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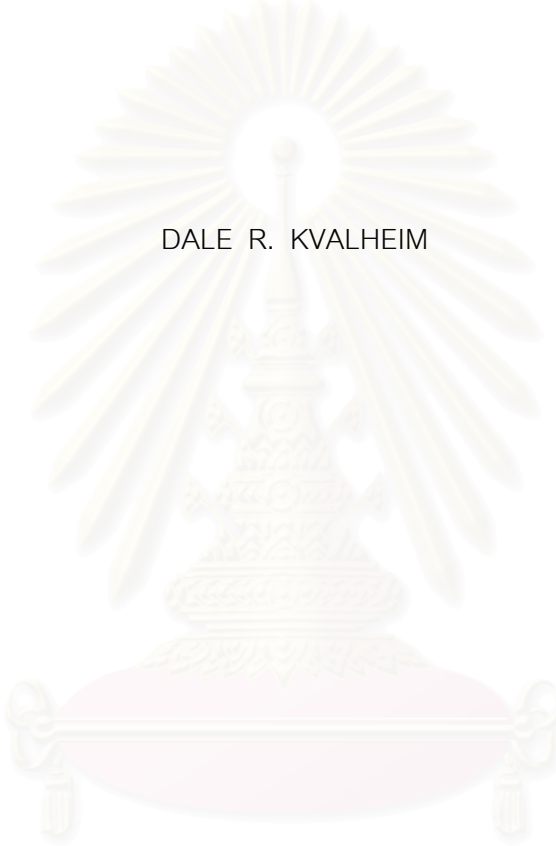
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CONCEPTUAL METAPHORS OF TIME IN THAI AND ENGLISH



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แม้ว่าจะมีการศึกษาอุปสรรคมาเป็นระยะเวลายาวนาน แต่เพิ่งจะมีการเสนอทฤษฎี
มโนอุปสรรคในช่วงสามทศวรรษที่ผ่านมาเอง นอกจากนี้ งานวิจัยเรื่องอุปสรรคส่วนใหญ่
เป็นเรื่องอุปสรรคของสถานที่ และยังไม่มีการศึกษาอุปสรรคของเวลามากเท่าใดนัก

วิทยานิพนธ์ชิ้นนี้เป็นงานวิจัยมโนอุปสรรคของเวลาแบบข้ามภาษา คือ ภาษาไทยและ
ภาษาอังกฤษ มีจุดประสงค์ในการวิจัยคือ วิเคราะห์รูปภาษาแสดงอุปสรรคของเวลา ระบุ
มโนอุปสรรคของเวลาที่แสดงโดยรูปภาษาแสดงอุปสรรค เปรียบเทียบจำนวนและชนิดและ
รูปภาษาแสดงอุปสรรคของเวลาในภาษาไทยและภาษาอังกฤษ

ในงานวิจัยชิ้นนี้ ผู้วิจัยเก็บข้อมูลจากนวนิยายภาษาอังกฤษเรื่อง 3001 : A Space Odyssey
ของ Arthur C. Clarke และนวนิยายเรื่องดังกล่าวที่เป็นฉบับแปลภาษาไทยของ ลักษณะรงค์ ในการ
วิจัย ผู้วิจัยเก็บรูปภาษาแสดงอุปสรรคของเวลาทั้งหมดที่ปรากฏในแหล่งข้อมูลแล้วนำมาวิเคราะห์
หามโนอุปสรรคในทั้งสองภาษาในขั้นสุดท้าย จะทำการวิเคราะห์เชิงปริมาณและหาข้อสรุป

มโนอุปสรรคที่วิเคราะห์ได้จากงานวิจัยชิ้นนี้ได้แก่ “เวลาคือวัตถุเคลื่อนที่” “เวลาคือผู้
สังเกตการณ์ที่เคลื่อนที่” “เวลาคือภาชนะบรรจุสิ่งของ” “เวลาคือทรัพยากร” “เวลาคือผู้ครอบครอง”
“เวลาคือสถานที่” และ “เวลาคือเงินตรา” อย่างไรก็ตาม มโนอุปสรรค “เวลาคือสถานที่”
ไม่พบในภาษาไทย มโนอุปสรรคที่พบมากที่สุด ได้แก่ “เวลาคือภาชนะบรรจุสิ่งของ” “เวลาคือ
ทรัพยากร” “เวลาคือวัตถุเคลื่อนที่” มโนอุปสรรคที่พบน้อยที่สุดคือ “เวลาคือผู้ครอบครอง”

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Although metaphors have been commented upon from time to time throughout recorded history, it has only been in the last three decades that the theory of conceptual metaphors has been proposed. Most research has concerned spatial metaphors. This means that time has not received as much attention.

This paper is a cross-language examination of conceptual metaphors of time in the languages of Thai and English. The research analyzed metaphorical expressions of time, identified the conceptual metaphors of time represented by those metaphorical expressions, and then compared the number, kind and expressions of conceptual metaphors of time operating in Thai and English.

In order to conduct this research, the English novel 3001: A Space Odyssey, by Arthur C. Clarke and a version translated into Thai, by ลักขณรงค์ , were used as a data base. All metaphorical expressions of time appearing in the books were recorded. The expressions were then analyzed. Then the metaphorical expressions were grouped under the conceptual metaphors that were detected in the two languages. Finally, the quantities were analyzed and certain conclusions were reached and generalizations made.

The conceptual metaphors identified in this research were : TIME IS A MOVING OBJECT, MOVING OBSERVER, CONTAINMENT, RESOURCE, POSSESSOR, SPACE, and MONEY. However, TIME IS MONEY and MOVING OBSERVER were not found in Thai. The most culturally coherent conceptual metaphor of TIME operating in English was MOVING OBJECT with CONTAINMENT and RESOURCE following. The least coherent conceptual metaphor was MOVING OBSERVER. In Thai, the most culturally coherent conceptual metaphor was CONTAINMENT followed by RESOURCE and then MOVING OBJECT. The least coherent was TIME IS A POSSESSOR.

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CHAPTER 1

INTRODUCTION

1.1 Rationale

Currently, most cognitive linguists accept the idea that metaphors are a part of the conceptual system and that they not only appear in language, but pervade language (Lakoff and Johnson, 1980, p. ix). However, there has been relatively little analytical research conducted on temporal metaphors, and that research has been devoted primarily to the English language. Nor are there—at least, none that I have been able to locate—any comparative studies devoted to conceptual metaphors of TIME¹ across languages.

Although spatial and temporal metaphors are quite similar in their definitions and the functions they perform in language—that is, they both conceptualize less concrete ideas as more concrete ideas based on experience in order to understand the less concrete ideas—they are quite different and according to Lakoff and Johnson belong to two different categories of conceptual metaphors...structural and orientational. For the most part, temporal metaphors are structural. That is, “...one concept is metaphorically structured in terms of another” (Lakoff and Johnson, 1980, p. 14) Whereas, the orientational category of metaphors “...*organizes* a whole system of concepts with respect to one another” (Lakoff and Johnson, 1980, p. 14). For instance, one example of a temporal metaphor subsumed within the structural category is TIME IS MONEY. In this instance, time is structured around the concept of money and employs terms such as *spend*, *invest*, *budget*, and other similar terms to metaphorize time as money. Thus, we

¹ When referring to the conceptual metaphor of TIME, it will appear in small capital letters to distinguish it from the common usage of time.

derive metaphorical expressions such as: I *spent* two weeks on the beach; Is this project worth *investing* that much time?; We must *budget* our time wisely. However, the orientational metaphors, for the most part consist of metaphorical expressions employing terms that organize concepts in a spatial relationship. For instance, terms such as, up-down, in-out, front-back, and others organize concepts according to their positions in space. An example that metaphorizes time in an orientational manner is TIME IS CONTAINMENT. And, some examples of the CONTAINMENT metaphorical expressions are: He was born *in* 1980; and, He came *out* of the past.

In previous studies the results of the research that has been conducted in the English language have been assumed to be operant in other languages due to the fact that metaphors do, in fact, exist in all languages. However true this may be, it is not good science to assume that findings derived from previous research must of necessity apply to all other languages. In truth, additional comparative studies will find that the conceptual metaphorical systems across languages are quite similar. But, without confirmation provided by the application of appropriate research and analysis, this assumption will remain merely an assumption and possibly an erroneous one. After all, any differences identified may be significant enough to require modification of the current theory of conceptual metaphors.

This study is designed to be comparative at the outset and every attempt is made to examine the metaphorical aspects of time in the Thai and English languages separately in as non-biased a perspective as possible. First, the temporal metaphors were identified and recorded. Then, once the conceptual metaphors of TIME had been identified, a comparison across the two languages was conducted.

Time is a concept that we can only see, feel, and experience indirectly. We cannot see time directly; nor can we touch or otherwise sense time directly. Yes, we mark time with watches, birthdays, and the signs of aging in our faces, but we do not see or feel time. Hence, it is an exceedingly difficult concept to understand. In fact, modern physicists still do not have a precise definition of time. However, not only do we find the concept useful, it is quite often necessary to employ the concept of time for ourselves and to express it to others throughout our daily lives.

Space is defined by motion and motion is defined by an object's relative position in space and time. When one considers only one half of a culture's conceptual metaphorical system—that is, space, without time—then one will find that the data and results derived must provide incomplete answers.

In addition, as proposed by Lakoff and Johnson, “conceptual metaphors are the understanding and experiencing of one kind of thing in terms of another; and, are embodied, universal aspects of the cognitive system” That is, they are relationships created in the cognitive system that are expressed linguistically because—although on the surface, they seem unrelated—those relationships in a person's cognitive system ‘make sense’ and can be—and sometimes must be—communicated to others in an intelligible way. Hence, the two primary relationships that every person shares with his/her environment—that is, time and space—must be systematized in some structured manner and an examination of English and other languages should reveal those systematic structures. Therefore, since this is a cross-language comparison, it is hoped that the collection, analysis, and comparison of conceptual metaphors of TIME in this paper will contribute to a more complete understanding of the role of conceptual metaphors in the human cognitive system.

1.2 Objectives

The data derived from this paper will contribute to the general body of knowledge concerning conceptual metaphors and the human cognitive system. However, this paper is specifically concerned with the following objectives and seeks:

- 1.2.1 to identify, collect and analyze temporal expressions in Thai and English;
- 1.2.2 to identify the conceptual metaphors of TIME that are represented by those temporal expressions in Thai and English; and,
- 1.2.3 to compare the number, kind and expression of the conceptual metaphors of TIME operating in Thai and English.

1.3 Hypotheses

It is hypothesized that:

- 1.3.1 There are some patterns in the expression of time shared by both Thai and English.
- 1.3.2 The conceptual metaphors of TIME in both Thai and English include: TIME IS CONTAINMENT/TIME IS A MOVING OBSERVER/ TIME IS A MOVING OBJECT/TIME IS A JOURNEY/TIME IS MONEY/TIME IS A RESOURCE/TIME IS SPACE/TIME IS A POSSESSOR.
- 1.3.3 English has a larger number, more kinds, and more variation in the expression of conceptual metaphors of TIME.

1.4 Scope of Research

Although some figurative metaphors may appear in the data, this paper will focus on conceptual metaphors in general and will not examine figurative metaphors separate as neither a sub-category of conceptual metaphors nor a contrasting theory of metaphors.

1.5 Data

The data consists of metaphorical expressions of time that have been categorized under appropriate conceptual metaphors. The English data was collected from the science fiction novel 3001: The Final Odyssey by Arthur C. Clarke and the Thai data was obtained from a translation of the same novel by ลักขณรงค์.

The two books were read from cover to cover and samples were collected as they occurred with relevant contextual information included. The metaphors were recorded regardless of where they occurred in the source material. This prevented a particular style of narrative from influencing the collection of data. That is, one narrative style may employ certain types of conceptual metaphors of TIME in one part of the book, where a different narrative style may produce other types of conceptual metaphors of TIME in another part of the same book. By collecting the data from the entire books the research was not biased towards one or another style of writing.

In addition, the metaphors were recorded regardless of whether they would be considered figurative or conceptual. According to Lakoff and Turner (1989, p. xi) figurative metaphors (a form of poetic language) must be considered one component of the tool: metaphor. They say, “But great poets, as master craftsmen, use basically the same tools we use...” and, “Metaphor is a tool so ordinary that we use it unconsciously

and automatically...It is omnipresent...It is accessible to everyone...It is conventional...And it is irreplaceable...” Because it is unconscious, it is a part of our cognitive system. Therefore, when the great poets use the metaphor, they are capable of speaking to us, “because they use the modes of thought we all possess.”

An important question arises here: How to determine that a set of terms is metaphorical, or not? The following step-by-step description illustrates the procedure used in this research:

Step 1: While reading the novels look for terms denoting time such as, *time, day, hour, second, year*, etc. in English and ชุก (age), เมื่อ (when), ปี (year), กาล (time, era, epoch), เวลา (time), ปัจจุบัน (present), ระยะ (period, time, interval), สมัย (period, era, time), โบราณ (ancient), etc in Thai. These terms will indicate the presence of temporal expressions.

Step 2: Read the passage, sentence, or phrase that expresses a concept structured by time and look for the experiential terms that describe or modify that expression of time. For example: *come, in, pass*, etc. in the following expressions:

English: *The time came when he had to leave; He was born in 1997; The hours passed slowly.*

In the above examples, we see the terms *time, 1997, and hours*. A careful reading of the sentences reveals that the terms *came, in, and passed* modify the time concept. The key term *came* has *time* moving towards the agent, the term *in* conceptualizes *1997* as a container of some kind, and the term *passed* has *the hours* moving past the observer.

In Thai do the same. For example: มา (come), ใน (in), ผ่านพ้น (pass), etc.

Thai:

มา	ตั้งแต่นั้น	ปี	ค.ศ. 2700;
come	ever since	year	A.D. 2700;
	ever since the year 2700 A.D.		

ใน ศตวรรษ ที่ ยี่สิบเอ็ด;
 in century (det.) Twenty-first;
 in the Twenty-first Century

ยุค ไดโนเสาร์ ที่ ยิ่งใหญ่ ผ่านพ้น ไป นาน แล้ว
 Age Dinosaurs (det.) Great passed gone long ago
 the Age of the Great Dinosaurs had long since passed

In these examples, we see the terms ปี ค.ศ. 2700, ศตวรรษ, and ยุค. A careful reading of the samples then reveals that the key terms that modify the concepts of time in these passages are มา, ใน, ผ่านพ้น. The key term มา has the year 2700 *coming* toward the experiencer. The key term ใน conceptualizes a century as a *container*. And, finally, the key term ผ่านพ้น has the Age of the Dinosaurs *passing by* the observer long ago.

- Step 3: Decide whether the experiential term conceptualizes time as some other kind of entity, or experience. It is the key terms that will indicate this one way or the other. And, if the decision is in favor of an alternative conceptualization, then determine what image schema the experiential terms fall under. For instance, the terms *come*, มา, *pass*, ผ่านพ้น all fall under an image schema in which time is moving in some manner. Whereas, the terms *in* and ใน denote an image schema of containment. That is, the agent can be *in* a period of time, or an observer can see that time is conceptualized as containing an object or person within a time period.

1.6 Selection of Resources

Originally, I had planned to do a survey of various types of literature from several different sectors of the two cultures that would model the two subject languages in as broad a manner as possible. For instance, sports, science, technology, business, social, fiction, and so on. However, once I became involved in the actual collection of data and found just how much data would be accumulated from just the two sources mentioned above, I decided to focus on them alone. And in some ways, it may have been the best of the options.

The printed sources consist of one English novel by Arthur C. Clarke and the Thai version that has been translated into the Thai language by a native speaker of Thai . In order to illustrate the conceptual metaphors of TIME that operate in the different cultures and languages I recorded samples from the dialogs as well as the narrative.

An interesting question that arises at this point is, why? Why use this particular work of science fiction? A brief description of the plot will provide the explanation.

The story concerns an astronaut who has been lost in space for about one thousand years. Thought to be dead, but in reality in a form of suspended animation, he is found and brought back to life at the beginning of the third millenium. Because the subject is constantly referring to his former life and considering his current life, there are numerous references to time. These references to time, of course, provide numerous opportunities for the concept of time to be expressed metaphorically. And, as this study will illustrate, the concept of time is, in fact, expressed metaphorically in most instances. Some of this is due to the fact that time is an exceedingly abstract and difficult concept to understand, hence some less abstract and more easily understood expression of time is required in order for the reader to know how the author intends the reader to understand his references to time. And, it is also due to the fact that time is a major factor in the novel.

One argument that critics will raise is that this cannot be truly representative of the Thai language and culture because the Thai translator was doing nothing more than translating the metaphorical expressions that the English version employs in telling the story. However, my reply is that when the Thai translator employed the same metaphorical expressions, he did so with the knowledge that they would communicate—hence, operate—in the Thai language and culture. Yes, they may not have arisen in a natural dialogue between two native speakers of Thai, but as expressed in the translation,

they operate in an understandable way. That is, the native speaker of Thai is not confused by the metaphorical expressions of time, rather—just as in the English version—the reader is provided a clearer understanding when the translator makes metaphorical references to time. It is for this reason that I feel the comparison is valid and can provide insight into the systems of conceptual metaphors of TIME within both languages.

Because metaphors have an experiential base, similarity of experiences within the two cultures should be expressed by similar, or nearly similar metaphors. But, as this paper has hypothesized, their expression will vary. By comparing across languages in similar situations, these variations will be most apparent.

