification, reflecting a re-interpretation in accordance with Thai concepts. For example the meanings of Thai words may vary considerably from those of their Pali or Sanskrit cognates. Similarly, in many cases, it was the form of Indic theory rather than its consistent application which appeared to be important in Thai illness classification. The "four elements theory", for example, served as a convenient division which could be drawn upon in differentiating between specific types of illnesses. But often the emphasis on this form was matched by repetition or overlap in the descriptive content of the illnesses so-classified.

The emphasis on consistency in form rather than content may be a characteristic of Indic medicine as well as of Thai. There is no certainty that the Indic medical practices which entered Thai culture were representative of orthodox practices as opposed to popular medical beliefs. In fact the indications are that the input was from various parts of India, and probably occurred over a very long period of time. The numerical symbolism involving the number "eighteen", to take one example, appeared to be South Indian in origin. On the other hand, some of the drawings depicting the paths of the sen-en seem likely to come from tantrism, probably of North Indian origin. Because of these diverse origins it is likely that the traditional medicine which entered Siam was a mixture of popular and court traditions. To date there have been few studies of the texts used in the popular traditions of Indic medicine, and it is difficult to gauge the extent to which they may have influenced the form of Thai texts. However, it seems probable that elements characteristic of popular medicine, such as beliefs linking illness to malign 'spirits', may have been carried into Thai medicine along with the more theoretically consistent aspects of Indic medicine.

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3 See Chapter 6, p.168.
4 See Chapter 5, pp.121-122.
5 The question of the role played by Indic medical theory in Thai medicine is tied to the more general issue of the extent to which doctrinal Buddhism has been re-interpreted to conform with popular Thai animistic beliefs (see Terwiel (1979), pp.268-269; Wijeyewardene (1986), pp.14-15, 244-245). Whereas in the case of Buddhism the Canon may provide at least a measure of doctrinal consistency, with medicine it is more difficult to isolate orthodox and popular elements.
Thai medicine does not simply show the influence of Indic medicine: there is also evidence of an input from Khmer, Mon, Chinese and, more recently, Western medicine. The heterogenous nature of Thai medicine is particularly reflected in the ingredients of prescriptions. In this context features of Indic origin are but part of a range of influences which have evidently taken place over a very long period of time and, as seen in the incorporation of aspects of Western medicine, are still occurring.

Owing to its dynamic nature, it would be futile to attempt to define a "traditional Thai medicine" as such. It is obvious from the limited study possible here that at different times in history "Thai medicine" has meant different things. The sack of Ayuthaya represents one important crisis in the tradition. Though it is likely that much of the information contained in the nineteenth century texts which survive today was copied from Ayuthayan texts, we cannot be certain that their contents are the same. This is because none of the court texts of that era appear to have survived. The medicine of the late Ayuthayan era was in turn likely to have differed from that prior to its earlier sacking by the Burmese in 1569. Even if it were possible to know what constituted the medical systems of those times, would they be any more representative of "traditional Thai medicine" than the nineteenth century texts on which this study is based? The most that can be said of the features described here is that they were characteristic of Thai court medicine in the nineteenth century, and probably also of the late Ayuthayan period.

Perhaps the major feature of the Thai classification to emerge from this study was the role played by tropes, of which two types, metonym and metaphor, were of particular importance. Metonymy was mainly evident in the formation of relationships of inclusion between illness categories. This allowed certain terms to have a relatively narrow range of meaning in some contexts, but a wider range in others. As evident from the close examination of one illness category, krasai, metonymy also served to determine the number of categories at a given level of contrast through numerical symbolism. In addition, metonymy could provide a means for the naming of illnesses, allowing the name of a major symptom to represent the condition in general, as in the case of ai ('to cough' or 'a [persistent] cough'), and bit ('colicky pain', or 'dysentery').

Metaphor was most evident in the naming and symptomatic description of illnesses. At a basic level, illnesses could be named metaphorically by their resemblance to some familiar aspect of the environment. This seemed to be the case, for example, with ḳk ḍḳk ('a disease characterised by eruptions'), where the name was based on a resemblance

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6 Chapter 4.
8 Chapter 4, p.112.
between the illness and the blooming of flowers.\textsuperscript{9} The role of metaphor was even more evident from the close examination of the illness category \textit{krasai}, which showed that metaphor may also play an important role in the naming and description of specific types of illnesses. At this level, prominent features of Thai classification were the identification of illness with animals or other familiar aspects of the natural environment. Another important feature was the association of illness with dominant cultural symbols, such as spatial displacement in the body and the phases of the moon.

Taxonomic representations are another important feature of the classification of illness in Central Thai medicine. In a study of Northern Thai traditional medicine, Brun and Schumacher found that, with a few minor exceptions, the classification of illness lacked depth, and concluded that the system was characterised by a hierarchical shallowness.\textsuperscript{10} However, as we have seen, the traditional Central Thai medical texts make explicit reference to hierarchical relationships between categories, often specifying the number of types of illnesses. The analysis of the illness category \textit{krasai} also showed that the texts may be explicit in classifying the varieties of "basic level" categories.

It seems likely that such taxonomic representations are also a feature of Northern Thai medicine. Brun and Schumacher's characterisation of Northern Thai medicine as being "non-hierarchical" appears to be based, at least in part, of a failure to recognise the polysemy of certain illness names. Thus terms such as \textit{khai} and \textit{lom}, common to both Central and Northern Thai traditions, may be employed to denote the domain of "illness in general", as well as illnesses of more specific levels of inclusiveness.

While there is an hierarchical arrangement of some illness categories appearing in the texts, however, it need not follow that there is an all-encompassing taxonomic system for illnesses. Such an assumption would be as wrong for Central Thai medicine as it is for Northern Thai.\textsuperscript{11} Further, the role which these taxonomies play in illness classification appears to be quite different from that which observers versed in the Western medical tradition might expect. In general, the findings here support criticisms which have been made of taxonomic models of classification, the most prominent of which being that the taxonomic model does not adequately represent the links which imaginative processes make between illness categories. As we have seen, this is a feature which plays a central role in Thai illness classification.

A number of the other features of Thai illness classifications described here are also at odds with a taxonomic representation. There was, for example, considerable evidence of overlap between categories, in both the vertical and horizontal dimensions or the

\begin{footnotes}
\item[9] Chapter 4, p.108.
\item[11] Ibid.
\end{footnotes}
hierarchy. At the most general level of contrast there were not one, but several terms, differing in etymology and usage, which could denote illness in general, the differences between them not evident from their taxonomic depiction.

At "basic" levels of contrast, the domain of illness was also not well-differentiated from phenomena which were evidently considered to be non-pathological. Metaphor in particular was one means which served to relate illness categories to other domains, such as those of plants, animals, and 'spirits'. In certain contexts it is not possible to clearly differentiate illness from these other domains. This was very evident in the area of treatment where, in some cases, the choice of *materia medica*, terminology, and associated practices reflected a concept of illness as an animal-like entity. These features, characteristic of Thai medicine, fit poorly with the structure of a taxonomic model.

Traditional Thai illness classification might better be seen as a network of associations, all of which contribute to the identification of the illness. This may be achieved by means of the various features of the classification described in this work: the relationship of categories to each other through metonymy; to the natural environment through the medium of animal metaphors; and to the social environment through numerical symbolism, Indic classifications, and concepts of "power".

There is an important role for hierarchical representations in this view of illness classification. A taxonomic classification of illness may, like the other features such as animal metaphors and numerical symbolism listed above, serve to give a sense of order and definition, albeit illusory, to the experience of illness. While Thai illness taxonomies may not withstand close analysis, they may never have been intended to provide a definitive categorisation of illness. On the basis of this study, a taxonomic classification appears to constitute but one of a diverse range of strategies which give form to illness and contribute to healing.

The recognition of these various forms of classification is not new: Mulholland, for example, has recently discussed the provision of "diagnostic alternatives" in relation to the classification of children's diseases. The contribution of the present study, it is hoped, is in showing how these diagnostic alternatives, and the treatments which complement them, form part of a network of associations capable of adaptation and change, and of giving meaning to the experience of illness.