1.7 Important Terms and Concepts

cognition

The mental processes that permit us to understand the world around us. In particular, this paper will be illustrating the metaphorization of time as one feature of cognition.

conceptual metaphor

Conceptual metaphors are a feature of conceptual reasoning that provides us with help in understanding our world by conceptualizing more abstract, difficult to understand concepts in terms of less abstract and more easily understood experiences. The conceptual metaphor is not strictly a feature of language. (Refer to Chapter 2, Section 2.2 for a detailed explanation.)

cultural coherence

A concept that is naturally consistent within a culture. In regards to the conceptual metaphorical systems of the American and Thai cultures, when stating that a conceptual metaphor is coherent within one or the other culture, I mean that it is consistent within that culture; that it is just one part of the larger cultural system comprised of the language, social mores, religion and all the other characteristics that define one culture as distinct from other cultures.

dead metaphor

Metaphors that have become so familiar to native speakers of a language that they do not consider the expressions as metaphorical at all. Two examples of this in English are *in time* and *on time*. They both have a literal meaning of timeliness, but their metaphorical meanings would be denied by most native speakers until it was indicated that *in* implicates containment and *on* implicates a position above and touching some object with a surface.

embodiment

As posited by Lakoff and Johnson, this is the idea that “human concepts are not just reflections of an external reality, but that they are crucially shaped by our bodies and brains, especially by our sensorimotor system.”

experiential base

Sort of a neural data base of experiences that are constantly referred to in order that we can understand the world and any new experiences that crop up as we go through our lives.

figurative metaphor

The figurative metaphor is a feature of language and is employed most often as a device in literature to dramatize the description of some thing, or the expression of some idea in terms not normally associated with that thing or idea.

image schema

Mental imagery that allow us to classify our specific experiences of the world under some more general experience. For instance, the metaphorical expression *in 1977* is derived from (with a little thought) the idea that the year *1977* can be conceived of as a container of some kind.

key terms

These are specific terms appearing within metaphorical expressions that denote the conceptual metaphor under which they are to be subsumed. For instance, the key term in the metaphorical expression *in 1977* is *in* and it is this key term that indicates the metaphor is one expression of the TIME IS CONTAINMENT conceptual metaphor.

linguistic relativity

The Whorfian theory that “culture through language, affects the way we think, especially perhaps our classification of the experienced world.” (Gumperz and Levinson, 1997, p. 1) However, in this paper, the phrase will include the idea that the experiential context within which the speech act takes place affects language to some degree also.

mapping

A device employed by Lakoff and Johnson to outline the component parts and the linkages between them when describing a particular conceptual metaphor. (More will be said of this in the analysis.)

metaphor

A language device that is used to describe some thing, or express some idea in terms not normally associated with that thing or idea.

metaphorical expression

A single metaphor that can be subsumed under a conceptual metaphor. For instance, *in 1977* is a metaphorical expression; whereas, TIME IS CONTAINMENT is a conceptual metaphor consisting of a whole class of metaphorical expressions with an experiential base similar to *in 1977*.

1.8 Applications and Benefits

- 1.8.1 This paper will be one of the first truly comparative studies of conceptual metaphors of TIME across languages.
- 1.8.2 The results of this study will provide supporting evidence of linguistic relativity.
- 1.8.3 The findings will also prove useful for the classroom instructor when explaining expressions of time in both Thai and English.

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

CHAPTER 2

REVIEW of LITERATURE

2.1 Introduction

After a thorough search through the available data bases, I have found that there are no other comparative studies of conceptual metaphors of TIME across languages. In one respect, this is a disadvantage because there is no previous set of guidelines which I can follow. But, at the same time it is a challenging and exciting experience. After all, if this paper should provide some useful insight into conceptual metaphors of TIME across the American English and Thai languages, there will be other cross-language comparative studies to follow.

Although there are no studies directly related to this paper, the pioneering research of Lakoff and Johnson will be employed to lay out the theoretical framework for this paper. However, before discussing the framework, it will be informative to examine the transition from the traditional to the modern theory of metaphors.

2.2 Review of the Theory of Metaphors

2.2.1 Figurative Metaphors

In Aristotle's day and for 2500 years after, the metaphor was considered nothing more than a feature of language and had nothing to do with the way we think, nor did it have anything to do with the manner in which the mind is related to language. It has only been recently that George Lakoff and Mark Johnson have posited the modern theory of conceptual metaphors.

Traditionally, the metaphor was defined as one set of unrelated terms used to describe, express, or represent another term, or set of terms. It was considered nothing

more than a feature of language, useful to the poet and politician, but not the scientist. In this view, the metaphor is considered outside of normal language...to be used “as a kind of decorative addition to ordinary plain language” (Saeed, 1997, p. 303).

Thus, the traditional view of metaphor was as a novel or poetic linguistic expression where one or more words for a concept are used outside of its normal conventional meaning to express a *similar* concept (Saeed, 1997, p. 303). In this view, the metaphor was considered merely a feature of language...that is, a simple tool of language (Lakoff and Johnson, 1980, p. 3). Nevertheless, an entertaining one. Hence, they were employed in literature and speech by poets and politicians; however, not by scientists. That is, they were figurative parts of speech. In this view, figurative speech was not important because it was not literal, it could not describe the real world directly, only indirectly in a manner resembling the simile. That is, when using a metaphor to describe reality, we could only be saying that ‘reality is like...’ Of course, this kind of statement does not tell us what reality ‘is’, only what it is ‘similar to’. For the scientist/philosopher seeking truth and the essence of reality, the metaphor was considered useless.

This traditional view of metaphors held sway right up to the Twentieth Century. And, for this reason, there were no serious challenges to the idea that metaphors could only serve nonliteral functions in language. However, in the late Nineteenth Century Friedrich Wilhelm Nietzsche (1844 – 1900) may have been responsible for planting a seed that later matured into the conceptual metaphor. He claimed that every sentence was metaphorical. He also defined metaphor as “a concrete image used in place of a concept, that metaphorical thinking is nonconceptual thinking, and that we have, in whatever way, adjusted ourselves to the idea that all of language is metaphorical”

(Danto, 1980, p. 44). In this view, there is no claim that the metaphor is a part of the cognitive process, rather it remains a part of language, but a transition occurs with the idea that ‘all of language is metaphorical.’ This is an important step in the development of the theory of conceptual metaphors because prior to Nietzsche, metaphors were unimportant figurative parts of speech that occurred infrequently in most natural language, and not at all in scientific language. If, as Nietzsche claimed, ‘all of language is metaphorical’, then the importance of the metaphor would have to increase. Nietzsche also claimed that changes in human reality could only occur after the change occurred in the language of that culture (Danto, 1980, p. 8). This extraordinary claim is the same as saying that language drives reality, not the reverse. If true, then it would be equivalent to saying that language comes before the conceptualization of new ideas. However, as will be demonstrated in the next paragraphs, this idea was dispensed with quite handily with the theory of conceptual metaphors.

2.2.2 The Conceptual Metaphor

It was only left for someone to examine language and try to determine the extent that metaphors actually permeate language. Unfortunately, because of the manner in which the Nazis distorted Nietzsche’s philosophy and caused it to become unpopular, there was no one to take up an examination of and to challenge his ideas about language. His theories were simply ignored, rather than challenged. It wasn’t until the second half of the Twentieth Century that the theory of conceptual metaphors was posited by Lakoff and Johnson.

In 1980, George Lakoff and Mark Johnson published their theory of conceptual metaphors under the title, *Metaphors We Live By*. In this work, they posited the ideas

that metaphors are an important part of the cognitive process, that they are pervasive in language, and that they are embodied.

In the words of Lakoff¹, “The essence of [conceptual] metaphor is understanding and experiencing one kind of thing in terms of another” (Lakoff and Johnson, 1980 p. 5).

A further refinement of the Lakoff definition derives a more precise definition of the conceptual metaphor: one concept from a more easily understood concrete domain being used to understand and experience another concept from a more difficult to understand abstract domain. In most discussions of metaphors, the more concrete concept is usually referred to as the SOURCE DOMAIN and the more abstract concept is referred to as the TARGET DOMAIN.

Plugging a specific example into the key elements of the definition will help to illustrate the definition of a conceptual metaphor: ‘TIME (abstract concept/TARGET DOMAIN) IS CONTAINMENT (concrete concept/SOURCE DOMAIN)’. Or, simply the conceptual metaphor: TIME IS CONTAINMENT.

The terms understand and experience are critical to a proper understanding of conceptual metaphors. A conceptual metaphor is not simply an expression which employs a concrete concept to describe an abstract concept. It is a cognitive process—an important one—that helps us to understand the experiences we have of the world around us. The metaphor does not simply liken two different concepts to each other, it “...goes further by causing a transference, where properties are transferred from one concept to another” (Saeed, 1997, p. 302 – 303).

¹ From this point on when referring to the combined efforts of Lakoff and Johnson, or Lakoff and Turner I will use Lakoff alone to eliminate redundancy. Because Johnson and Turner are common

There is a significant difference in the traditional definition of metaphor and the conceptual metaphor that is quite obvious in the above discussion. Notice that in the traditional definition of metaphor there is no mention of the mental processes involved in cognition. However, conceptual metaphors are considered an important cognitive feature and are expressly concerned with understanding and conceptualizing our experiences of the world.

Once the more abstract concept is understood, it becomes possible to express the concept to others. It is only then that the conceptual metaphor becomes a part of language...when used to describe a concept using language. That is, the concept comes before the speech act. This is the opposite of the idea posited by Nietzsche. However, his statement that 'all of language is metaphorical' has turned out not to be as radical as it first seemed. The research by Lakoff has revealed that metaphorical expressions are pervasive in language to an extent that was not previously considered in the traditional view of metaphors.

2.2.3 Neural Connections

All of the previous discussion has been in the realm of the abstract world of philosophy and non-physical evidence. However, during the last three decades there has been some exciting research in the cognitive sciences which has provided physical evidence supporting the theory of conceptual metaphors.

In the words of Lakoff and Johnson (1999, p. 57) the following is a physiological description of how metaphors are formulated:

names in English, Lakoff's name was selected. There is no intent to denigrate the contributions of Johnson and Turner.

“...Whenever a domain of subjective experience or judgement is coactivated regularly with a sensorimotor domain, permanent neural connections are established via synaptic weight changes. Those connections, which you have unconsciously formed by the thousands, provide inferential structure and qualitative experience activated in the sensorimotor system to the subjective domains they are associated with.

“Our enormous metaphoric conceptual system is thus built up by a process of neural selection. Certain neural connections between the activated source- and target-domain networks are randomly established at first and then have their synaptic weights increased through their recurrent firing. The more times those connections are activated, the more the weights are increased, until permanent connections are forged.”

In general, when we derive a metaphor, one conceptual domain (SOURCE DOMAIN) becomes connected to another conceptual domain (TARGET DOMAIN). Experience is the connector in the theory of conceptual metaphors. In some way—as yet not understood—our experiential knowledge mediates between conceptual domains causing novel relationships to arise. Although this phenomena has been described in terms of the cognitive linguist, cognitive scientists have found that this occurs physiologically as well. Antonio R. and Hanna Damasio have actually mapped two specific regions of the brain: “A large set of neural structures serves to represent concepts; a smaller set forms words and sentences. Between the two lies a crucial layer of mediation” (Scientific American, Sept. 1992, p. 63).

Although this does not prove that conceptual metaphors are physiologically fixed in the neural networks of the brain, it does indicate that something similar to the cognitive process that hypothetically produces conceptual metaphors is operating physiologically. Hence, we have evidence derived from reason and some tentative evidence derived from physical research that supports the theory of conceptual metaphors.

In the next section I will describe the theoretical framework employed to analyze and compare the data collected for this research paper.

2.3 Theoretical Framework

2.3.1 Introduction

The primary sources for the theory of conceptual metaphors were, of course, the works of George Lakoff and Mark Johnson. The specific sources are listed in the bibliography at the back of this paper.

2.3.2 Conceptual Metaphors

In most studies, metaphors have been distinguished from other types of figurative language, i.e. metonymy. **Metonymy** is defined as the process in which one domain stands for another domain due to the inherent relationships between the two. For instance, *The whole village protested* where *village* stands for *the people* of the village. Synecdoche—a sub-category of metonymy—is limited to situations where the part stands for the whole, or the whole stands for a part. A good example of this is *All hands on deck* where *hands* stands for the *crew members* of a boat (who, of course, are whole persons, not just parts of persons). In the data collected for this research, I found no occurrences of either. This may simply be a result of the fact that part for whole and whole for part temporal metaphors are somewhat difficult to derive. For example, I found it a stretch to recall the use of the following metaphorical expression of time: *It seemed as if he had been absent for a month of Sundays*. Hence, both synecdoche and metonymy seem to play an insignificant role in temporal metaphors and for that reason, they have not been examined in this paper. Not only that, but metonymy and

synecdoche are used figuratively and as this analysis has found, figurative metaphors occur less frequently than conceptual metaphors which—as mentioned earlier—are the focus of this paper.

This research is focused on conceptual metaphors. However, it must be remembered that figurative metaphorical expressions are considered by Lakoff and Turner as one part of the theory of conceptual metaphors. The reason for this is that conceptual metaphors are a part of the cognitive system that we use to understand and organize the world around us. Poets and politicians metaphorize their worlds in the same manner. However, their use of the figurative metaphor is due to “their talent for using these tools, and their skill in using them, which they acquire from sustained attention, study, and practice” (Lakoff and Turner, 1989, p. xi). Therefore, any figurative metaphors that appear in the data have been treated purely as conceptual metaphors with no additional notation.

2.3.3 The Theory of Conceptual Metaphors

In the following sections, I will describe the theory of conceptual metaphors and how it is employed in the analyses of each of the conceptual metaphors I have identified. Then a look at the constituent parts of the theory of conceptual metaphors will provide us with the necessary framework for the following analyses. But, first a brief look at the fundamentals of the theory of conceptual metaphors is required.

First, the use of metaphor is not novel; it is quite common. Second, metaphors are not limited to poetic linguistic expressions; they appear throughout everyday discourse. Third, the generalizations governing metaphorical expressions are not in language, but in thought. Finally, abstract concepts are largely metaphorical.

Lakoff and Johnson define the metaphor as, “The essence of metaphor is understanding and experiencing one kind of thing in terms of another” (Lakoff and Johnson, 1980, p. 5). That is, a metaphorical expression is a term or set of terms not normally related to another term or set of terms used to explain, describe, or define the second set of terms. For instance, in the metaphorical expression ‘The *time flew* while I was playing football’ we see that the term *flew* is providing time with an ability that time does not have. In other words, a bird’s ability to fly is transferred to time. Time is not a bird, nor a man-made flying machine. Time does not fly. However, there are times when we feel that time passes quite rapidly and it is the connotation that flying is faster than walking that the speaker of this metaphorical expression wishes to express. Another aspect of this particular expression is that time is considered an object of some kind that has the ability to *fly*. But, we know that time is not a physical object, rather it is something intangible and abstract. It is not an object that can be sensed in some physical manner. A final factor that must be noted is that there are two possible perspectives of the experiential aspect: either one is observing, or experiencing. That is, the speaker is either a participant, or an observer. In the example above, time is flying and the speaker is observing the phenomena. However, in the following example the speaker is inserted into a participating role: ‘I *flew* through the *long hours* of waiting’. Here we can see that the speaker is implying a causal relationship to the rapid passage of time, rather than expressing the observance of time’s rapid passage.

The above discussion provides us with a definition of metaphorical expressions which, in turn, provides the foundation for understanding the conceptual metaphor. The conceptual metaphor consists of all the features discussed above. But, from the above, we can see that all the different features of the metaphorical expression can be

discussed from a purely linguistic perspective. That is, in analyzing the metaphorical expression, we can avoid any reference to the cognitive system. However, this is not true when discussing the conceptual metaphor. The cognitive system and the role that the conceptual metaphor plays in cognition are inextricably related.

Using the preceding definition of the metaphorical expression to derive a definition of the conceptual metaphor results in the following: the essence of the conceptual metaphor is understanding and experiencing an abstract, complex, difficult to understand concept (TARGET DOMAIN) in terms of some more concrete, less complex, and relatively easier to understand concept (SOURCE DOMAIN). It is the two aspects of ‘understanding and experiencing of concepts’ that are the keys to the conceptual metaphor.

However, the conceptual metaphor will also be a part of a culturally coherent system that helps one understand the culture—or, even more broadly, the world—within which one exists. This requires a system of categorizing in order to understand and organize our world of concepts. (In following sections, I will discuss cultural coherence, categorization, image schema, and the roles that they play in the theory of conceptual metaphors.)

Now, a look at two examples will best illustrate how this criteria is applied to the theory of conceptual metaphors.

In the first sentence in Example (1), the verb *spent* is metaphorical as its normal lexicalized usage is associated with the *spending* of money. People understand and experience the action of *spending* most familiarly with the concrete, less complex, and more readily understood notion of MONEY. It is the image schema comprised of one exchanging money for some other object or service that denotes the experiential base.

However, in the first sentence the expression *summer vacation* is a period of time conceptualized as *money* that can be exchanged for something else (in this case, *time* is being exchanged for enjoying oneself at the beach). *Summer vacation* is a measurable quantity of *time* which, as mentioned above is abstract, complex and not as easily understood as *money*. However, as can be seen in this example, it is possible to conceive of TIME as MONEY in an experiential sense. In the second sentence, *spent* is

Example 1: with a verb:

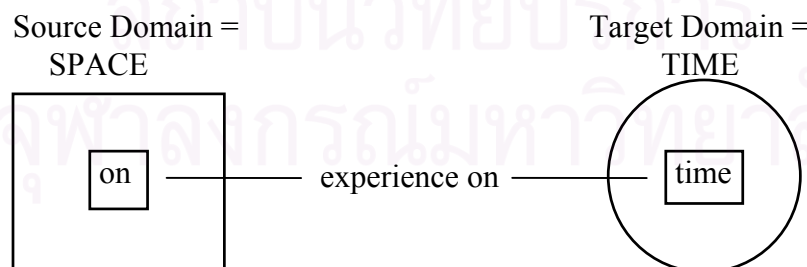
I spent my hard-earned cash at the beach. vs. *I spent my summer vacation at the beach.*



being used in its lexical sense; that is, one is *spending* money—an object meant to be exchanged for other objects or services. Hence, the second usage is non-metaphorical.

Example 2: with a preposition of place:

Nora was on the table. vs. *Nora was at home on Sunday.*



The use of *on* with *time* derives a metaphorical expression due to the normal use of *on* as a preposition of position (a spatial notion). One understands and experiences this concept of *on* most readily as a position in space. One's image schema of the

preposition *on* is comprised of one object placed over and contiguous with the upper surface of another object. However, in this expression, the term *on* does not express a position in space, rather it expresses the idea that Nora is not late for some event; that is, *on* is conceived of as a specified place over and contiguous with the upper surface of *time* which is conceived of as an object with a surface. Therefore, this usage is metaphorical. Of course, the second usage of the preposition *on* is its lexical sense; *on the table* expresses a precise position in space; hence, it is non-metaphorical.

From the above, we derive a cognitive definition of conceptual metaphors; that is, they are experiential connections across dissimilar conceptual domains. A *conceptual domain* is an embodied idea; a separate, self-contained *concept*. The domain part of this phrase implies that the concept occupies an area in which other related concepts are also contained. For instance, MONEY is related to other similar nouns such as *cash* and *lucre*; to verbs such as *spend*, *lose*, *waste*; and, to adjectives such as *expensive*, *cheap*, *dear*, etc., each of which is composed of other concepts making up these related domains. Hence, a system of categories exists of which MONEY is the primary concept with related concepts subsumed under it.

2.3.4 Image Schema

When analyzing metaphors of any kind, one of the keys to the analysis and the understanding of metaphors is the relationship between the two conceptual domains that make up the metaphor. The correlation is one of experience and that experience is understood by image schema that exist as an element of the “cognitive unconscious” (Lakoff and Johnson, 1999, p. 11). Image schema are cognitive structures derived from source domain concepts imposed on target domain concepts in order to understand

them. For example, our experiential bases of concepts such as, *containment*, *journey*, and *money* are comprised of specific features which characterize the concepts to which they belong. According to Lakoff and Johnson, when we understand a person as being *in* the street, "...we are imposing an imaginative container structure on the [street], with the [person] *inside* the container. The cognitive structure imposed on the [street] is called *the container image schema*" (Lakoff and Johnson, 1999, p. 117). It is this cognitive structure that brings about an understanding of the person as being *in* something. In the case of the TIME IS CONTAINMENT conceptual metaphor, when we say that 'he was born *in* 1980' we are imposing a cognitive structure of containment on the year 1980. That is, it contains a young man's birth-event...In other words, when time is conceptualized as containing the young man's birth-event we understand the period of time described as 1980 as containing this event.

Hence, in order to understand conceptual metaphors, one must consider the concepts being metaphorized in terms of the pre-existing unconscious image schema that are evidenced from an analysis of different languages. Being unconscious, these image schema operate without conscious manipulation. Therefore, conceptual metaphors are part of the cognitive processes which enable us to think about and understand the world around us.

Of course, the abstract concept TIME will not have a separate image schema of its own, but a more concrete concept will. And, it is this concrete image schema (SOURCE DOMAIN) that is imposed on the abstract TARGET DOMAIN (TIME) that provides us with an understanding of time.

In the discussion of examples (1) and (2) in the preceding section we saw how the conceptual metaphors TIME IS MONEY and TIME IS SPACE are derived from image

schema based on the two experiential bases. It is in this manner that all conceptual metaphors are derived from our experiences.

In this paper, the features of the image schema that characterize the various cognitive structures of the conceptual metaphors analyzed are outlined by mappings of each of the conceptual metaphors. These mappings provide the experiential bones of the cognitive skeletons that are imposed on target domains. And, like a skeleton the mappings hold up the conceptual metaphor and allow it to stand.

2.3.5 Categorization

As can be seen from the above description of conceptual domains, we are dealing with a conceptual type of categorization. And, research conducted by cognitive scientists from anthropology and psychology as well as other fields (from Ludwig Wittgenstein to Karen Rosch) have led to the proposal that thought/conceptualization, in general, is organized in terms of prototypes and basic level categories. Hence, categorization could be one of the keys to understanding and describing conceptual domains which, according to Lakoff, in *Women, Fire and Dangerous Things* (1987, p. 6), is “central to any understanding of how we think and how we function...” Categorization (in particular, the basic-level theory of categorization) is fundamental to human cognition and is an important—if not the most important—component in metaphors. After all, each image schema can be understood as a superordinate category and the individual metaphorical expressions as subsumed within that category. For instance, the TIME IS A MOVING OBJECT conceptual metaphor is a superordinate category that consists of metaphorical expressions such as, the time *came* when he had to leave; the date *passed* without incident; and, the future was fast *approaching*.

In addition, figurative thought is associative; that is, in the case of metaphor, one concept is associated with another through experience in order to understand an otherwise difficult to understand concept. A look at categorization reveals that subordinate members of a category are also associated to the superordinate member. Hence, the categorial process is also associative.

Therefore, it is felt that the aspect of categorization as theorized by Rosch and others will be significant to this analysis.

2.3.6 Cultural Coherence

The TIME IS MONEY conceptual metaphor is culturally coherent in a society in which time is considered a valuable commodity, such as the modern American industrial society. But, is it equally coherent in all other societies? This question will be answered in the forthcoming analysis. However, at this time I want to discuss this aspect of conceptual metaphors.

Cultural coherence is defined as a natural consistency within a culture. Therefore, in regards to the conceptual metaphorical systems of the American and Thai cultures, when stating that a conceptual metaphor is coherent within one or the other culture, it will mean that the conceptual metaphor is consistent within the metaphorical systems operating within that culture and is part of the larger system of understanding the world in which a member of that culture exists. That is, when referring to a particular conceptual metaphor as culturally coherent, it will mean that the metaphor being discussed is relevant, appropriate to, and operates meaningfully in the culture within which it appears.

In order to illustrate this aspect, an example of the type of conceptual metaphors of TIME that operate in the two languages will be useful.

In the following examples, we see that similar metaphorical meanings are not expressed in precisely the same manner (i.e., the prepositions employed to express similar meanings are different): English = They will come *on Sunday*; Thai = เขาจะมาในวันอาทิตย์—They will come *in Sunday*; both expressions share the same meaning: the subjects will arrive at a destination at a future point in time identified as Sunday. These expressions are derived from the conceptual metaphors: English = TIME IS SPACE; Thai = TIME IS CONTAINMENT. Thus, in this instance, similar literal temporal meanings are derived from different conceptual metaphors.

This indicates the possibility that when talking of a specified day in American English it is culturally coherent for the time to be conceptualized spatially. Whereas, in Thai, it is culturally coherent to conceptualize a specified day as containment. (This possibility will be examined in the analysis, but for now it is only used as an illustration of cultural coherence.)

In “Metaphors We Live By”, Lakoff and Johnson state, “The most fundamental values in a culture will be coherent with the metaphorical structure of the most fundamental concepts in the culture” (Lakoff and Johnson, 1980, p. 22). Thus, the phrase ‘cultural coherence’ can best be described as ‘structural and consistent agreement within a culture’. In order to illustrate the fact that the two cultures share some of the same conceptual metaphors; and, therefore, are systematically coherent in a similar manner, I will risk being somewhat redundant.

When a conceptual metaphor is judged culturally coherent, the assumption is partially based on the number of appearances in the data. However, if a particular conceptual metaphor is to be considered culturally coherent it must also be systematically coherent.

In this paper, the metaphors that are judged systematically coherent are judged so precisely because there is a system that is fundamental to the way members of a culture express time metaphorically. TIME IS A MOVING OBJECT is a fundamental concept in both languages and the following examples are only two from a longer list that will be discussed in the appropriate section. For now, these two examples are intended only to illustrate the concept of systematic cultural coherence. In English, we find that time (conceived as an object) can pass (or move) swiftly as in “The *age* of the Machine-entities *swiftly passed*” (Clarke, 1997, p. 2) or *uneventfully* as in “...when January 1, 3001, had *passed uneventfully*...” (Clarke, 1997, p. 9). The Thai translations appear as, ยุคของเครื่องจักรกลผ่านไปแล้วอย่างรวดเร็ว (ลักษณะรงค์, 2541, p. 12) where อย่างรวดเร็ว means *swiftly*; and เมื่อวันที่ 1 มกราคม ค.ศ. 3001 ผ่านพ้นไปโดยไม่มีเหตุการณ์ผิด where โดยไม่มีเหตุการณ์ผิด (ลักษณะรงค์, 2541, p. 20) means *without any bad incidents*. Although the English and Thai differ slightly in the manner in which they convey the concept of bad incidents—that is, English uses the compound word *uneventfully* and Thai uses the phrase โดยไม่มีเหตุการณ์ผิด the meanings are the same. In fact, it would not have been out of place for the English phrase *without any bad incidents* to have appeared in place of *uneventfully*. In English, the compound word *uneventfully* has a connotation of bad events; hence, both *uneventfully* and *without any bad incidents* convey the same

meaning in English. The question whether the metaphors are culturally coherent in their respective languages must be answered in the positive. After all, bad incidents, or events, are not restricted to one or the other culture. There may be some differences as to what constitutes a bad incident in the two cultures, but members of both cultures would agree that there is a category of incidents that can be identified as bad events that do occur. It is in this sense that coherence is systematic in both cultures...semantically.

Additionally, we can see that the structure of the metaphors is identical. That is, time is conceptualized as an object that passes by an observer in both the English and the Thai. Hence, in this case, there is semantic as well as structural coherence and that coherence is systematic.

These illustrations and the above explanation also indicate the role of linguistic relativity in this paper. The fact that the conceptual metaphor time is a moving object operates systematically in both languages indicates universality. However, the fact is that at an atomic level, they appear somewhat differently—indicating linguistic relativity. Gumperz and Levinson account for this with a modified version of linguistic relativity in which “...the result of comparison between systems may be a robust finding of universal principles governing individual traits” (Gumperz and Levinson, 1997, p. 5).

There are many more such examples from both versions of the novel which support the idea of cultural coherence and that illustrate the structural consistency in which *time* is understood and experienced as a *moving object*. But, this is not the place to discuss them all. Additional examples are discussed in the analysis.

The preceding discussion has dealt with individual metaphorical expressions, but what about conceptual metaphors? How do we determine whether a particular conceptual metaphor is culturally coherent?

A conceptual metaphor consists of metaphorical expressions of the experiential bases that characterize the image schema of the conceptual metaphor. If those experiential bases appear repeatedly in a systematic and culturally consistent manner, then the conceptual metaphor must also be culturally coherent. That is, if a metaphorical expression is considered culturally coherent, then the conceptual metaphor that it is subsumed under must also be culturally coherent.

2.3.7 Dead Metaphors

Another important aspect of metaphors that requires some discussion is the ‘dead metaphor’. Basically, a dead metaphor is considered one which has become so familiar to the native speaker that the native speaker does not rely on a reference to the metaphorical meaning to understand the term, or phrase. An example of this in English would be the phrase, *on time* and in Thai, the term *ตอนนี่*. In both cases, most of the respective native speakers would have trouble accepting the proposition that either of the phrases are metaphorical because they have become so much a part of every day language that the metaphorical reference has been lost to the native speaker.

The English *on time* means to be at a specified place at a specified time. But the metaphorical meaning is *to be at a position that is over and touching an object regarded as time*. A native speaker would probably argue that there is no such image of a person sitting, lying, or standing on some ‘thing’ that could be conceptualized as time

present in his/her mind when using the term. Hence, the metaphorical reference has died and therefore it is no longer operant.

Similarly, the lexical meaning of the term *ตอนนี้* is ‘now’. And a look at a Thai/English dictionary (see bibliography) reveals that *ตอน* is defined as *at a position in space*. That is, it is repeatedly defined using the English preposition ‘at’ or the phrase ‘at a point in space’. When combined with the lexical term *นี้* which means ‘this’ and employed as a temporal term—that is, in a position where only the concept of time would make sense—the lexical term *ตอนนี้* is translated as ‘now’ or ‘at this point in time’. And, since it implicates a position in space, it is a metaphorical expression of the conceptual metaphor TIME IS SPACE. Once again, a Thai native speaker might object that when he/she uses the term *ตอนนี้* there is no image of the speaker being *at a point in space that is identified as the time ‘now’*. Nevertheless, as will be seen in the following analysis, both the English and the Thai lexical terms possess a metaphorical sense and for the purposes of this thesis, their deaths will be disregarded. The following reasoning will be applied to all so called ‘dead’ metaphors.

The primary reason for disregarding ‘dead metaphors’ is that non-native learners of the respective languages could and would be confused by the culturally coherent definition of many lexical terms until given a reasonable explanation. And, the clearest explanation would make reference to the fact that they are derived from the experiential bases of the native speakers, which happen to be metaphorical and can be conceptualized in the manner described above, but have acquired those somewhat

confusing definitions that native speakers employ without a thought to their metaphorical origins.

Support for this position comes from a paper “*Difficulties with Diagnosing the Death of a Metaphor*” by Zdravko Radman (1997). In this paper he says that by taking the death of a metaphor literally, one “easily wipe[s] out sedimented, past meanings and so ignore[s] semantic memory...[and] meanings are reduced to a one-dimensional (either metaphoric or literal), static structure.” He further states that “...labeling of metaphors as ‘dead’ is not lethal, for their meanings can be revitalized and recreated, according to our linguistic competence, diachronic perspective, interests, and needs.”

For these reasons, this paper will consider all ‘dead metaphors’ as being reborn in order to illustrate just how pervasive conceptual metaphors are in the two cultures and to examine how the two cultures view time.

2.3.8 Conceptualizing Time

Before we can begin to analyze the conceptual metaphors of TIME, we must understand just how we conceive of time. Lakoff and Johnson in their book, ‘*Philosophy in the Flesh*’ (Lakoff and Johnson, 1999, pp. 137 – 169) describe this in detail. I will briefly summarize their description.

The first thing to understand is that a complex notion of TIME is built into our conceptual systems; therefore, most of the process takes place unconsciously.

Time is sometimes measured by comparing events. For instance, the beginning of an event, such as an English class, is compared to time that is represented on a watch which is a temporal scalar device—an instrument designed to measure time. Interestingly, the brain is said to have its own clock as well. “Forty times a second an

electrical pulse is sent across the brain.” Some neuroscientists think that this signal may be responsible for many of the body’s rhythms (Lakoff and Johnson, 1999, p. 138). However, this remains to be seen. If it proves to be fact, then we can say that the internal sense of time is created by regular, repetitive events such as these internal neural signals—an experiential basis. Whether true or not, externally, we can observe how we measure time by comparing regular, repetitive events such as our English classes, the rising and setting of the sun, birthdays, etc.

When speaking of time it becomes apparent that since it is an abstract concept that we cannot directly observe we must resort to other concrete concepts to understand our experiences of time; that is, we must soon resort to metaphors. These metaphors usually take the shape of motion in space. Motion can be detected (in fact, there is an area in the visual system of our brains dedicated solely to that purpose). For this reason, in a conceptual metaphor, MOTION is considered the SOURCE DOMAIN and TIME the TARGET DOMAIN.

Lakoff and Johnson state that “The most basic metaphor for time [in English] has an observer at the present who is facing, toward the future, with the past behind him” (Lakoff and Johnson, 1999, p. 140). This is called the TIME ORIENTATION metaphor and is mapped as follows:

--The location of the observer	→	The Present
--The space in front of the observer	→	The Future
--The space behind the observer	→	The Past

This concept of TIME permits metaphors like these: ‘That’s all *behind* me now,’ ‘He put that *in back of* him,’ ‘Let’s look *ahead* to the future.’ However, it does not permit the following metaphorical expressions: I looked *back* at *tomorrow*; I look

forward at today; I looked *backward at today*; I looked *forward at yesterday*. These last examples are not systematically coherent in American English.

Those TIME ORIENTATION metaphors that operate in English have a spatial SOURCE DOMAIN. However, this particular type of metaphor says nothing about motion; the observer could be moving or stationary. To account for this, there are two other kinds of metaphors that are combined with the TIME/SPATIAL ORIENTATION metaphor. The first is the MOVING TIME metaphor in which time moves and the observer is stationary and facing a fixed direction. When combined with the TIME ORIENTATION metaphor it is mapped as follows:

--The location of the observer	→	The Present
--The space in front of the observer	→	The Future
--The space behind the observer	→	The Past
--Objects	→	Times
--The motion of objects past the observer	→	The 'Passage' of Time

Where the mapping of the MOVING OBSERVER metaphor can be combined with the TIME ORIENTATION metaphor and appears as the following:

--The location of the observer	→	The Present
--The space in front of the observer	→	The Future
--The space behind the observer	→	The Past
--Locations on observer's path of motion	→	Times
--The motion of the observer	→	The 'Passage of Time
--The distance moved by the observer	→	Amount of Time 'Passed'

These mappings illustrate just how we conceptualize TIME in its most general metaphorical senses. However, similar mappings for TIME are constructed by considering TIME as a RESOURCE, as JOURNEY, as MONEY, as CONTAINMENT, as SPACE, etc. And, it must be remembered that the mappings impose the properties of the various conceptual metaphors and their experiential bases on the TARGET DOMAIN.

A look at the TIME IS MONEY conceptual metaphor will further illustrate the type of analysis that has been performed by Lakoff and Johnson. The mapping for MONEY is simply formed by imposing experiences like *budget*, *spend*, *invest*, *profit*, and *loss* which are obviously related to money. Thus the following mapping is derived:

--Money	→	Time
--The user of the money	→	User of Time (The Agent)
--The purpose that requires the money	→	Purpose that requires Time
--The value of the money	→	Value of the Time
--The value of the purpose	→	Value of the Purpose

This mapping, in which the user must be considered the person who *budgets*, *spends*, *invests*, etc. time, provides metaphorical meanings for the TIME domain in statements like the following:

You must *budget* your time better.
 How did you *spend* your time last week?
 I will *invest* more time on this project at a later date.
 The time *spent* on this project has been *profitable*.
 I haven't *lost* any time on frivolous activities.

The mappings above provide us with clear outlines of the manner in which English native speakers conceptualize time metaphorically. But, what about in Thai? This paper will attempt to identify those temporal metaphors in Thai that can be plugged into the mappings above, or other mappings that are culturally coherent in Thai. This does not mean that all of the above mappings are culturally coherent in Thai, rather it means that conceptual metaphors that are operant and culturally coherent in Thai can be mapped in some manner similar to the mappings outlined above.