8.2. Conclusions

From the findings summarised above, we may conclude that classifications cannot be considered to be unified, well-bounded systems. Cross-culturally and within given

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12 MTP, pp.94-105.
societies, there may be considerable variation in the way in which phenomena are classified. Classifications reflect dominant cultural features, and they may be heterogenous, with certain phenomena classified in several different ways.

This study has shown that, in the case of Thai medicine, elements derived from a Tai "folk" tradition, Indic medicine, neighbouring Southeast Asian peoples and, recently, modern medicine, all contribute to the classification of illness. None of these traditions in itself provides an all-encompassing system. The classification is rather the result of an interplay between trope and taxonomy, which are brought to bear on the problem of coming to terms with phenomena which are unfamiliar and life-threatening.

An understanding of the complexity of the contribution which these diverse elements make to the classification of illness emerged largely through the methodology employed here. This made use of a synchronic approach, based on a study of the contemporary usage of illness terms, combined with a close examination of historical sources, with particular emphasis on traditional medical texts. Neither source in isolation could provide a complete picture, but a comparison of the two broad types of information made it possible to gain some understanding of the processes by which Thais classify and respond to illness.

That these processes continue to be valid in the context of a modernising health system, is apparent from the ways in which modern concepts of illness are employed in Thai illness classification. The approach used in this study may thus have a useful application in the examination of the interaction between traditional and modern medicine.

8.3. Directions for Future Research

In the course of this study the discussion of a number of aspects and implications of the classification and treatment of illness has, of necessity, been restricted. An aim in future research would be to expand on these areas, of which there are three, consisting of the descriptive and historical aspects of Thai illness classification, cognition and physiology, and the materia medica.

While it enables some general understanding of Thai illness classification, the limitation of the detailed examination of illness categories here to a narrow range of conditions means that the results of the present study cannot be regarded as exhaustive. In further research the scope of the present work should be widened to include a close examination of other illness categories and texts of the Central Thai tradition. A comparison of the findings here with descriptions of illness appearing in texts from elsewhere in Southeast Asia would also be of considerable benefit. In addition to texts
employed by other Tai peoples, those from the Mon, Khmer, Burmese and Javanese\textsuperscript{13} traditions would contribute to a clearer understanding of the significance of the Central Thai material presented here.

There is also need for further research on texts and practices from the Indic tradition of medicine. To date much research on Indic medicine has focussed on the so-called "classical" tradition of Indic medicine, and little work appears to have been done on texts from the "folk" tradition. As we have seen, it is these heterogenous texts, probably originating in the medical traditions of South and Northeast India, and Sri Lanka which appear to have been an important influence on Thai medicine. Research on Thai medicine, and Southeast Asian medicine in general, would benefit greatly from further investigation of that part of the Indic tradition.

Another area of Thai medicine which would bear further investigation in the light of the findings of the present study is the relationship between traditional medical beliefs and modern medicine. This is a complex issue, involving not only the ways in which traditional illness categories are employed by modern practitioners of traditional medicine, but also the ways in which patients interpret the concepts of modern medicine, especially in the clinical situation. Some of the ways in which traditional categories may be reinterpreted in the modern context have been briefly discussed here, but a more thorough investigation is warranted, taking in the way in which modern concepts are interpreted in the context of traditional classifications. Among the other features which might be examined are assumed knowledge, the types and nature of theoretical explanations, and techniques which reflect and contribute to the persuasive aspect of therapy.

The second general area for future research noted above concerns the more theoretical points raised in the course of this work. The main focus in this study was on the relationship between semantics, cognition, and physiology, as they relate to pathology, but some of the findings here suggest that this approach may have a useful application in other domains which are "non-pathological". Thus the role of imaginative processes might be considered in relation to domains in which some of the sensory domains considered here, such as taste, smell, and touch, play a prominent role. The area of diet and cuisine, which was briefly touched on here, would be especially suited to such an examination. Consideration might also be given to concepts relating to child development, learning, and the acquisition of motor skills. Auditory perceptions would be another area where this approach could be applied.

There remains an important area of doubt in this study concerning the physiological effects of the imaginative processes which have been described. Though, from the evidence presented regarding connections between those areas of the brain which mediate

\textsuperscript{13} See Pigeaud (1967) for details of a rich tradition of Javanese medical texts (vol.1, pp.265-268).
language and thought, it seems certain that imaginative processes can affect the immune system, it remains to be shown that this does occur by the means described here. Such studies as would be needed to confirm the hypothesis argued in this work present considerable difficulties for the researcher. Nevertheless, it may be possible that through a multi-disciplinary approach some indication can be gained in quantitative terms of the contribution which the imaginative processes discussed here make to healing.

Materia medica, the third of the areas listed above, will be of particular importance in future research into traditional Thai medicine. This is because the materia medica provides a link between deforestation and primary health care, two areas which are becoming of increasing concern both within Thailand and internationally.

In common with the tropical forests of most regions of mainland Southeast Asia, those of Thailand have in recent years been severely depleted. According to figures published by the Royal Forest Department (1986), the total forested area of Thailand declined from an estimated 273,628 sq.km., or 53.33% of land area, in 1961 to 149,053 sq.km., or 29.05% of land area, in 1985. The implications of this loss of plant and animal resources for traditional medicine are three-fold.

Firstly, from the point of view of modern medicine, tropical forests are widely acknowledged as an important source of medicinal plants, and their disappearance has justifiably provoked considerable international concern. It has been recognised that one way of gaining access to the knowledge of the pharmacological properties of forest plants is by the medical systems of indigenous peoples. Although this may be a very complex task in Thai medicine, a good number of ingredients included in prescriptions possess significant pharmacological properties. However, with the environmental changes which have taken place in Thailand over the last century, it is likely that many of the ingredients appearing in the texts are no longer available. Furthermore, with the introduction of modern medicine, the number of practitioners familiar with medicinal plants, or texts, has also declined. It is thus evident that if there is to be any attempt to investigate the

16 Chapter 7.
17 In this regard it is also possible that the medical texts might provide a useful source for the historical documentation of flora and fauna, especially if a comparison were possible with texts from other Tai groups, or other peoples of the region such as the Mon and Khmer.
18 In the words of Dr Mark Plotkin: "Each time a medicine man dies it is like an irreplaceable library burning down" (The Economist, April 2, 1988, p.76).
pharmacological properties of Thai materia medica, then this should be initiated in the near future.

A second point is that traditional medicine may in itself contribute to the depletion of forest plants and animals. Although, in general, the impact of Thai traditional medicine on tropical forest environments is minor in comparison to that of logging operations and other large-scale development, the demands which it makes on certain plant and animal species may be critical in regard to their survival. This is especially so in the case of threatened or endangered mammals such as the big cats, Asian rhinoceros,19 civets, and deer species,20 all of which appear in prescriptions in Phāetsāt songkhro. An aim of future research into traditional Thai medicine should be to investigate the impact which their medicinal use has on tropical forest species, and if possible suggest ways in which this could be minimised.

Thirdly, the scarcity of resources is in turn reflected in the increasing cost of traditional medicines and thus has an effect on the availability of health care. Prices of traditional medicines are already high. For example in 1986 in a village in Udon Thani Province, Northeast Thailand, prices varied from around 20 baht for a 'package' (chut) of "boiled" medicine (yā tom21) for the treatment of krasai, to 120 baht for "ground" medicine (yā fon22) to treat haemorrhoids (ritsiduang thawan). The relatively high price of the latter was, according to the vendor, due to the fact that it was composed mainly of pieces of the heartwood of forest trees (unidentified) which were "difficult to find". Though a package of medicine sold in this form will usually be taken over a longer period of time than "boiled" medicine, it still represents a significant part of a family's income.23 The Northeast is now the origin of much of the Thai materia medica, and it is likely that prices elsewhere are higher than those quoted here. Such prices are comparable to those of

20 See also Stewart Cox (1987), p.213.
21 That is a decoction, medicine boiled in a pot. A single batch is re-heated and used continuously until it becomes tasteless (MTP, pp.112-113).
22 In this case the medicine is prepared by grinding the ingredients against a stone to produce a fine powder. The powder is usually taken after mixing with hot water, lime juice, alcohol, or some other liquid.
23 On the basis of figures from the 1981 Socio-Economic Survey of Thailand published by the National Statistical Office, the average weekly income of households in Northeastern Thailand was only 628 baht (National Statistical Office (1981), p.22).
modern pharmaceuticals, and it is obvious that, in some cases at least, traditional medicines can no longer be considered as an inexpensive alternative to modern drugs.