Although there has been little discussion of temporal metaphors in Thai previous to this paper, Suda Rangkupan (1992) has examined the subsidiary verbs PAY1 'go' and MAA1 'come' and discussed how the metaphorical expression TIME IS SPACE is

in the Thai language. Since her work provides a tentative starting point for the analysis of Thai conceptual metaphors of ORIENTATION it is summarized below.

In general, Rangkupan explains her analysis of temporal relations derived from PAY1 and MAA1 as follows:

PAY1 is employed to refer to a situation in which the speaker's focus is on a point in time other than the termination point. Whereas, MAA1 refers to a situation in which the speaker's focus is on the termination point of the situation. She also distinguishes between two types of situations. One is a process situation in which the situation endures through a duration of time (situations such as these can be referred to as durative); and, the other is a stative situation in which a verb describes a state/condition that began in the past and proceeds to the time of speaking (these situations can be referred to as terminative). Examples (provided by Rangkupan) of each situation and a short explanation appear below:

- (1) pay1 in a process situation that began, continues, and has not yet terminated:
 thə1 khəŋ thəm1 pay1 daay3 may3 taʔ2lət2
 she may do go able neg. all
 'She may not be able to do so until it finishes'
- (2) pay1 in a stative situation which implies two different states occurring consecutively:
 raay1daay3 thii3 khə1 mi1 caʔ2 khaat2 pay1
 earning that used to have fut. be in short go
 'Those earnings which (they) used to have will become in short supply.'
- (3) maa1 in process situation that began, continued and (possibly) terminates at the point of speaking:
 khau5 liaŋ4 kə1 maa1 tɛ2 khlət3 thuk4 khon1
 She take care him come since born every people
 She has taken care of all of you since you were born.'

- (4) maa1 in a stative situation which began and continues until the time of speaking (and possibly beyond) without changing its state:
 naay1 pen1 phian3 chan5 maa1 naan1
 you be friend I come long time
 ‘You have been my friend for a long time.’

From the above comparison of English and Thai conceptions of time it is apparent that aspects of duration, termination, and directionality must be considered in this paper’s analysis of the conceptual metaphors of TIME.

2.3.9 Summary

In the previous pages we have discussed how the theory of conceptual metaphors arose from the traditional view of figurative metaphors and the findings of modern neuro-scientific research. This discussion has covered the roles of categorization, image schema, cultural coherence, linguistic relativity, and dead metaphors

In addition, we have discussed in detail what it means to conceptualize time in a metaphorical sense and how mappings devised by Lakoff and Johnson provide us with the key features of various conceptual metaphors.

From here we will proceed to an analysis of the metaphorical expressions that were identified and recorded.

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CHAPTER 3

ANALYSIS

3.1 General Introduction

In the following sections I will examine the conceptual metaphors identified in the English and Thai resources primarily in qualitative terms. However, a quantitative examination of the key terms that appear in each of these sections will also be performed. This part of the analysis is brief and concise; hence, it will not divert us from the main part of the analysis in this chapter. And, it will provide a deeper understanding of the key terms employed in each of the conceptual metaphors.

The analysis identified the following conceptual metaphors as operating in the two languages: 1) TIME IS A MOVING OBJECT; 2) TIME IS A MOVING OBSERVER; 3) TIME IS A RESOURCE; 4) TIME IS SPACE; 5) TIME IS CONTAINMENT; 6) TIME IS A POSSESSOR; and, 7) TIME IS MONEY. Since the analysis is based on the theoretical framework provided by Lakoff and Johnson, all of the conceptual metaphors listed above—except TIME IS A POSSESSOR—have been analyzed in their various works. However, during the collection of the data it was found that the POSSESSOR conceptual metaphor appeared repeatedly in both English and Thai. Hence, it was included in this analysis. (See the appropriate sections for a description of each.)

The analyses of each of the conceptual metaphors was conducted in the sequence above. The reasons for proceeding in this sequence are that the first two conceptual metaphors to be examined—MOVING OBJECT and MOVING OBSERVER—are quite similar in that they all involve some kind of movement. They are being presented together in one section rather than separately because of their similarities and because the quantity

of the OBSERVER metaphors is quite low compared to the OBJECT conceptual metaphors. Their analyses will be followed by RESOURCE, then SPACE, and so on as listed above.

The MOVING OBJECT, RESOURCE, SPACE, CONTAINMENT, and POSSESSOR conceptual metaphors appear in both English and Thai. Whereas, the MOVING OBSERVER and MONEY conceptual metaphors appear in English only.

Each of the conceptual metaphors will be analyzed in English first with the analysis of the Thai data following with the exception of the MONEY metaphor. I will examine it in one section prior to the comparative analysis at the end of this chapter. Each of the analyses will begin with a short introduction in which the mapping for that particular conceptual metaphor and a brief explanation appears. Next, the key terms that denote the particular conceptual metaphors in the language being discussed will be outlined and explained. Finally, the analysis of the conceptual metaphor will be conducted term by term.

3.2 TIME IS A MOVING OBJECT and TIME IS A MOVING OBSERVER Introduction

The mapping below is included here in order to provide us with the important characteristics that make up the TIME IS A MOVING OBJECT conceptual metaphor. What must be remembered about the mapping—as with all the mappings—is that it defines in broad terms what features the metaphorical expressions must consist of in order to be subsumed under the TIME IS A MOVING OBJECT class of conceptual metaphors.

Another reason that the mapping is being reprinted here is that it can be easily referred to when there are questions as to how, or if, a particular metaphorical expression ‘fits’ the classification in which it appears.

There is a special class of OBJECT metaphors that are conceptualized as flowing substances (TIME IS A SUBSTANCE). The SUBSTANCE metaphors differ from the OBJECT metaphors only in the feature of extent. That is, a substance is considered to be a linear flow of time, rather than a series of individual time-objects moving from place to place. This minor variation of the OBJECT conceptual metaphor will not be treated separately. Instead, this concept has been collapsed into the MOVING OBJECT class. A look at the mappings of the two conceptual metaphors reveals that the mappings for the SUBSTANCE and OBJECT metaphors are the same except that an object is conceptualized as individual entities and objects can be quantified. Whereas, substances are conceptualized as flowing masses (Lakoff and Johnson, 1999). And, since substances can be measured, there can be a little or a lot of time, or it can be long or short.

The two mappings are first presented separately and then they are collapsed into one mapping to illustrate how readily the features of the two conceptual metaphors fit:

TIME IS A MOVING OBJECT

The Location of the Observer	→	Present
The Space in Front of the Observer	→	Future
The Space Behind the Observer	→	Past
Objects	→	Times
Motion of Objects Past Observer	→	Passage of Time

This mapping allows metaphorical expressions such as: 1) The time is *flying*; 2) The future is *coming*; and, 3) The time *passed* quickly. In sample (1) and (3) time is moving with no indication of direction in relation to an observer. However, the TIME ORIENTATION mapping tells an American English speaker that when time *flies* or *passes*, it must move from the past to the present and beyond into the future. This is the culturally coherent manner in which Americans conceptualize time. In (2) there is an observer entailed by the term *coming*. In this expression, a speaker—the observer—

states that a time in the future is *coming* towards the location the observer occupies. When an object is described as *coming* it must be coming to a location occupied by the observer—whether the arrival occurs in the past, future, or the present. We can see this relationship by the non-metaphorical statements: He *came* to school yesterday; He is *coming* to school tomorrow; He *comes* to school. In the first two samples, the observer is presently occupying the location defined as school, but the subject of the statement is not. That is, he arrived yesterday, or he will arrive tomorrow. In the third, the present tense statement denotes a repetitive action; but, an observer may or may not be occupying the location.

The same explanation as above applies to the SUBSTANCE mapping with the difference that TIME is conceptualized as a flowing mass rather than a multiplicity of objects.

TIME IS A MOVING SUBSTANCE

The Location of the Observer	→	Present
The Space in Front of the Observer	→	Future
The Space Behind the Observer	→	Past
Substance	→	Time
Amount of Substance	→	Duration of Time
Size of the Amount	→	Extent of Duration
Motion of Substance Past Observer	→	Passage of Time

This mapping derives the following kinds of metaphorical expressions: 1) A *long* time has *passed* since I last saw you; and, 2) There is only a *little* time to finish the project. Once again there is an observer who conceptualizes time as a moving substance and expresses that conceptualization in samples (1) and (2). And, it is obvious that in both types of expressions, time is some *long* or *little* substance that is moving. Because the two conceptual metaphors are so similar, they are not treated separately by Lakoff and Johnson. They are mapped in the manner below in order to illustrate the key

features that will guide us in determining whether a metaphorical expression belongs in this class or not. In addition, the features listed here are the features that define the roles that the key terms play in the metaphorical expressions.

TIME IS A MOVING OBJECT (SUBSTANCE)

The Location of the Observer	→	Present
The Space in Front of the Observer	→	Future
The Space Behind the Observer	→	Past
Objects	→	Times
Substance	→	Time
Amount of Substance	→	Duration of Time
Size of the Amount	→	Extent of Duration
Motion of Objects/Substance Past Observer	→	Passage of Time

As mentioned earlier, we will also examine the MOVING OBSERVER conceptual metaphors in this section. However, a separate sub-section will be devoted to them because, although they do possess movement as a metaphorical feature, the movement is significantly different from the class of MOVING OBJECT conceptual metaphors. A quick look at its mapping reveals how it is similar and dissimilar to MOVING OBJECT conceptual metaphors.

TIME IS A MOVING OBSERVER

The Location of the Observer	→	Present
The Space in Front of the Observer	→	Future
The Space Behind the Observer	→	Past
Locations on Observer's Path of Motion	→	Times
Motion of Observer	→	Passage of Time
Distance Moved by Observer	→	Amount of Time Passed

Obviously, the TIME ORIENTATION concept is part and parcel of this class of conceptual metaphors as well as the features of location, motion, and distance. However, the difference is that it is the observer that is moving, not time. This mapping derives metaphorical expressions like the following: 1) I have *passed* my fortieth birthday; 2) We're *approaching* the beginning of the Fourth Millennium; 3) He wished he could *go back twenty years* to his youth. In these expressions, the observer is moving

past 'time' conceptualized as locations on a landscape. In this class of conceptual metaphors, time is not conceptualized as an object moving with an observer remaining in one position.

One more important point must be made before beginning the analysis. A metaphorical expression does not have to consist of each and every characteristic listed in its mapping. For example, in order to be subsumed under the TIME IS A MOVING OBJECT conceptual metaphor category, a metaphorical expression could consist of just one of the defining characteristics such as the extent of the movement. How is this determined? By looking at the definition of the key terms in the metaphorical expressions and ensuring that the key term(s) denote movement semantically. That is, the definition of the key term must be consistent with the metaphorical concept in question.

In the next section we will present the key terms that denote the MOVING OBJECT conceptual metaphor.

3.2.1 Key Terms Denoting MOVING OBJECT in English

To conduct this analysis, key terms that implicate the TIME IS A MOVING OBJECT conceptual metaphors were identified. The key terms have been categorized as below in order to provide insights into the specific relationships that exist between the key terms and the relevant metaphorical expressions. The numbers in parentheses following the experiential classification of the key terms are the total number of metaphorical expressions in which the key terms appeared; and, the numbers following each of the key terms are the quantity of metaphorical expressions in which that particular key term appeared. For instance, there were a total of 15 metaphorical expressions identified as

denoting the motion experience. And, the key term ‘elapse’ appeared as an adjective one time only. The quantity (15) was derived from adding the number of metaphorical expressions employing the key terms.

The key terms expressing TIME IS A MOVING OBJECT are classified as follows:

Motion: (15)

Adjective = elapse (1)//**Noun** = turn (1)//**Verbs** = accelerate (1); come (2); go (2); got under way (1); pass (5); reach (1); span (1)

Direction: (28)

Adverbs = ahead (2)//**Prepositions** = from (23); to (2); up (1)

Extent: (36)

Adjectives = long (14); short (2)//**Adverbs** = as long as (12); as much as (1)//**Nouns** = end (7)

Nouns denoting periods of time: (2)

Nouns = beginning (1); passage (1)

Position: (49)

Adjectives = next (3)//**Prepositions** = after (29); before (16); beyond (1)

A first glance reveals that there were a total of (130) occurrences of the key terms denoting the MOVING OBJECT conceptual metaphor.

An interesting feature illustrated by the above data is that there is a large variety in both the *motion* and *extent* terms—nine *motion* and seven *extent*—used to metaphorize TIME AS A MOVING OBJECT. However, the actual number of occurrences of metaphorical expressions employing *motion* terms is quite low (15) when compared with the number of metaphorical expressions employing *extent* terms (36).

The largest category consists of *position* terms with (49) metaphorical expressions employing the four key terms in the category. The *direction* terms are comprised of (28) metaphorical expressions which employ four key terms. And, finally the key terms of

nouns denoting periods of time (beginning and passage) appear in two metaphorical expressions. That is, the two key terms appear in one metaphorical expression each.

In the next section each of the above categories will be examined in detail from a qualitative perspective.

3.2.2 Qualitative Analysis of the Key Terms

This section will discuss how each of the key terms listed above are employed in order to derive the MOVING OBJECT conceptual metaphor.

The first group of key terms are the motion terms. When labeling this category, the term motion was selected in order to eliminate any possible misconception that this discussion is simply an examination of the grammatical structure of the metaphorical expressions. The following discussion will examine the semantics of the expressions rather than their structure. After all, it is the meaning behind the various expressions that determine their metaphorical quality, not their grammatical structure. The analysis will proceed according to the sequence in which the key terms appear in the listing reproduced here.

Motion:

Adjective = elapse // **Noun** = turn // **Verbs** = accelerate; come; go; got under way; pass; reach; span

The metaphorical expressions that the above motion terms appeared in were:

1) *elapsed* time; 2) the *turn* of the century; 3) as time was slightly *accelerated*; 4) when the time *came*; 5) *going* all the way back to the *Voyager* flybys of 1979 and the first detailed surveys from the orbiting *Galileo* spacecraft of 1996; 6) the Age of Infinite Power *got under way*; 7) when January 1, 3001, had *passed* uneventfully; 8) *much* more than five minutes had *passed*; 9) it could never even *reach* the Stone Age; 10) only one long lifetime *spanned* the gulf between this primitive *Discovery* and the ship that had carried the same name to Jupiter!

In each of the above samples, we can see that time is conceptualized as an object that is moving. Each of the motion terms denotes motion in a particular manner. For instance, *elapse* and *pass* both denote time as passing the observer. Whereas, the phrase the *turn* of the century denotes a point in the motion of time where it makes a *turn*—or changes its direction.

The next example stands out because it is the only term that refers to the speed of time. Of course, accelerating an entity means to move that object from one place to another in a shorter amount of time. Hence, the term entails moving across a measurable distance. The term also implies that there is an object of some kind that is being *accelerated*.

In the next expression the term *come* is interpreted as a motion from some remote location to a location situated near the observer. In this instance, time is an object that has *come*. Like *come*, *go* appears twice: once in the gerund form and once in the past tense form. The precise metaphorical relationship is not obvious and requires some explanation. When speaking of the huge amount of data collected by an organization Clarke says, “...*going* all the way back to the *Voyager* flybys of 1979 and the first detailed surveys from the orbiting *Galileo* spacecraft of 1996.” In this metaphorical expression, we see that the author measures the amount of data by employing the concept of time as a MOVING OBJECT. The time period of the data *goes all the way back* to certain events that occurred in the past. In this case, the data is the object and the events are the points of departure from which the data has moved through time. That is, the information has been collected during the time from the past to the present. Interestingly, in this metaphor, we find that the information is traveling back in time to

the past. That is, the direction of the object is also indicated as against the normal flow of time from past to present.

The next motion term employed is the verb phrase *got under way* (sample 6) meaning started. This metaphor illustrates the conceptualization of a period of time (the Age of Infinite Power) as an object that *gets under way*. This phrase is often used in English when a large ship starts a journey as in, *the ship got under way*. In this case, the phrase can be interpreted as the time period conceptualized as an object began to move.

Pass appears four times in moving object metaphorical expressions. The sample above illustrates how a specific point in time is conceptualized as a moving object that *passed* without eventuality. In sample (7) one can see how the date *January 1, 3001*, is conceptualized as an object and the term *pass* has it moving past the observer without incident. Sample (8) employs the term *much* to portray a *period of time* as a substance that *has passed* the observer. Hence, we see an example of a metaphorical expression employing the MOVING SUBSTANCE feature.

The next example employing motion terms is sample (9) in which the term *reach* is employed. When a native speaker of English first thinks of the term *reach*, he/she will most likely think of it in terms of extending the arm and hand out in order to touch something as in, *I reached for the cookie*. However, an alternate usage of the term means *to arrive* at a destination. And, it is this definition that metaphorizes the expression as a MOVING OBJECT.

In the metaphorical expression, "...only one long lifetime *spanned* the gulf between this primitive *Discovery* and the ship that had carried the same name to Jupiter!" we find the one and only appearance of the key term *span*. *Span* means 'to cross and connect' two locations that are remote from each other. Hence, the term

entails the action of ‘bridging a gap’, which creates the image schema of a ‘bridge crossing a gap’ between two points in time. Obviously, it is the *one long lifetime* that is conceptualized as the bridge connecting the two different rocket ships that existed in two different time periods, or metaphorical locations. That is, two objects are conceptualized as points in time in order to metaphorize the time that is closing the gap between them.

Direction:

Adverbs = ahead // **Prepositions** = from; to; up

The key terms that denote direction consist of the one adverb and three prepositions above. The adverb *ahead* and the prepositions *from*, *to*, and *up* indicate the direction of the moving object in the following examples:

1) *ahead* of schedule; 2) *from* his own century; 3) *to* this time; 4) *up* to now

In the first example, a moving object is implied by the use of the term *schedule* to denote a point of time in which an agent must complete some task before reaching, or arriving at that point in time. The term *ahead* obviously denotes a point of time that falls before the scheduled time. Hence, time has a face that is pointed in a direction that is located *ahead*. In this case, the scheduled time can be located in the past, present, or future. However, the point of time that is *ahead* of the scheduled time must be located at a point of time preceding the scheduled time.