The contribution of traditional medicine is important, for despite the progress which has been made in the provision of modern primary health care, there remains a shortage of trained personnel. Thus in rural areas, especially in the Northeast which has a high incidence of treatable illnesses such as gastro-intestinal and respiratory disease, traditional medicine still provides an important complement to modern medicine. The lack of availability of traditional medicines may, in these situations, have a significant effect on the provision of health care.

It is in the context of these two issues of deforestation and the need for adequate primary health care, both of which will become increasingly important in coming years, that future research in traditional medicine should be carried out. The findings of this study suggest a number of avenues which might be pursued. One of these is the value of further textual analysis, particularly involving comparative data, both from other Tai groups as well as from neighbouring cultures which appear to have had a significant influence on Thai medicine, such as the Khmer and Mon. Such work would enable a greater understanding of the classification of illness, and consequently the reasons for the selection of materia medica. Not only would this give an increased knowledge of the ways in which Thais conceptualise illness, but it would also help to isolate ingredients which have pharmacological value.

Future research might also focus on the materia medica used by contemporary practitioners of traditional medicine and their patients. Aspects which might be looked at include the extent to which traditional medicines are used, the relationship between medicine and food, the availability of ingredients, factors which are salient in the determination of their medicinal value, and the degree to which alternative ingredients might be employed. This might allow for the promotion of cheaper ingredients which are less destructive of tropical forest plant and animal species, but are still valuable in the treatment of illness and its prevention.

The findings here also indicate that considerable care should be exercised in the development of programmes to promote traditional medicine. It is clear from this study that the medicinal value placed upon certain substances need not correspond to any pharmacological properties they might possess. It is apparent, too, that because of marked

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regional differences in dialect and environment, both the concepts of illness and medicine may vary widely within Thailand. These contextual factors should be taken into account when selecting "traditional medicines" for widespread promotion to complement modern medicine. For the indications are that the efficacy of traditional Thai medicine is dependent upon a close relationship between classification, treatment, and environment. An understanding of the ways in which these aspects are linked may ultimately have as much to offer as a knowledge of their properties in isolation.
APPENDIX

Index of Illnesses Appearing in *Phāetsāt songkhrō*

Notes

This appendix contains an index of the main illness categories appearing in the three volumes of *Phāetsāt songkhrō* published by the Wat Pho Traditional Medical College Association (Samākhom rōngrian phāetsāt phāen bōrán Wat Phračhetuphon (vols.1, 2, 1961, vol.3, 1976). Entries are given in romanised form and Thai script, ordered according to the Thai dictionary, a key to which is located in the preface to this work (pp.iv-v). The system of transliteration used is that of the Library of Congress.

Since *Phāetsāt songkhrō* consists of a compilation of a number of texts (*khamphi*), the names of the specific texts in which entries appear is given in the third column. The volume and page numbers in *Phāetsāt songkhrō* appear in the fourth column, together with additional notes. These are presented in the form volume no.: page no. (comments). A key to abbreviations used is given below.

In general where the original text contains multiple references to a particular illness category only the main descriptive reference is given. For reasons which are outlined in Chapter 4 this index should not be regarded as exhaustive. The index is intended only as a general reference guide to illness descriptions contained in *Phāetsāt songkhrō*.

**Key to Texts Included in *Phāetsāt Songkhrō***

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<td>Khamphī aphaisantā</td>
<td>LRU Wā duai laksana rōk utčhārathāt</td>
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<tr>
<td>KT</td>
<td>Khamphī thiphamālā</td>
<td>MP Mutčhāpakkhanthikā</td>
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<td>KMR</td>
<td>Khamphī mukkharōk</td>
<td>PKC Phrakhampī prathom ċhindā</td>
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<td>KMS</td>
<td>Khamphī manchusārawichian</td>
<td>PKCh. Phrakhampī chantasāt</td>
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<td>KPCM</td>
<td>Khamphī phaičhitmahāwong</td>
<td>PKCW Khamphī chawadān</td>
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<td>KSS</td>
<td>Khamphī sitthisārasongkhrō</td>
<td>PKK Phrakhampī krasai</td>
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<tr>
<td>KTW</td>
<td>Khamphī thātwiwan</td>
<td>PKM Phrakhampī mahāchōtarat</td>
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<td>KW</td>
<td>Khamphī witthīkuttharōk</td>
<td>PKR Phrakhampī rōknithān</td>
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<td>PKS</td>
<td>Khamphī sappakhun</td>
<td>PS</td>
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<td>Phrakhampī takkasīlā</td>
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<td>Phrakhampī thātbančhop</td>
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<td>Phrakhampī thātwiphang</td>
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Other Symbols and Abbreviations