The three directional prepositions that also denote the MOVING OBJECT conceptual metaphor are *from*, *to*, and *up* and they appear in metaphorical expressions three, four, and five.

Although the direction is not explicitly denoted in these metaphors, it is implied in English by the TIME-ORIENTATION mapping. *From* implicates a direction that is approaching the *observer*. Similarly, *to* is implicating the same direction...towards the *observer*. And, in the final sample, *up* indicates that time is moving from a lower position *up to* the present.

Extent:

Adjectives = long; short // **Adverbs** = as long as; as much as // **Nouns** = end

The next set of key terms to be discussed are labeled as extent terms. They are made up of adjectives, adverbs, nouns, and prepositions. Each of them, in one way or another, implies an extent, or duration of time. The following set of examples appears in the same sequence as above.

1) for half of its *long* day; 2) a thousand years is a very *short* time; 3) not *as long as* you think; 4) the *end* of the fossil fuel age

Obviously, in the first two samples, the periods of time (day and a thousand years) are being conceptualized as objects that are *long* and *short*, respectively. They are both examples of the TIME SUBSTANCE feature that denotes time as lengths of motion.

The *as...as* phrasals mean *to the extent*, so the metaphorical expressions *not as long as* you think and he could have been dead for *as much as* five years both denote the extent of time as a substance. A reproduction of the short conversation in which the first metaphorical expression appears is necessary to understand just how this expression is metaphorized as the MOVING OBJECT conceptual metaphor. The sentence is a response to a statement by Indra, a female doctor who has been treating Poole. In the following conversation, Indra speaks first and Poole responds:

“And while Danil is organizing your move, we’ll go for a little trip upstairs...to the Lunar Level.”

“Wonderful. How far is that?”

“Oh, about twelve thousand kilometers.”

“Twelve thousand! That will take hours!”

“Not *as long as* you think...”

In the above conversation it is relatively easy to see how the phrase *as long as* refers to the extent of many hours. However, without this explanation of the context, we could not know if the phrase was referring to time or a length of rope. But in this context we can see how the phrase *as long as* is metaphorized as an extension of time.

The noun *end* appears relatively frequently in metaphorical expressions similar to example four and in order to derive extent of time, *far* must be considered a distance which an *object* moves across. In other words, time moves across a distance to the present.

Nouns denoting periods of time:

Nouns = beginning; passage

There were only two nouns denoting periods of time in the novel. The expressions are: 1) near the *beginning* of the Fourth Millenium; and, 2) the *passage* of time. The term *beginning* entails movement as a point where the Fourth Millenium starts its motion. And, *passage* describes the act of *passing*. Although functioning as a noun in the phrase, the MOVING OBJECT conceptual metaphor is derived from this term.

Position:

Adjectives = next // **Prepositions** = after; before; beyond

The final set of key terms that denote the MOVING OBJECT conceptual metaphor have been identified as terms that indicate the position of the object on the path of

motion. The set consists of one adjective and, logically enough, three prepositions. The group of metaphorical expressions below illustrates how the positional terms function in the metaphorical expressions to denote MOVING OBJECT conceptual metaphors.

1) the *next* morning; 2) *after* a few minutes; 3) a few weeks *before* launch; 4) even if it had been allowed to go *beyond* the first few weeks after conception

As we can see, the adjective is a modifier of the temporal term of the metaphorical expression above. However, in the metaphorical expression the morning is portrayed as being in a position that followed a preceding position. Of course, the implication is that the current position must have been arrived at through some kind of motion. Hence, *next* tells us that time has moved.

The final grammatical classification in the positional terms consists of the prepositions *after*, *before*, and *beyond*. The act of moving is entailed in each of these terms by their definitions. *After* means that an object follows some preceding position in time, *before* means that the object precedes some following position in time and *beyond* is defined as on or to the further side of some position in time (Webster's Encyclopedic Unabridged Dictionary of the English Language, 1994, p. 144). Therefore, the terms entail *movement* and we have the TIME IS A MOVING OBJECT conceptual metaphor.

3.2.3 Key Terms Denoting MOVING OBSERVER in English

The mapping for this set of conceptual metaphors has been outlined in section 3.2. Hence, I will not repeat the discussion here. However, it might be wise to remind the reader that the mapping describes the features that determine what a metaphorical expression requires in order to be considered a MOVING OBSERVER conceptual metaphor.

In this category, which is similar to the MOVING OBJECT conceptual metaphor, I identified the key terms that denote the observer as the entity in motion and time as static. Interestingly, all of the key terms in this class of conceptual metaphors are of the motion feature. They are listed below with the number of metaphorical expressions that employed each of the key terms. Once again, the number following the experiential classification is the total number of metaphorical expressions in this group. And, the number following each of the key terms is the number of metaphorical expressions that the individual term appeared in:

Motion: (5)

Verbs = bring (1); come (1); explore (1); transport (2)

The terms *bring* and *transport* both imply the action of carrying an object from place to place. *Bring* appears just once in the following context: Poole (the protagonist) is concentrating on viewing a video recording of a celebration that took place in his past when the voice of "...a new commentator took over, speaking with the accent that immediately *brought* him up to the present." That is, an outside stimulus causes the movement of Poole (the observer) from the past to the present. Even though the movement from past to present is only within the thoughts of Poole, the movement, as conceptualized in these terms, is the movement of an object (Poole, or his thoughts) from one place in time (the past) to another place in time (the present). *Bring* entails an accompaniment, as the observer is carried from one location to another. However, it is significant that *bring* implies the carrying of someone across a span of time. In spatial terms, it could be said that Poole is being carried from a remote location toward the location of the present. But, it is the action of being carried that is significant in this metaphor.

The metaphorical expression employing *come* is quite similar to the *bring* expression. In the expression, Poole *came* back to the present, the only real difference is that Poole is performing the act of *coming* himself, rather than being carried across time.

Finally, the term *explore* is a specific kind of movement, usually with a purpose. After all, it would be very difficult for someone to *explore* a location by remaining in one place and looking around...unless it is a small region. However, in English there is an entailment that *exploring* requires motion. In all of the preceding metaphorical expressions, time is static and it is the observer who does the moving.

The *transport* of an observer is similar to *bring* because it implies the observer is being carried across time. *Transport* appears in the metaphorical expression, *transported* across the centuries.

The above analyses provide several insights into the TIME IS A MOVING OBJECT and the TIME IS A MOVING OBSERVER conceptual metaphors. One interesting point is that there are five different features of key terms operating in the MOVING OBJECT conceptual metaphors: motion, direction, extent, nouns denoting periods of time, and position. Whereas, in the MOVING OBSERVER group of conceptual metaphors we see just the one feature of motion. And, all of the key terms in this group are verbs. What generalizations and conclusions can be drawn from these facts will be discussed in section 3.2.6 following the analysis of the Thai conceptual metaphors below.

In the next section, I will analyze the Thai conceptual metaphor TIME IS A MOVING OBJECT in order to see how it compares to the English data examined above.

3.2.4 Key Terms Denoting MOVING OBJECT in Thai

First, it must be remembered that, although there are significant differences in the manners in which the English and Thai languages conceptualize the TIME AS A MOVING OBJECT, there must be a common framework on which to base the following analysis. Therefore, the mappings that were outlined in the English section will be applied to the Thai data. (This applies to all of the following analyses, as well.) This does not mean that the Thai language makes use of every conceptual metaphor that appears in English, only that the mapping provides us with a common foundation that can be used to compare the conceptual metaphors operating in the two languages. Hence, if there are questions as to how, or if, the Thai key terms ‘fit’ into the various conceptual metaphors discussed in the Thai language, one should refer to the mappings that apply to each of the English conceptual metaphors that parallel the Thai. However, in the cases where there are no conceptual metaphors in the language, the mapping will, of course, apply to the language that does contain that class of conceptual metaphors. (This research has identified two conceptual metaphors that appear in English, but not in Thai...MOVING OBSERVER and MONEY).

The key terms in metaphorical expressions that denote the conceptual metaphor of TIME IS A MOVING OBJECT are categorized as follows:

Motion: (110)

Verbs =	มา (...แล้ว) (35);	มา (...)	ก่อน (10);
to come	(...already);	to come (...)	before;
ผ่าน(ผ่าน)	มา (9);	ผ่าน(ผ่าน)	ไป (11);
to pass	come;	to pass	go;
ไป	(...แล้ว) (17);	ล่วงหน้า	ไป (1);
to go	(...already);	to pass	go

(มา)	ถึง (20);	ตาม (5);	เลื่อน (1);
(come)	to/to arrive;	to follow;	to slip, to slide;
เร่งให้เร็วขึ้น (1)			
to accelerate			

Extent (4)

Adjectives =	ช้า	ไป (1);	เพียง (2);
	slow	go;	just, only, merely;
Noun =	ระยะ (1)		
	period of time, period, interval		

Position (4)

Prepositions =	ก่อน (3);	จาก (1)
	before;	from

A look at the numbers above reveals that the motion terms are the most culturally coherent with extent and position terms following far behind with four metaphorical expressions of the MOVING OBJECT metaphor each.

3.2.5 Qualitative Analysis of the Key Terms

In this section, I will provide examples of the metaphorical expressions employing the key terms above and a translation of each. However, a detailed explanation of every class of term is not necessary because they have been explained in the English section above. However, if a term or two appears in Thai but not English, I will, of course explain them.

The key terms that denote action appear in the following examples:

- 1) มา ตั้งแต่ ปี ค. ศ. 2700;
come since year A.D. 2700
ever since the year 2700 A.D.
- 2) มา จากอารยธรรม สมัย ก่อน
come from civilization time before
coming from past civilizations

- 3) คำถาม นั้น ของ อดีต ที่ ผ่าน มา;
 questions those poss. past det. pass come
 those are questions belonging to a time that has passed
- 4) แต่ หลังจาก ที่ เวลา ผ่านพ้น ไป แล้ว สิบห้าปี
 since from det. time pass go already fifteen years
 after a fifteen-year period of time had passed by
- 5) ไป แล้ว ตั้ง หลาย ศตวรรษ;
 go already since many centuries
 many centuries had gone by already
- 6) ไม่เคย ปล่อยให้ เวลา ล่วงเลย ไป;
 never allowed time to pass go
 [Professor Anderson] never let time pass by [without some usefulness]
- 7) มาถึง ยุค นี้;
 arrive era here
 arriving at this era
- 8) ไป ตาม ยุค ตาม สมัย;
 go follow age follow age
 following age after age
- 9) เลื่อน วันเกิด ของ คุณ ไป หนึ่งพันปี;
 slide birth date poss. you go one thousand years
 slide your birth date by one thousand years
- 10) เหมือน เวลา ถูก เร่งให้เร็วขึ้น
 like time like accelerated
 as if time had been accelerated

Extent:

- 1) ช้าไป สองสามปี ไม่ ทัน การฉลอง ครอบรอบ
 too slow a few years neg. on time celebration cycle
 สองพันปี;
 two thousand years
 a few years too late for the celebration of the year 2000
- 2) เวลา เพียง หนึ่งชั่วคน จะ ยาว พอ ปิด
 time just one lifetime fut. long enough to close
 just one short lifetime closed the gap between the ancient ship *Discovery* and
 ช่องว่าง เรือคิสโคเวอรี ใน สมัย โบราณ กับ
 gap ship *Discovery* in time ancient with
 the rocket with the same name that still flies to Jupiter

ยาน	ที่	มี	ชื่อ	เดียวกัน	นี้
rocket	det.	has	name	same as	this
ที่	เดินทาง	ไป	ยัง	ดาว	พฤหัสบดี
det.	flies	go	still	star	Jupiter
3) หนึ่งพันปี		เป็น	ระยะ	เวลา	ที่ สั้น มาก
one thousand years		is	period	time	det. short very
one thousand years		is	a very short	period of time	

Thai *position* terms:

- 1) ก่อน เวลา;
before time
previous times
- 2) จาก นี้ ไป
from here go
from now on

In the following discussion I will refer to the key terms and the metaphor examples that they appear in by naming the category first and then referring to the number of the example within that category.

In this section of the analysis, you will notice that I have not included a separate category for the object class of key terms. The terms that would appear in this category are: ปี (year), ศตวรรษ (century), อดีต (past), วัน (day), สมัย (age, era, time), เวลา (time), ยุค (age, era), and other similar temporal terms. These temporal terms in Thai do not imply a moving object in themselves. Hence, they will not be discussed as a separate class of terms. Instead, when some explanation of these terms is required, it will be conducted when the particular metaphorical expression employing the term is discussed.

The Thai motion terms are, in most instances, equivalent to the English so I will examine the differences rather than the similarities to avoid too much redundancy.

3.2.6 Comparison of English and Thai MOVING OBJECT and MOVING OBSERVER

First, notice that in the English class of motion terms there is the adjective *elapse* which can be used as a verb also—time has elapsed—or as an adjective—elapsed time. There are two Thai phrases that are equivalent in meaning *ผ่าน(พ้น)มา* and *ผ่าน(พ้น)ไป* that can be translated as to *pass by* or *elapse*. However, they are never employed as adjectives. Another difference is that the use of *มา* and *ไป* is determined by the Thai speaker's perception of the time event as being either terminative or non-terminative. If the event is terminative the term *มา* will be employed and if the event is non-terminative then *ไป* will be employed. This is not the case in English. In English the equivalent term *elapse* indicates no direction, nor does it indicate termination. In fact, *elapse* is usually quite non-specific regarding termination. Termination, or non-termination in English would be indicated with a temporal term such as *day*, *week*, *year*, or *forever*, *eternity*, etc. For example, the day *came* when he could fly a plane, illustrates time as a MOVING OBJECT that reaches a termination point; and, the lecture *went on* for an eternity, illustrates how a period of time moves so slowly that it seems like it will never end.

Some other obvious differences are that *bring*, *explore*, *got under way*, *span*, and *transport* have no Thai equivalent. That is, they were not employed in this novel; that does not mean that there are no equivalent terms in Thai at all.

In the Thai motion terms we see two that are almost the same except that the first *ผ่าน(พ้น)มา* employs the Thai word for *come* and the second *ผ่าน(พ้น)ไป* employs the

Thai word for *go*. According to Rangkupan (1992, p. 94) this is due to a difference in the direction of time. She says that *go* refers to a temporal situation in which the speaker's attention is focused on a point other than the termination. Whereas, when using the term *come* the speaker is focused on the termination point.

Regarding the moving observer conceptual metaphors, we find that there are none in the Thai language. First, we see that motion terms (consisting of verbs) are employed to show the act of moving an observer *to*, *from*, or *within* a time that is conceptualized as a static location. In English, the motion terms denote acts of moving to (*bring* and *come*), or within (*explore*) a time/location.

Now, we will go on to the TIME IS A RESOURCE conceptual metaphor.

3.3 TIME IS A RESOURCE Introduction

The first question that arises is, what features does the TIME IS A RESOURCE conceptual metaphor consist of? I will answer that by first outlining the most important characteristics, then I will illustrate the mapping derived from those characteristics.

When we consider what a resource is, we find that the following features describe our general concept of a resource (Lakoff and Johnson, 1999, p. 161 – 162):

The Elements of the Concept:

- a. user can quantify it in a somewhat precise manner;
- b. user can assign it a value per unit;
- c. it serves a useful purpose for the user; and,
- d. it is used up progressively as it serves the user's purpose.

The following mapping for the TIME IS A RESOURCE conceptual metaphor is derived from preceding elements:

The Resource	→	Time
User of the Resource	→	Agent (User of Time)
Purpose Requiring the Resource	→	Purpose Requiring Time
Value of Resource	→	Value of Time
Value of Purpose	→	Value of Purpose

As a result of this mapping words such *worth*, *value*, *waste*, *use*, *save*, *spare*, and others can be employed with metaphorical meaning in the time domain. Another point that must be made here is that for the purposes of this paper, when ever time is being conceptualized as an object of some kind, I have classified it as a resource. The reasoning behind this is that we humans have found some use—hence, value—for everything that is on this planet. So, every object is a resource of some kind at some time or another. Although Lakoff and Johnson do not state this type of reasoning explicitly, this definition is implied by the fact that everything on this planet has been utilized as a resource at one time or another. When these objects are being used for this purpose, they have value and are thought of as resources. Therefore, the possession of time, when time is considered an object, is conceptualized as TIME IS A RESOURCE. Hence, we find the following metaphors in English:

What is your time *worth*?; My time is *valuable* to me; Stop *wasting* my time; He *used* all of his available time; Do you have any *spare* time for me? I don't *have* any time; He *has* lots of time.

And, in Thai¹:

- 1) ถูก ของ มัน;
age poss. it
it's age [period of time]
- 2) ได้ นับ พันปี;
can count a thousand years
a thousand years can be counted

¹ All of the Thai samples are taken from the Thai translation of Clarke's novel 3001.

- 3) ใช้ เวลา;
use time
use time
- 4) จะ ไม่มี มี วัน;
will neg. have day
there will not be a day
- 5) ขอ เวลา เดี่ยว;
ask for time a little
give [me] a little time
- 6) เวลา ที่ เสีย ไป
time det. waste go
the time that is wasted

In the Thai examples, we notice that there are some similarities and some differences. For instance, in the first example ของ shows that time is a ‘possession’; the second term ใช้นับ illustrates that a resource can be ‘counted’; in the third, the term ใช้ shows that a resource can be ‘used’; in the fourth, the phrase ไม่มี illustrates that resources come in ‘limited’ supplies; in the fifth, the term ขอ shows that one person has enough control—ownership—over the resource that another person can ‘ask’ for its possession to be transferred; and, in the last sample, the term เสียไป illustrates that a resource can be ‘wasted’. If we replace ‘resource’ with ‘time’, we have metaphorical expressions of TIME IS A RESOURCE.

Now, we will take a look at the key terms that denote the RESOURCE conceptual metaphor in English first, then in Thai.

3.3.1 Key Terms Denoting RESOURCE in English

The key terms denoting the TIME IS A RESOURCE conceptual metaphor will in some way entail possession, purpose, quantity, and usage of the resource. However, it is not necessary that all these characteristics must be present in a metaphorical expression to derive the RESOURCE metaphor. In those cases where there are more than one key term present in the metaphorical expression, the most culturally coherent will be selected for analysis. For example, in the metaphorical expression ‘The message from Earth had taken six hours’, we see the key terms *take* (meaning require) and the quantification term *six*. Both terms denote the RESOURCE conceptual metaphor, but only the term *take* will be considered for the analysis, as the purpose of a resource is more powerful than the idea of having a certain quantity of a resource. That is, if something is required, just one of that requirement may be as valuable as six. Hence, in cases where there is more than one key term, the quantification term will take the back seat and the other term will be considered the primary key term.

Possession (35)

Verb = have (12); promise (1); // **Possessive Pronouns** = his (9); his own (6); my (1); our (2); their (1); your (2) // **Noun + 's** (1)

Desire (27)

Verbs = found (1); need (1); take (24); want (1)

Quantity (37)

Adjectives = all (6); as much as (1); enough (1); few (2); little (1); many (1); most (4); much (1); no (1); plenty (1); some (1); // **Numerical Adjectives** = one, five, ten, hundred, thousand, etc. (9) // **Adverbs** = just (3); // **Verbs** = last (5);

Usage (5)

Verbs = consume (1); waste (4)

From the above numbers it is evident that, in English, possession and quantity seem to be most culturally coherent in deriving the RESOURCE conceptual metaphor.

However, the desire feature is not far behind. Therefore, it would be difficult to say with any certainty which of the three features is most cogent. But, we can see that the usage of a resource seems to play a lesser role in deriving the RESOURCE metaphor. This may be significant as well as surprising.

Let's take a closer look at the key terms and how the RESOURCE conceptual metaphor is derived from them.

3.3.2 Qualitative Analysis of the Key Terms

First, how does possession denote RESOURCE?

A resource is some object, or entity, that can be quantified, can be possessed—can be controlled, and therefore, is useful—has a purpose, and can be utilized for that purpose. Therefore, when we find terms that denote time as one or the other of these properties, we find the RESOURCE conceptual metaphor.

A look at the key terms that denote possession reveals that there were a total of thirty-five metaphorical expressions that consisted of verbs, possessive pronouns and one noun in the possessive form. The following are samples of metaphorical expressions that employ each of the key terms noted above:

1) he *had* less and less time; 2) the hundred years that had been confidently *promised* him; 3) voices of *his* age; 4) the events of *his own* time; 5) the rest of *my* life; 6) *our* age; 7) identifying *their* twenty-four hour standard days; 8) television programs of *your* time; 9) the politics and economics of *Poole's* era

In sample (1) the past tense form of the verb *have* illustrates the possession of the time by an agent. In addition, this same metaphorical expression contains the quantification phrase *less and less* which implies the consumption of time, which reinforces the conceptual metaphor TIME IS A RESOURCE. Sample (2) illustrates how time

can be possessed and controlled by one individual by the act of promising to give it to another. Samples (3) – (8) all employ possessive pronouns to show ownership of time; and, ownership of an entity entails control. Finally, sample (9) employs the possessive form of an individual to show ownership and control of time.

The key terms denoting desire consist of twenty-seven metaphorical expressions employing four different terms. By far, the term *take* was employed more often than any of the others. Samples containing the four key terms are:

1) he had never *found* time; 2) he *needed* only ten minutes; 3) it might *take* centuries; 4) I *want* time

Sample (1) must be considered in terms of an individual that has been attempting to *find* time because he *desires* that time. And, since he *desires* the time it is valued and that denotes time conceptualized as a resource. In sample (2) the term *need* illustrates once again how time is a *requirement* and as a *requirement* it must be *desired*. In the samples employing the term *take*, we must consider *take* in terms of the verb *require*, rather than as a verb meaning to carry an object to another location. Hence, the metaphorical expression can be best understood as it might *require* centuries. And, as already discussed, a *requirement* entails *desire*, which means that the object can best be conceptualized as a resource. In sample (4) we see that time is some resource that the speaker *wants*. *Wanting* an object usually entails that it is wanted because it has some value—even if only possessing it is the sole purpose—and implies the *desire* for *control* over the *resource*. In this manner, the TIME IS A RESOURCE conceptual metaphor is derived from the key terms denoting desire.

The next set of key terms quantifies time in some manner. By quantifying a time, we conceptualize it as an object and most objects on this planet have uses and value which makes them resources. The following examples illustrate these properties:

1) *all* the time; 2) *as much as* five years; 3) A thousand lifetimes would not be *enough*; 4) more than a *few* minutes; 5) so *little* time; 6) *many* lifetimes; 7) *most* of the time; 8) *much* of the time; 9) *no* time; 10) *plenty* of time; 11) at least *some* of the time; 12) *one* day; 13) *just* a few years too late; 14) *lasted* a thousand years

Samples (1) through (11) all employ adjectives to describe imprecise quantities of time and as discussed above quantity implies purpose and usage, which in turn derives the TIME IS A RESOURCE conceptual metaphor. Whereas, the numerical adjectives describe precise quantities. In sample (13) the adverb *just*—exactly, precisely, only—denotes an imprecise quantity; but, only that quantity. Finally, in sample (14) the verb *last* denotes the quantity of a resource by describing the amount as being in sufficient quantities to *endure* for a thousand years.

The final set of key terms consists of two verbs used in a total of five metaphorical expressions. Both terms describe the use of the resource time in a complete and final sense. The first, appears in the metaphorical expression *time-consuming* and describes how time can be used up completely with no indication of whether it served a useful purpose or not. Whereas, the next example Professor Anderson *wasted* no time describes the use of the resource time in some manner that did not have some usefulness.

The above discussion covers the English metaphorical system of TIME IS A RESOURCE. But, how does the Thai system of metaphorization compare with the English? The next section will provide some answers to this question.

3.3.3 Key Terms Denoting RESOURCE in Thai

The properties of the resource conceptual metaphor that were discussed in the English section and under which the key terms of the Thai language are listed are the same.

Possession (58)

Verb = มี (41); // **Possessor** = ของ (16); ยุคผม (1)
Have possessor age ∅ [owner/possessor] me

Desire (2)

Verbs = ต้องการ (1); ขอ (1)
want ask for/request

Quantity (16)

Adjectives = หหมด (1); ทุก (7); พอ (1);
all every enough

Adverb = สัก (2); **Verb** = นับ (5)
just about count

Usage (61)

Verbs = ใ้ (41); เสีย (3); กิน (17)
use waste eat/consume

As can be seen, there are thirteen different key terms that are categorized under the four properties that denote the RESOURCE conceptual metaphor. There were a total of 137 RESOURCE metaphorical expressions that appeared in the Thai version of the novel. Under the possessor property, there were three key terms used in a total of fifty-eight metaphorical expressions. The verb มี (have) was employed much more frequently than the others followed by the possessive ของ (a human owner/possessor) and finally, the phrase ยุคผม (my era) which employs a possessive form with a zero possession term.

Under the property of desire there were two metaphorical expressions employing one each of the verbs ต้องการ (want) and ขอ (to ask for). In the property of quantity we see the three adjectives หมด (all), ทุก (every), and พอ (sufficient). In addition, under the quantity property I also listed one adverb สัก (just about) and one verb นับ (to count).

The final property, usage, consists of the three verbs ใช้ (use), เสีย (waste), and กิน (eat/consume) with the first of these being employed most frequently.

With the above in mind we can now go on to the qualitative discussion of the key terms in Thai denoting the RESOURCE conceptual metaphor.

3.3.4 Qualitative Analysis of the Key Terms

In this section I will discuss each of the key terms within each of the properties before going on to the next set of key terms. I will provide examples of each and explain them. However, I will not go over the relevance of each of the four properties because I have already explained them in the introduction to this section (3.3).

The first of the properties listed is the possession property and the following examples illustrate the manner in which each of the possession terms were employed to derive the RESOURCE conceptual metaphor.

- | | | | | | |
|----|--|-----------|------|--------|------------|
| 1) | มี | เวลา | ให้ | ตัวเอง | น้อยลง; |
| | have | time | give | myself | decreasing |
| | [I] have less and less time for myself | | | | |
| 2) | สมัย | ของ | เขา; | | |
| | age | possessor | him | | |
| | his age [period of time] | | | | |

3)	ไม่ใช่	ยุค	∅	ผม
	neg.	era	∅	me
	not my era			

In sample (1) when the speaker says I *have* less and less time for myself we see how the act of having an object that is decreasing in quantity—which is time—entails a resource. Just as in the English, to have something means having control over its use and the purpose for having it. Sample 2 translates as *the time, or era belonging to him/her*. Once again it is the ownership of time that derives the resource conceptual metaphor. However, in this sample there is no term (denoted by ∅) that implies ownership. Instead, the juxtaposition of *ยุค* and *ผม* entails the act of possessing time. In the final sample, which translates as *not my era*, the speaker is denying ownership over the particular period of time. But, if one can deny ownership, that implies that it is an object that can be owned. It just is not owned by the speaker.

The next two examples imply desire:

- | | | | | | | | | |
|----|--|------|-----------|------|----------|--------------|--------|--------|
| 1) | ผม | ก็ | ต้องการ | เวลา | คิด | เหมือนกัน... | อย่าง | น้อย |
| | I | too | want | time | to think | same | manner | little |
| | ก็ | สัก | ชั่วโมง; | | | | | |
| | also | just | hour | | | | | |
| | I want some time to think too...no less than an hour | | | | | | | |
| 2) | ขอ | เวลา | เดี๋ยวนะ | | | | | |
| | Give | time | momentary | | | | | |
| | [Please] give [me] a moment | | | | | | | |

The first translates as I *want* some time to think...no less than an hour. Of course, to *want* is to desire. And, the second means, *give [me] a moment*. Neither states what the purpose(s) may be, but the acts of wanting and asking for time entail that the

speaker has a desire for the resource. And, in most societies desire for an object implies that there is a purpose.

The next set of key terms consists of terms that state or imply the quantity of a resource. The first four terms are quantitative adjectives and appear in the following samples:

- 1) หมด สมัย;
all times
all the time
- 2) ทุก ห้านาที;
every five minutes
every five minutes
- 3) หนึ่ง นาที ที่ ว่า ไม่ พอ
one minute det. was not enough
that one minute was not enough

The English translations reveal how these examples denote quantity which, in turn, denotes the TIME IS RESOURCE conceptual metaphor.

In the second and third samples a specific amount of time is indicated. In the first sample the quantity of time is not indicated.

The next sample is a quantitative adverb that indicates limitation of the quantity.

- 1) สัก วัน
just, only day
only a day

The limiting of the amount of an object implies value and the ability to quantify an object derives a resource.

The final sample under the property of quantity is a verb that means to count.

- 1) ได้ นับ พันปี
can be counted a thousand years
a thousand years can be counted

If something can be counted—quantified—it must be an entity of some kind and therefore, is considered a resource.

The last set of key terms have been labeled usage and consist of three verbs that illustrate that time as a resource, can be employed in some manner.

- | | | | | | |
|----|-------------------------------|------|----------|----------|------------|
| 1) | ใช้ | เวลา | นาน | ถึง | หกชั่วโมง; |
| | use | time | long | to | six hours |
| | use up to six hours of time | | | | |
| 2) | ใช้ | เวลา | อยู่ | ด้วยกัน; | |
| | use | time | stay | together | |
| | use the time to stay together | | | | |
| 3) | เวลา | ที่ | เสีย | ไป; | |
| | time | det. | wasted | gone | |
| | time that has been wasted | | | | |
| 4) | กิน | เวลา | หนึ่งปี | | |
| | eat/consume | time | one year | | |
| | to consume one year | | | | |

The first two examples illustrate two ways in which the Thai verb ใช้ (use) is employed. The first translates as *use* up to six hours of time. In this sample there is no purpose indicated. It is just a statement that a maximum amount of six hours can be used. In the second sample a purpose for using the time is stated in this way, *use* the time to stay together. Sample (3) has the speaker talking of using time in a wasteful manner. His statement is translated as time that has been *wasted*. And, in the final sample we see that time is a resource to be consumed, *consume* one year. The consumption of time is the same as the use of time and the usage of an object denotes a resource.

How does the preceding compare with the English?

3.3.5 Comparison of English and Thai Data

When we look at the two analyses we find some similarities and some differences. First, the same properties that denote resource can be found in both the English and the Thai data. That is, possession, desire, quantity, and usage are all expressed in some manner or other in both languages.

We also find that possession is culturally coherent in both languages—with thirty-five occurrences in English and fifty-eight in Thai. However, the desire property is significantly more coherent in English with twenty-seven occurrences; whereas, there were only two in Thai. It is tempting to speculate that there is less desire for resources in the Thai culture than in the American. And, to a certain degree this may be true. I have often asked various Thai friends about their desires. In many cases, I have asked about the strength of their desires and the response has often been: I don't hope for anything too much, because it will cause me not to get it. In addition, the Buddhist religion discourages clinging (wanting) to things because all things are temporary. And, as can be seen in the language, metaphors reflecting desire seem to be less coherent than in America.

Quantity, similar to possession, is also highly coherent in both languages with thirty-seven occurrences in English and 26 in Thai. But, usage is much less coherent in English with only five occurrences; where, in Thai, there were sixty-one occurrences.

We also saw in the analysis that both languages employ various parts of speech to express the RESOURCE conceptual metaphor. In English the possession property was expressed by verbs, possessive pronouns and nouns with the possessive affix. In Thai the possession property employed verbs and possessive nouns and pronouns. In addition, there was one example of ownership expressed merely by the position of the

terms with no possessive term inserted—that is, a \emptyset insertion. Desire was expressed with verbs in both languages. The quantity key terms of English and Thai employed adjectives, adverbs, and verbs. And, both languages employed verbs to express the usage property.

This indicates that the systems for conceptualizing time as a resource are quite similar in both languages. This could be a result of the translator trying to follow the original English as closely as possible. But, my feeling is that if the systems were not sufficiently similar, then the translator would not have been able to stay as close to the original as he did.

It is also clear with just a quick look at the two lists of key terms that the English employed a wider variety of terms from all the properties except usage to express the TIME IS A RESOURCE conceptual metaphor. The Thai usage property employed three key terms and the English only employed two. However, this difference is insignificant as the other classes of key terms in English employed many more terms than the Thai.

Now, we will take a look at the next conceptual metaphor.

3.4 TIME IS SPACE Introduction

The TIME IS SPACE conceptual metaphor can best be understood in terms of an image schema consisting of a landscape. In this landscape, time can occupy various positions that denote various metaphorical meanings of time. Most of the terms that denote position tend to be prepositions. For instance, *over*, *on*, *in*, *out*, *close to*, *far-off*, *near*, etc. can be metaphorically related to time in the following manners: time is *over*; he is *on* time/*in* time; *out* of time; *close to* the due date; *far-off* future; *near* seven o'clock. In some situations, the TIME ORIENTATION conceptual metaphor can be a part

of the landscape image schema and we get metaphorical expressions such as these: to the *front* is the future; he looked *back* at the past; and, *here* is the present.

From the preceding we can see that the mapping of the TIME IS SPACE conceptual metaphor is:

The Location of the Observer	→	Present
The Space Surrounding the Observer	→	Time Near the Present
The Space in Front of the Observer	→	Future
The Space Behind the Observer	→	Past

From the examples preceding this mapping, it obvious that time can be placed in a large variety of positions relative to the observer. It is these spatial positions that provide time with a wide variety of metaphorical meanings, which will be explored in the analyses that follow.

3.4.1 Key Terms Denoting SPACE in English

All the key terms in this conceptual metaphor will denote time as being located somewhere on a landscape schema. Hence, most of the key terms will consist of prepositions and all of the terms will be positional in meaning. The key terms denoting the TIME IS SPACE conceptual metaphor are:

Position (40)

Adverbs = apart (1); around (1); there (4); // **Prepositions** = against (2); ahead (2); at (19); on (3); over (7); up (1)

As can be seen from the above the use of prepositions to denote position is significantly more cogent in English than the use of adverbs. The examples that follow illustrate how the two grammatically different sets of key terms function in order to derive a similar image schema.

3.4.2 Qualitative Analysis of the Key Terms

Since the prepositions are the most coherent terms in the TIME IS SPACE conceptual metaphor, we will begin our discussion with them. Look at the examples below and picture a landscape on which time is located relative to the observer according to the definition of the preposition employed.

1) working *against* a deadline of days, weeks, or years; 2) *ahead* of time; 3) *at* this very moment; 4) *on* time; 5) *over* the centuries; 6) *up* a thousand years

Sample (1) illustrates that the observer occupies a position alongside and touching time on our landscape; however, it does not indicate exactly where on the landscape time is located. Sample (2) is similar in that we don't know precisely where on the landscape the observer and time are located; but, we do know that our observer is in a position located *ahead* of time. Sample (3) locates time at the same position as the observer who occupies the present. Sample (4) has time located above and in contact with a surface on the landscape. Whereas, sample (5) places time above and not in contact with a surface on the landscape. Sample (6) puts time in a position that is up in relation to the observer.

The second set of key terms consists of the adverbs *apart*, *around* and *there*. The metaphorical expressions they appear in are:

1) about a century *apart*; 2) *around* the mid-Twentieth Century; 3) *there* were times when

Once again, we must refer to our imaginary landscape to explain the above. Sample (1) indicates that there are at least two points of time that are separated by one century. However, we do not know precisely where on the landscape they are located. Sample (2) locates the observer near the middle of the Twentieth Century. And, sample (3) indicates time as occupying a space that is remote from the observer.

In general, what we see here is that although time is located on a landscape, in most of the cases discussed above, those locations are not precise enough to place them exactly on our landscape but we can place them in relation to the overall landscape, an observer, or in relation to other times.