- **acc.**: according to
- **assoc.**: associated with
- **cont.**: continued
- **descr.**: reference has description of illness
- **=**: the same as
- **?**: text is unclear or ambiguous
- *****: ambiguous illness category
- **#**: order in numbered list of illness categories
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<th>Thai</th>
<th>Source</th>
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<td>ก้าน</td>
<td>see krasai rōk</td>
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<td><em>kasai rōk</em></td>
<td>กัสัยรอค</td>
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| krasai | กั้น | PKR | 2:102 (thống mạn...)
| | | PKK | 2:195 (26 types), 196 (klōn, nām, lom, fai, lon, rāk, lek, pū, čhuk, plā lai, plā mō, plā duk, pluak, lin krabū', taw, dān, thon, siat, fai, nām, chua'k, lom), 212 (7 types; 16 types), 217 (7 types, descr.).
| krasai krabū' | กั้นกระบู่ | PKK | 2:204 (descr.)
| krasai klōn | กั้นคล่อง | KTW | 2:128-9
| | | MP | 2:170, 171 (descr.)
| | | PKK | 2:196 (descr.), 207 (5 types: din, nam, lom, fai [only 4 given]), 208, 208 (...lom; descr.).
| krasai khan | กั้นข่าน | PKK | 2:215
| krasai čhuk | กั้นชุก | PKK | 2:199 (descr.)
| krasai čhuksiat | กั้นชูเผยสืบ | PKK | 2: 21
| krasai čhāe | กั้นช้า | PKK | 2: 218 (descr.)
| krasai dān | กั้นด่าน | PKK | 2:206 (descr.)
| krasai dān thaw | กั้นด่านเทา | PKM | 2:60
| krasai taw | กั้นเทา | PKK | 2:205 (descr.)
| krasai thaw | กั้นเทา | MP | 2:166 ( =krasai lōhii)
| | | PKK | 2:209 (descr.)
| krasai thon | กั้นทอน | PKK | 2:211 (descr.)
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<th>English Meaning</th>
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<td>กระชัยท่องมาณ</td>
<td>PKM 2:49, PKK 2:213</td>
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<td>กระชัยปลัดุก</td>
<td>PKK 2:202 (descr.)</td>
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<td>กระชัยปลา</td>
<td>PKK 2:217 (descr. of lom k.)</td>
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KU 3:59
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| PKR       | 2:112                                      |

<p>| khai kradān hīn | ไร้กระดาหนิน |
| khai kradōng   | ไร้กระโดง |
| khai kradōng klēep | ไร้กระโด่งแกลบ |
| khai kradōng nām | ไร้กระโด่งน้ำ |
| khai kradōng fai | ไร้กระโด่งไน |
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*Notes:*
- KT: Khamtaklam Phra Maha Nakhon Tawang cramped
- PKK: Prakramthai king
- PKM: Prakarnthai magazine
- PKC: Prakarnthai centre
- PKS: Prakarnthai school
- MP: Mahpa phuket
- TW: Thasana (Thai literature)
- KPCM: Khamtaklam Phra Mahannakhon Tawang cramped
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**ph น**

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| ฝัยปายท์ | ฝ่ายปายท์ | PKC 1:138 (meaning 'illness in general'), 198 (meaning 'worm'; causing eleven types of ยิ้มติ้งชัน, listed: ปายท์, ปายติ้งชันท์, ปายติ้งชันท์บอต, ปายติ้งชันท์บอตบอต, ปายติ้งชันท์บอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอต, ปายติ้งชันท์บอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตบอตب
(phalaphana, descr.; phromakit, descr.), 205 (tua ph.), 210 (amunlathā), 212 (mutṣakāiyathā), 214 (suṭhinukkhabhānlabhāra), 215 (kanna; ratchaka; awanna), 216 (phān nōk, descr.)