3.4.3 Key Terms Denoting SPACE in Thai

In this section I will examine the key spatial terms that operate in the Thai language. Once again, it will be the properties of space—as described in the English section—that determine whether the metaphorical expressions employing the following key terms denote the TIME IS SPACE conceptual metaphor.

In the first set of terms denoting TIME IS SPACE we find that the motion of the observer to a point in time is conceptualized as a location. At first, I first analyzed these terms as MOVING OBSERVER conceptual metaphors. However, after consultation with native speakers of Thai, I re-classified them as SPACE metaphors. It seems that for a native speaker of Thai, motion is not as salient as the location.

However, in order for one to realize that the temporal term is being conceptualized as a location in the following expressions, the term denoting movement to that location must also be considered. For this reason, I have listed the key terms of both features, but it must be understood that there is one metaphorical expression for each pair. That is why the numbers denoting the quantity of the metaphorical expressions appear with the motion terms rather than the temporal terms. In other words, there were a total of 9 metaphorical expressions of this type pairing the motion with the temporal terms conceptualized as locations. The nine metaphorical expressions were employed as three different verbs in the quantities indicated. They appear below with their key terms:

Motion and Location: (9)

Verbs =	ถึง (6);	กลับไป (2);	มา(ถึง) (1);
	to arrive	go back	to come (to)
Temporal Nouns =	ยุคนี้;	สหัสวรรษใหม่;	สหัสวรรษที่สาม;
	this age	new millennium	the third millennium
	ยุคโบราณ;	ตอนนี้;	
	ancient times	this time	

These motion and location terms appear in the metaphorical expressions below:

- อีก ห้านาที เรา ก็ จะ ถึง สหัสวรรษใหม่;
another five minutes we also fut. arrive millennium new
in another five minutes we too will arrive at the new millennium
- ย้อนกลับไป ถึง ต้น สหัสวรรษ ที่สาม;
turn back go to beginning millennium third
turn and go back to the beginning of the Third Millennium
- มา ถึง ยุค นี้;
come to era here/this
to come to this era
- ถึง ยุค โบราณ;
to reach times ancient
to reach ancient times
- ถึง ตอนนี้ เขา รู้จัก;
to reach the present he knew
reaching the present he knew

In the Thai metaphorical expressions and their English translations above, we see that time is in a static location with the observer moving to the time conceptualized as a location in space.

There were two other forms of the TIME IS SPACE conceptual metaphors appearing in the Thai translation. The two metaphorical expressions that appeared were:

- 1) หลัง ยึด การควบคุม ยาน มา จาก ฮัล แล้ว
 after seizing control rocket come from Hal already
 many hours after seizing control of the rocket from Hal
 หลาย ชั่วโมง;
 many hours
- 2) เรา ไม่ มี แรงขับ พอ ที่ จะ ไป
 we neg. have drive enough det. fut. to go
 we don't have enough drive to go before then
 ก่อน หน้า นั้น
 Before face/front there

The key terms within these two metaphorical expressions of space are หลัง (meaning *after*) in the first and ก่อนหน้านั้น (meaning *before the face/front there*) in the second. In the first expression, the preposition of place (หลัง) is paired with a noun that describes a location relative to the observer. The second example, metaphorizes time as space by referring to a person belonging to a different age that has preceded another person. Another interesting aspect about the second is revealed by examining the original English statement from the novel. The speaker says that ‘We do not have sufficient propellant for an earlier departure.’ This is not metaphorical in English because the term earlier is a temporal term and it is not being conceptualized in any other manner. However, in Thai the translator metaphorizes the English ‘earlier’ with a Thai phrase translated as before the face/front there, which is understood as *before that time which is in front of us*. Of course, this is referring to two points in future time...one that comes before a second. It is in this manner that time is metaphorized as SPACE in Thai.

Now, a look at how the Thai compares with the English.

3.4.4 Comparison of English and Thai Data

The most striking fact about the Thai data is that there is so little of it when compared with the English. That is, there were forty metaphorical expressions of the TIME IS SPACE conceptual metaphor in English and only eleven in Thai. One reason for this lack of metaphorical expressions of SPACE in Thai may be that the CONTAINMENT conceptual metaphor (CONTAINMENT could be subsumed under the SPACE conceptual metaphor) occurs much more frequently in Thai than in English. Hence, the possibility exists that many of the English expressions of TIME IS SPACE have been translated to the Thai language as TIME IS CONTAINMENT. (An explanation of why the containment conceptual metaphor is not collapsed into the space conceptual metaphor is given in section 3.5).

Another difference was that the Thai expression of the future was expressed in a manner that placed the future in back of the observer. However, in English the TIME-ORIENTATION mapping doesn't permit this. In American English, the future is supposed to occupy the space in front of the observer, not the back.

This seems to indicate that TIME IS SPACE may not be as universally coherent as the other conceptual metaphors.

3.5 TIME IS CONTAINMENT Introduction

The first thing that must be understood about the term containment is that it does not necessarily entail three-dimensional boundedness. That is, time—when conceptualized as containment—has an interior which is a duration of time and an exterior which forms the beginning and end of the duration of time. And, the observer is either in or out of the container...time. However, the container can be similar to a fence

that surrounds the observer but does not prevent the observer from climbing over it; a tunnel that prevents the observer from going up, down, or sideways but has openings at both ends; or, like a capped bottle that has boundaries in all three dimensions.

From the above we can see that there are many containment metaphorical expressions that can be considered spatial in their metaphorical sense. For example, ‘we went *through* the month quickly’. The term *through* gives us a sense of going through a tunnel. And, for that reason, it sometimes seems that this particular metaphorical expression might best be considered spatial rather than containment. However, there is no precise indication that this container must, in fact, be a tunnel. It could just as well be a large pipe, which is an object. Since there is no clear indication of what type of container is being implied, we cannot say for certain that the CONTAINMENT conceptual metaphor is better collapsed into the SPACE conceptual metaphor.

In addition, containment is such a powerful human experience that there is a wide variety of terms to describe the experience. These terms form the experiential base for a system of CONTAINMENT conceptual metaphors that is distinct from the concepts of space and object. It is for these reasons that CONTAINMENT is not collapsed into the SPACE conceptual metaphor.

The CONTAINMENT mapping that follows will help us to understand how we conceptualize time as CONTAINMENT.

Observer Located within Bounded Region	→	Inside Duration of Time
Observer Located outside Bounded Region	→	Outside Duration of Time

While in the container, the observer can be conceptualized once again like the TIME IS SPACE conceptual metaphor. Hence, the CONTAINMENT conceptual metaphor looks like this:

The Location of the Observer	→	Present
The Space Surrounding the Observer	→	Time Near the Present
The Space in Front of the Observer	→	Future
The Space Behind the Observer	→	Past
Observer Located within Bounded Region	→	Inside Duration of Time
Observer Located outside Bounded Region	→	Outside Duration of Time

This mapping derives metaphorical expressions such as these: *in* the first two weeks of last year; *in* 1988; he sped *through* the years; she looked back *in* time; she came *out* of the past.

With the preceding as a guide, we can now look to the key terms that denote the CONTAINMENT conceptual metaphor.

3.5.1 Key Terms Denoting CONTAINMENT in English

The experiential property that the key terms must portray is one of the observer being bound by a duration of time. The following key terms were identified as operating in the English language:

Boundedness (125)

Adjectives = full (1); midway in (1); // **Prepositions** = in (116); into (2); within (4); // **Verb** = hold (1)

Just as in the TIME IS SPACE conceptual metaphor, we see that the prepositional class of key terms is by far the most cogent in English. In fact, the term *in* makes up well over 90 % of the TIME IS CONTAINMENT conceptual metaphors. However, there are other terms used to express CONTAINMENT and they should provide us with some additional insights into the CONTAINMENT conceptual metaphor.

3.5.2 Qualitative Analysis of the Key Terms

The following samples are based on the boundedness property of containment. Once again it should be remembered that boundedness is not three-dimensional; rather, it means that the observer is bound or limited in some way by a period of time. The CONTAINMENT mapping is similar to the SPACE mapping; therefore, time can be conceptualized as a landscape in which the observer is bound by a fence, a tunnel in which the observer is bounded by the walls, roof, and floor, but not at either end of the tunnel, or simply limited in movement. That is, the boundedness may not be defined precisely and all we know is that the observer is bounded with no way to determine whether it is two- or three-dimensional boundedness, nor do we know in which directions the limitations extend. There is also the possibility that the boundedness is that of a container, such as a bottle, pocket, bag, etc.

The examples that illustrate the CONTAINMENT conceptual metaphors that employ the preceding list of key terms are:

1) a *full* minute; 2) he was *midway in* time between *Goliath* and the first ships to cross the western ocean; 3) *in* the 2700s; 4) *in* the far-off Age of Print; 5) dropped *into* 2001; 6) *within* a few days; 7) what surprises does the Third Millenium *hold* for us?

Sample (1) illustrates CONTAINMENT by conceptualizing a minute as some kind of container that is *full* and can not hold any more. Sample (2) has the observer placed at a mid-point in time that is limited by the times when two different kinds of ships existed (the *Goliath* is a rocket ship and the other ships are boats). That is, the boundaries are defined by the times of the ships' existences. In samples (3) and (4) the preposition *in* is employed to conceptualize CONTAINMENT. In English, the preposition *in* is most coherent for expressing TIME IS CONTAINMENT. This is proven by the large quantity of

occurrences of this kind of metaphorical expression. I included the two samples in order to illustrate the fact that the boundaries of the periods of time can be described in various ways. That is, sample (3) limits the period of time by stating a particular set of years; whereas, sample (4) limits the period of time by describing a period of time defined by the advent of the printed books. In sample (5) we have a very specific image of someone being dropped into a container described as the year 2001. Sample (6) provides a limited amount of time—a few days—and the preposition *within* to conceptualize the fact that something will occur in a limited amount of time. And, sample (7) conceptualizes the period of time identified as the Third Millennium as a container that *holds* a set of unknown surprises.

It is in the preceding ways that CONTAINMENT can be metaphorically expressed using the key terms listed above.

3.5.3 Key Terms Denoting CONTAINMENT in Thai

As in English, the primary property of CONTAINMENT conceptual metaphors is boundedness and the key terms below must entail boundedness in order to derive the TIME IS CONTAINMENT conceptual metaphor. The following list of key terms are those identified as operating in the Thai language:

Boundedness (205)

Adjective =	เต็ม (2);	กลาง (5);
	full	middle
Adverb =	ภายใน (6);	Prepositions =
	within	ใน (192)
		in

Although there are only four key terms operating in this conceptual metaphor, there were two hundred and five metaphorical expressions of the TIME IS CONTAINMENT

metaphor in the novel translated by ลักษณ์รงค์. That seems to indicate that it is one of the most salient conceptual metaphors in the culturally coherent system of conceptual metaphors existing in the Thai language.

However, a detailed discussion of the Thai system of conceptual metaphors will have to wait. Right now, it is time to examine how the key terms above entail boundedness.

3.5.4 Qualitative Analysis of the Key Terms

First, let's look at some samples selected due to the manner in which they demonstrate how the key terms entail boundedness, or CONTAINMENT.

- | | | | | |
|----|--|------------|-------------|--------------|
| 1) | นาที | เต็ม; | | |
| | minute | full | | |
| | a full minute | | | |
| 2) | เวลา | กลาง | วัน; | |
| | time | middle | day | |
| | mid-day | | | |
| 3) | ภายใน | เวลา | เพียง | หนึ่งชั่วคน; |
| | within | time | merely | one lifetime |
| | within just one lifetime | | | |
| 4) | ใน | ปี | ค. ศ. 2304; | |
| | in | year | A.D. 2304 | |
| | in the year 2304 A.D. | | | |
| 5) | ใน | สมัย | โบราณ; | |
| | in | times | ancient | |
| | in ancient times | | | |
| 6) | ใน | ปีแรก | ของ | สหัสวรรษ |
| | in | year first | poss. | millennium |
| | in the first year of the Fourth Millennium | | | ที่สี่ |
| | | | | fourth |

Sample (1) demonstrates how the key term เต็ม (meaning *full*) implies CONTAINMENT rather than stating the property directly like the key term ใน (meaning *in*). However, there is no doubt that when we refer to an entity as being *full*, it entails the idea that whatever the entity is *full* of cannot escape because it is *bound* in some manner. We can see this most clearly by imagining a glass that is *full* of water. In this conceptual metaphor the glass would be time. So, we have the metaphorical expression นาทีเต็ม, or a *full* minute.

The next sample employs the term กลาง (meaning the *middle*, or *center*). Of course, being centrally located entails that there must be some entity either surrounding us, or possibly there are two objects equally distant and on both sides of us. In both cases there are boundaries of some kind equi-distant from our location. And, those boundaries are defined by the span of time specified in the metaphorical expression. As in the metaphor เวลากลางวัน (the middle time of the day). Here the boundaries are set by the beginning and end of one twenty-four hour period of time.

In sample (3) the adverb ภายใน (meaning *within*) is employed to demonstrate CONTAINMENT within a span of time defined as *one short lifetime*. That is, the boundaries of time in this metaphorical expression are defined by the length of one's life. Samples (4) through (6) all employ the preposition ใน (meaning *in*) to demonstrate CONTAINMENT. However, the three samples were selected in order to illustrate the different kinds of time being metaphorized in these expressions.

Sample (4) defines the boundaries of time by identifying a specific time period (a particular year). The boundaries consist of the beginning and end of that year. Therefore, the Thai metaphorical expression ในปี ค. ศ. 2304 (in the year 2304 A.D.) conceptualizes the year 2304 as a *container*. In samples (5) and (6) the preposition *ใน* operates in the same manner; however, the containers'/times' boundaries are defined in sample (5) as an *ancient times* (สมัยโบราณ) with boundaries no more specific than the beginning and end of those ancient times. While sample (6) defines the boundaries of the *container* as the *first year of the Fourth Millenium* (ปีแรกของสหัสวรรษที่สี่). That is, the beginning and end of a specific year within a larger span of time.

How are the English and Thai conceptual metaphors of CONTAINMENT similar? Or dissimilar?

3.5.5 Comparison of English and Thai Data

The first thing that leaps out of the data is that both English and Thai employ the preposition *in* to demonstrate CONTAINMENT in a metaphorical manner. Of course, that indicates that the preposition *in* is the most salient experience in both languages when conceptualizing CONTAINMENT.

It is also interesting that adjectives denoting fullness and centrality appear in the data. This might not be as interesting if it were not for the fact that the Thai terms (เต็ม and กลาง) appear more frequently than the equivalent terms in English. However, it can

only be noted as interesting because the data is insufficient to determine whether the Thai terms are more coherent than the English.

What is significant is that, although there are significantly fewer CONTAINMENT conceptual metaphors in English than in Thai, the number is still quite high and indicates a high degree of coherence. And, since English and Thai share this particular conceptual metaphor, it indicates universality in the manner in which the two languages metaphorize time.

One other difference that should be noted is that in English there was one occurrence of a metaphorical expression employing a verb but none in the Thai data. I don't believe this is significant but it is worth noting.

3.6 TIME IS A POSSESSOR Introduction

This particular conceptual metaphor is one that has not been identified by Lakoff and Johnson, but in the data that I have analyzed, I have identified numerous occurrences of this conceptual metaphor in both languages. And, because possession is such a powerful experience, I have elected to treat it as a culturally coherent conceptual metaphor separate from the RESOURCE metaphor. In addition, the TIME IS A RESOURCE conceptual metaphor does not permit the image schema of time being a user or possessor of a resource because a resource is an entity to be used by some person rather than the other way around. Hence, TIME IS A POSSESSOR could not possibly be subsumed under the TIME IS A RESOURCE category. What are the characteristics that entail that time is a possessor?

The primary features of possession are ownership and control over something—or someone—which can be implicated by terms such as *my*, *your*, and *our*...or, Lakoff's

book. That is, the possessive pronouns and the possessive affix on nouns. This possession entails control over the object. In the RESOURCE section I have discussed possession in terms of a person that holds power over, or title to some object, but in this conceptual metaphor, it is time itself that possesses an entity. For example, time's wheels kept turning; the cavemen *of* the past; and, the books *belonging* to the Renaissance period. Although there are some who would insist that the first example is an expression that metaphorizes time as a vehicle with wheels, I would insist that it is better understood and more coherent as a possessor because possession is a more personal and concrete experience than the observation of some object with wheels. That is, I have, I own, I control, is far more concrete than I *see*. In the second example, the preposition *of* (Webster's Encyclopedic Unabridged Dictionary, 1994, p. 999, says that *of* is 'used to indicate possession') provides the past with the ownership of the cavemen. That is, the cavemen *belong* to the past. And, in the third example, the verb *belong* is a concrete statement that the books are owned by the period of time identified as the Renaissance.

From the above we see that the TIME IS A POSSESSOR conceptual metaphor consists of the following characteristics: 'Time itself has Ownership and Control over some entity.

Now, a look at the key terms denoting POSSESSION in English that appeared in the novel 3001 by Arthur C. Clarke will reveal how and to what extent this conceptual metaphor is culturally coherent in the American culture.

3.6.1 Key Terms Denoting TIME IS A POSSESSOR in English

The following key terms employed by the TIME IS A POSSESSOR conceptual metaphor provide time with ownership and/or control over some object, person, or occurrence:

Possession/Control (21)

Possessive Noun = ___'s (1); // **Prepositions** = of (17); // **Verbs** = have (2); offer (1)

It is obvious once again that prepositions seem to be most coherent in this conceptual metaphor. This may be due to the fact that prepositions describe our relations to the things and people around us. Making them powerful experientially based terms.

3.6.2 Qualitative Analysis of the Key Terms

The above key terms are employed in metaphorical expressions like the following to derive the conceptual metaphor TIME IS A POSSESSOR.