PKS 1:261 (nai kōng semha [two refs]), 265 (māe ph.khū' klu'an yai, klu'an nōi sai; ph.khū' khī kī kāk), 267 (nai uthon; māe ph.[three refs.]), 268 (māe ph. thang khotchārāt), 270 (māe ph. nai rai fan), 271 (māe ph.nai thōng lae nai fan lae nai hū; ph. an bangkōēt tāē rōk ru'an lac kutthang), 272 (ph. phān nōk affecting the skin), 273 (māe ph.an kōēt tāē fan; ph.kōēt tāē khotchārāt), 277 (māe ph.an kratham hai long thōng), 282 (tua ph.su'ng kratham hai khan tua thua sanphāng), 283 (ph.thōng mān), 288 (twelve types)

TW 2:28 (three types: lom, dī, salēt), 29 (list of eighty types of wātaphāyāt [sic], descr.), 38 (mūn ph.)

PKCW 2:98 (two types, two refs)
PKT 2:187
PKK 2:220
KA 3:28 (eleven types, descr.), 28 (eleven types, descr.)
KSS 3:78
KW 3:99 (descr.)
PKCW 2:98 (ph.n., ph.yai lae klu'an kī kāk)
PKCW 2:98 (ph.nōi, ph.y. lae klu'an kī kāk)
PKS 1:269 (ph.r.khū' phit ēi hai buṭphō)
SW 2:17
**phandu’k**  ณรศิก  
KW  3:96 (*ph.r. arising from kimichāt*)  
PKC  1:50 (symptoms in expectant mother at three months)  
PKS  1:276 (*lom ph.*)

**phrahomakīt**  นครภวคิย  
PKC  1:204 (type of phayāt), 229 (*tān čhōn* called *ph.*)

**phrái kumphan**  ราชบุญกันหา  
KA  3:36 (*fī* called *ph.; tān čhōn* called *ph.* [?]; descr.)  
PKC  1:71 (burial of placenta to ensure that it does not attract *ph.k.*, which will come and eat it then enter the mother’s body)

**phít**  มีช  
PKC  1:88 (*ph.sāng*), 89 (*ph.tān sāng*), 132 (*ph.nai pāk nai kho kāmrōep*), 152 (*ph.fī ᵃt; ph.fī duang diaw*)  
PKTW  1:244 (*ph.kamdaw*)  
PKS  1:261, 263 (*ph. amaphru’k; ph. patakhāt; ph.ngū, takhāp, malāeng pōŋ*), 265 (*ph.fī*), 269 (*ph.fī*), 270 (*ph.ngū haw*), 273 (*lom an mī ph., three types*)  
TW  2:2:43 (*rōk ph.*)  
PKCW  2:94 (*ph. nai sīsa phu’a lōhit phikān*)  
KTW  2:139 (*ph.fī*)

**phung mān**  นงมาน  
PKC  1:63  
PKK  2:205  
PKS  1:288  
KMS  3:53

**phuphōng**  หนผง  
PKC  1:63  
PKK  2:205  
PKS  1:288  
KMS  3:53

**phlēw fai**  เมตวโน  
KA  3:31 (*=plēw fai fā ?*)
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Note: For "muak," the correct term is "m.nai lam sai," and for "muan," it should be "bit puat m."
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mūtarok  มุตรอรก  KMS  3:54-5 (twenty types, unnamed, descr.; m. nāmbaw pen lōhit; m. nāmbaw lu'ang)

mētha  เมทะ  TW  2:37, 40 (two refs)

māengkhrō  แม่งคร้อ  PKT  2:193 (mongkhrō misspelt ?)

māe tangāw  แม่ตางาว  PKT  2:190 (kān called m.t., descr.), 191 (descr.)

māe sāng  แม่ส่าง  KA  3:24 (descr.)

māe rammanāt  แม่รามนานต  PKS  1:269

malāeng khā khaw lū  แมลงคาเข้หู  PKS  1:269

yā

yātōmangsa  ยาโตมังสะ  KMR  3:74 (descr.)

yen  เย็น  TW  2:35

rā

rūn  รุ้น  TW  2:35

rūn phāi nai  รุ้นภายนใน  PKC  1:190

rasomrirōk  ระสมริโรค  TW  2:38

rangkhāe  รางแก  PKS  1:268

rattakhāt  รัตตามำฏ  PKTB  2:148
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**roem námkhāng**

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*lu'at rāi* เลี้ยงระบาย

*lōhit* โหลิต

*lōhit sannibāt* โหลิตสันนิบาต

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<td>TW</td>
<td>2.36</td>
</tr>
<tr>
<td>amaphruʿk</td>
<td>อิมเนกษ์</td>
<td>PKS</td>
<td>1.263 (phit a.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PKR</td>
<td>2.113 (sen a.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LRU</td>
<td>2.159</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KSS</td>
<td>3.85</td>
</tr>
<tr>
<td>amaphāt</td>
<td>อิมมาต</td>
<td>PKS</td>
<td>1.263</td>
</tr>
<tr>
<td>atsadākāt</td>
<td>อิสาสะกาศ</td>
<td>PKS</td>
<td>1.263</td>
</tr>
<tr>
<td>ākhantukasannibāt</td>
<td>อาคันทุก-bsaanนิบับะต</td>
<td>KSS</td>
<td>3.84 (descr.)</td>
</tr>
<tr>
<td>āpḥāt</td>
<td>อานาท</td>
<td>SW</td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PKT</td>
<td>2.132 (two refs.)</td>
</tr>
<tr>
<td>āma-atisān</td>
<td>อามะอัตสาร</td>
<td>TW</td>
<td>2.37 (ā. khū' pen bit yang อน อน)</td>
</tr>
<tr>
<td>utthayakān</td>
<td>อุทภยาค</td>
<td>PKC</td>
<td>1.103 (descr.; see also săng u.), 138 (la called u.), 148 (assoc. săng dāeng)</td>
</tr>
<tr>
<td>Uthonarök</td>
<td>อุทธระคก</td>
<td>KA</td>
<td>3:31 (<em>u.la-ţng</em>)</td>
</tr>
<tr>
<td>-----------</td>
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<td>----</td>
<td>-------------------</td>
</tr>
<tr>
<td>Uthonawät atisän</td>
<td>อุธรวาดอธิสาน</td>
<td>KU</td>
<td>3:59 (eighteen types), 59 (five types, causing elevation of the navel: <em>mān nam</em>, <em>mān lom</em>, <em>mān hin</em>, <em>mān lōhit</em>; descr.)</td>
</tr>
<tr>
<td>Upātikarök</td>
<td>อุปอาทิยะโรค</td>
<td>PKK</td>
<td>2:196 (<em>krasai pen u.</em>)</td>
</tr>
<tr>
<td>Upathon (Upathom ?)</td>
<td>อุปทะ (อุปทะ?)</td>
<td>MP</td>
<td>2:170 (four types, descr.), 171 (<em>upathomarök samrap burut</em>), 172 (descr.), 176</td>
</tr>
<tr>
<td>Urahkhawät</td>
<td>อุระกะวาง</td>
<td>KT</td>
<td>3:94 (type of wannarök, descr.)</td>
</tr>
<tr>
<td>Urumarök</td>
<td>อุรุมาคก์</td>
<td>TW</td>
<td>2:38</td>
</tr>
<tr>
<td>Œpakamikarök</td>
<td>โอปักกามิกก์โรค</td>
<td>LRU</td>
<td>2:156</td>
</tr>
<tr>
<td>Ai</td>
<td>ไอ</td>
<td>PKM</td>
<td>2:65 (five years)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PKCW</td>
<td>2:90 (<em>ritsiduang mongkhrō hūt a.</em>)</td>
</tr>
<tr>
<td>Ai hāeng</td>
<td>ไอแหม่ง</td>
<td>PKK</td>
<td>2:219</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PKM</td>
<td>2:64 (<em>a.h.mai mī semha</em>)</td>
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