1) the Twenty-first *Century's* 'smart cards'; 2) ecological disasters *of* previous centuries; 3) the earliest records *of* the Space Age; 4) some ladies *of* this era; 5) how many channels would the Third Millenium *have*?; 6) choose which of the myriad distractions this age could *offer*

In sample (1) we see a period of time in the possessive form that has ownership and control over smart cards. Samples (2) through (4) employ the preposition *of* to ascribe the property of possession to time. That is, TIME possesses some events—ecological disasters, objects—earliest records, and persons—ladies, respectively. Sample (5) employs the verb *have* to show that time is in possession and control of the number of [television] channels. And, sample (6) shows time's ownership and control

over a set of distractions by portraying time as offering to provide those distractions to someone.

3.6.3 Key Terms Denoting TIME IS A POSSESSOR in Thai

In the Thai version of the novel 3001, I identified three TIME IS A POSSESSOR conceptual metaphors. Each of the three employed the term ของ which means ownership to indicate that time owned various objects. Since there are so few samples I will reproduce and discuss them all here:

- | | | | | | | |
|----|---|---------|---------------|---------|---------|---------|
| 1) | คำ | ไม่ดี | ของ | ยุคนี้; | | |
| | words | no good | possession of | era | this | |
| | bad words of this era | | | | | |
| 2) | ข้อมูล | ข่าวสาร | ของ | เวลานับ | ศตวรรษ; | |
| | information | news | possession of | time | count | century |
| | accumulated news of the centuries | | | | | |
| 3) | บันทึก | อมตะ | ของ | ยุค | อวกาศ | |
| | recordings | old | possession of | age | space | |
| | old recordings belonging to the Space Age | | | | | |

In each of the three samples, the Thai term for ownership ของ is employed to indicate that the various temporal expressions ยุคนี้ (this age), เวลานับศตวรรษ (time counted as centuries), and ยุคอวกาศ (the Space Age) are the owners of คำไม่ดี (bad words), ข้อมูลข่าวสาร (news information), and บันทึกอมตะ (old recordings), respectively.

3.6.4 Comparison of English and Thai Data

Although TIME IS A POSSESSOR has not been identified in any of the books by Lakoff and Johnson, the above examination reveals that it is operating in both languages. However, the numbers do not reveal just how coherent the metaphor is in each of the two languages and the data is far from conclusive. However, I do believe that it is safe to say that the TIME IS A POSSESSOR conceptual metaphor is coherent in both languages. This means that it is part of the conceptual metaphorical systems of both languages. Another point to make concerning the TIME IS A POSSESSOR conceptual metaphor is that Thai relies on a term that specifically denotes ownership (ของ). Whereas, the English, to a great extent, relies on the preposition *of* to denote ownership. In English it is also significant that there is a greater variety of key terms than in Thai and that the POSSESSOR conceptual metaphor appears more frequently than in Thai. This could mean that the appearances in the Thai translation are more figurative than the English, but even this may turn out to be incorrect with a look at a broader data base.

Another interesting feature of possession is that it is an important characteristic in both the TIME IS A RESOURCE and TIME IS A POSSESSOR conceptual metaphor categories. And, some of the same key terms are employed to denote the two conceptual metaphors. In English, we see that the term *have* appears in both the RESOURCE and POSSESSOR class of metaphorical expressions: RESOURCE = he *had* less and less time; and, POSSESSOR = how many channels would the Third Millennium *have*? In the RESOURCE class of conceptual metaphors we see that *have* follows the possessor and precedes the time—conceptualized as an entity of some kind. Similarly, in the

POSSESSOR class of conceptual metaphors, the term *have* follows the possessor and precedes the entity that is being possessed. The above example is in the question form and must be converted to the direct statement form to reveal this pattern. That is, ‘how many channels would the Third Millennium *have*?’ appears as ‘the Third Millennium *has* many channels’ when converted to a direct statement. Once converted, the pattern: possessor – have – possession reveals itself. However, the difference between the two is that in the RESOURCE pattern it is the resource/time that is the possession and the possessor is the subject in this clause. However, in the POSSESSOR pattern it is time that is the possessor of some other entity.

In Thai, an examination of the RESOURCE and POSSESSOR classes of conceptual metaphors reveals that a similar feature is operating. That is, the term *ของ* is employed in both. The RESOURCE example appears as *ยุคของมัน* (age *of* it/non-human life form) and the pattern is possession – *of* – possessor. Similarly, the POSSESSOR pattern in this example *คำไม่ดีของยุคนี้* (bad words *of* this era) is revealed as possession – *of* – possessor. However, in the RESOURCE example we find that the possessor is a non-human life form that possesses the resource/time; whereas, in the POSSESSOR class of conceptual metaphors it is time itself that is the possessor of an entity.

3.7 TIME IS MONEY Introduction

The TIME IS MONEY conceptual metaphor could quite logically be subsumed under the RESOURCE conceptual metaphor. After all, money is a valuable resource. However, Lakoff and Johnson (1999) treat it separately from the RESOURCE metaphor, just as I

have. The reason for this is that the experiential bases characterizing money are so powerful in the modern American industrial society that the money metaphorical expressions that appear can no longer be considered figurative metaphors. They are part and parcel of everyday English; and, that makes them conceptual metaphors rather than figurative metaphors.

The mapping for the TIME IS MONEY conceptual metaphor is as follows:

Money	→	Time
User of the Money	→	Agent (User of Time)
Purpose Requiring the Money	→	Purpose Requiring Time
Value of Money	→	Value of Time
Value of Purpose	→	Value of Purpose

Notice that the mapping is exactly the same as the RESOURCE mapping, except for the substitution of the resource concept with the conceptual term money. This is because, as stated above, the MONEY conceptual metaphor could be subsumed under the RESOURCE conceptual metaphor category. However, for the reasons stated above it has been treated separately.

The metaphorical expressions of money employ a set of monetary terms such as, *spend*, *invest*, *budget*, *lose*, *save*, etc. to express the MONEY concept. For example: I *spent* a week at the beach; he *invested* a lot of time in that project; you must learn to *budget* your time; I *lost* a lot of time; you can *save* an hour if you take this shortcut. These examples illustrate how the metaphorical expressions fit into the TIME IS MONEY mapping.

3.7.1 Analysis of the MONEY Conceptual Metaphors

The TIME IS MONEY conceptual metaphor appears in the English version of the novel eight times and not once in the Thai version. Every English sample employed the term spend:

- 1) *spend* much time together; 2) *spending* less and less time there; 3) How do I *spend* my time?; 4) Ted Khan *spent* years; 5) *spent* lifetimes; 6) *spends* much of its life; 7) Altogether, he *spent* less than an hour on Planet Earth; 8) *spent* much of his life.

A look at the translated version of the novel reveals that each of the English MONEY conceptual metaphors is interpreted as a RESOURCE conceptual metaphor by the Thai translator.

- 1) ใช้ เวลา อยู่ด้วยกัน;
use time stay together
use time to stay together
- 2) ใช้ เวลา น้อยลงเรื่อยๆ;
use time decrease gradually
use less and less time
- 3) ฉัน ควร ใช้ เวลา ยังไง ดี ละ;
then I should use time how good ques.
Then how should I use my time?
- 4) เทด คาน ใช้ เวลา รวบรวม หลักฐาน อยู่ หลายปี;
Ted Khan use time to collect evidence stay many years
Ted Khan used many years to collect evidence
- 5) ใช้ เวลา ชั่วชีวิต;
use time lifetime
use lifetimes
- 6) ใช้ เวลา ส่วนใหญ่ ของ ชีวิต;
use time part large of life
uses a large part of its life
- 7) พูล ใช้ เวลา บน โลก ไม่ ถึง ชั่วโมง;
Poole use time on Earth neg. to hour
Poole used less than one hour on the Earth
- 8) ใช้ เวลา ส่วน มาก.
use time part a lot
used a lot of time

The Thai term ใช้เวลา translates as *use* time and as discussed above in the section dealing with the RESOURCE conceptual metaphor, *using* time is more coherent as RESOURCE. Hence, in Thai there seems to be no way to express the TIME IS MONEY metaphor in a culturally coherent manner.

3.7.2 General Conclusions

In general, the only conclusion that can be drawn from the above analysis is that TIME IS MONEY is culturally coherent in American English, but not in the Thai language. Why? As mentioned earlier, this could be a result of the speed with which Thailand has been forced to modify its economic and social systems into an industrialized society. Languages tend to be conservative and slow to change; hence, the changes that would reflect the industrialized society and economy may be in the making.

This brings us to the end of the qualitative analysis of the conceptual metaphors identified in this paper. It is now time to look at the data from a quantitative perspective.

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CHAPTER 4

A QUANTITATIVE PERSPECTIVE

4.1 Introduction:

There were a total of seven conceptual metaphors identified in the English and Thai versions of the novel. They were: MOVING OBJECT, MOVING OBSERVER, RESOURCE, SPACE, CONTAINMENT, POSSESSOR, and MONEY. The MONEY and MOVING OBSERVER conceptual metaphors did not appear in the Thai version. In other words, there were five conceptual metaphors shared by the two versions and two in English that did not appear in the Thai language.

4.2 English Data:

In the original English version, the following seven conceptual metaphors were identified: TIME IS A MOVING OBJECT, TIME IS A MOVING OBSERVER, TIME IS A RESOURCE, TIME IS SPACE, TIME IS CONTAINMENT, TIME IS A POSSESSOR, and TIME IS MONEY.

In the English version there were 434 total metaphorical expressions of TIME. Table 1.1, on the next page, illustrates their breakdown by number and percentage as well as their density of occurrence.

To calculate the density of occurrence (density/page), the number of pages contained in the English version of the book had to be determined. Since the book consists of 247 pages, of which only 238 pages contain text, the density was calculated by dividing the number of metaphorical expressions by the number of pages—238 in this case. There were 9 pages separating the major parts of the novel containing only the titles of the

various parts of the story which were not considered when calculating the density of occurrence.

<u>Conceptual Metaphor</u>	<u>Quantity</u>	<u>Percentage</u>	<u>Density/page</u>
MOVING OBJECT	130	29.954	0.546
MOVING OBSERVER	5	1.152	0.021
CONTAINMENT	125	28.802	0.525
RESOURCE	105	24.193	0.441
SPACE	40	9.217	0.168
POSSESSOR	21	4.839	0.088
MONEY	<u>8</u>	<u>1.843</u>	<u>0.034</u>
Total	434	100 %	1.823

Table 1.1

As can be seen from the table, the MOVING OBJECT conceptual metaphor occurs most often closely followed by CONTAINMENT, then RESOURCE, SPACE, POSSESSOR, MONEY, and finally by MOVING OBSERVER. The metaphorical expressions of MOVING OBJECT and CONTAINMENT appeared in almost equal numbers.

The MOVING OBJECT and MOVING OBSERVER conceptual metaphors are closely related, yet there is a huge difference in the number of times that they appeared in the novel. Of course, the number of appearances implies that the MOVING OBJECT conceptual metaphor is coherent to a greater extent than the others for purposes of expressing *time* metaphorically. In some ways this is not surprising, as time is normally considered in terms of movement. That is, this data indicates that most references to time in everyday speech would implicate time as dynamic rather than static. However, it must be remembered that the subject of this novel is, to a great extent, *time* and one man's

personal ‘odyssey’ through time. Hence, there is the possibility that the rate of appearance of the MOVING OBJECT conceptual metaphors in this novel is due to the storyline rather than a strong predilection by native speakers of English to express time in terms of MOVING OBJECT. However, it should be noted that in reading materials other than this resource I have noticed a similarly high rate of occurrence of the MOVING OBJECT conceptual metaphor. Therefore, the possibility remains that the concept of time as movement is most coherent to native English speakers.

From this data alone, one can see that—at least in literature—metaphorical expressions of time are pervasive. That is, according to the calculations performed here, there were 1.823 metaphorical expressions of TIME on each page of the novel. This is a significant rate of occurrence and indicates that when one must refer to time in English, temporal metaphors are employed far more often than not.

Another point is that although this paper did not examine other types of conceptual metaphors, if Lakoff and Johnson are correct in their position that conceptual metaphors are pervasive in everyday language, then there should be a large number (possibly larger than the number of TIME conceptual metaphors) of non-TIME conceptual metaphors in this novel. This would produce an even better case for their position.

Surprisingly, the SPACE conceptual metaphor appeared ‘only’ 40 times. Early in this research project, I had speculated that the spatial concept would be quite coherent and possibly the most coherent to native speakers of both languages. This was primarily due to the fact that most research dealing with metaphorical expressions has been in the area of spatial metaphors. Furthermore, one of the most coherent experiential bases of human beings is as physical entities occupying space in a physical universe, it seemed quite

logical that we humans would think in terms of space more often than not. Hence, the feeling that TIME IS SPACE would be most coherent. But, as the data reveals, this is not so.

In the next section, the discussion will examine the data from the Thai translation of the novel.

4.3 Thai Data:

In the translated version of the novel, 3001: The Final Odyssey, the following five conceptual metaphors were identified: TIME IS A MOVING OBJECT, TIME IS CONTAINMENT, TIME IS A RESOURCE, TIME IS SPACE, and TIME IS A POSSESSOR.

In the translated version there were a total of 444 metaphorical expressions of TIME. Table 1.2 illustrates their breakdown by number and percentage as well as in terms of their density of occurrence.

<u>Conceptual Metaphor</u>	<u>Quantity</u>	<u>Percentage</u>	<u>Density/page</u>
MOVING OBJECT	79	17.793	0.338
CONTAINMENT	204	45.946	0.872
RESOURCE	147	33.108	0.628
SPACE	11	2.477	0.047
POSSESSOR	3	0.676	0.013
Total	444	100 %	1.898

Table 1.2

In this case, the number of pages on which text appeared and were considered when calculating the density of occurrence was 234. There were 13 pages in the Thai version which contained nothing more than titles of the different parts of the novel with no temporal metaphors; hence, they were not included.

It is somewhat puzzling to me that there are fewer metaphorical expressions in Thai than in English due to the fact that metaphorical expressions of time should occur more frequently in Thai than in English. I made this assumption because time marking in Thai is performed by non-morphological marking; whereas, in English time marking is performed—to a large extent—morphologically (Schalbruch, 1996). That is, in order to indicate when a particular action takes place in Thai, the speaker/writer must add complete words such as, เมื่อ/วาน/นี้ to make a temporal phrase. However, in English, the time of an action can be marked by affixing a morpheme such as *-s*, or *-ed*: *plays*—an action taking place in the present; and, *played*—an action that took place at some time in the past. Notice that neither of these two English terms are metaphorical. They are marked for time, but there is no metaphorical reference whatsoever. Since additional temporal terms must appear in Thai when marking time, it would seem that there would be more opportunities for temporal references to be metaphorical. In a morphological system, the morpheme *-ed* that refers to the past is in no manner metaphorical. It is simply marking the verb/action as having taken place in the past. It is only when additional non-temporal terms are employed to indicate time—whether it be in the present, past, or future—that time becomes metaphorical.

The MOVING OBJECT conceptual metaphor appears third in frequency to the CONTAINMENT and RESOURCE conceptual metaphors but was listed first for the purpose of comparison with the English table in which the moving object is the most frequently occurring conceptual metaphor. In the English version, the MOVING OBJECT conceptual

metaphor is followed by CONTAINMENT, RESOURCE, SPACE, POSSESSOR, MONEY and MOVING OBSERVER.

The data from the English version describes a relatively even distribution of the MOVING OBJECT and RESOURCE conceptual metaphors. Whereas, in the Thai translation there are almost twice as many CONTAINMENT metaphorical expressions than there are MOVING OBJECT conceptual metaphors. However, the appearance of 204 CONTAINMENT conceptual metaphors is quite significant because it indicates that containment is the most coherent conceptual metaphor operating in the Thai language.

Once again I am puzzled by the low number of SPACE conceptual metaphors appearing in the Thai translation of the novel because space is culturally coherent in both languages. The similar distributive spread is very significant and seems to indicate that SPACE is not as coherent as the other three. However, this could be due to the translator's attempt to follow the original English version as much as possible.

There is another possibility. If one collapses the containment into the space class of conceptual metaphors, then space becomes the most coherent in both languages. However, as explained earlier, containment is such a powerful experience that Lakoff and Johnson have treated it as a separate conceptual metaphor and this paper has attempted to follow the theoretical framework provided by them as much as possible.

However, the POSSESSOR conceptual metaphor is one that had not been considered by Lakoff and Johnson. But it does appear in the data and has been recorded 21 times in English and 3 times in Thai. This is somewhat surprising, not because of their appearance, but because they hadn't been identified previously. Possession, as one of the key features used to identify the TIME IS A RESOURCE conceptual metaphor, was employed in many instances and seemed to indicate that possession is an important characteristic of

being human. This makes sense in a society that has passed through the industrial revolution like America. But, the high rate of RESOURCE conceptual metaphors that appeared in Thai employing the possessive feature seems a little surprising because the Buddhist religion discourages clinging to possessions. However, in both English and Thai we found that the TIME IS A POSSESSOR conceptual metaphor does operate. In Thai to a much lesser degree than in English, nevertheless it does operate.

In the final chapter there will be additional opportunities to discuss the ramifications of the preceding research in both qualitative and quantitative terms.



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CHAPTER 5

SUMMARY, DISCUSSION, and RECOMMENDATIONS

5.1 Summary

This project began as a survey of the conceptual metaphors of TIME that operate in the Thai and English languages and to a great extent it has remained so. However, there was a significant modification to the originally proposed scope of research.

Originally, the project was intended to analyze a broad spectrum of the conceptual metaphors of TIME operating in Thai and English. Hence, the data was to be collected from a wide variety of resources such as sports magazines, political commentaries, social magazines, fiction novels and short stories. However, once I began to collect the data it became apparent that the amount of data would be seriously imposing. For this reason and because of time restrictions I decided to limit the resources to an English version of the novel *3001: A Space Odyssey* by Arthur C. Clarke and a Thai version of the same novel translated by ลักขณรงค์.

Hence, metaphorical expressions of time were collected and recorded from the above resources, then analyzed in order to identify the conceptual metaphors of TIME that are represented by those expressions in both Thai and English. Once this was accomplished, a comparison of the number, kind, and expression of conceptual metaphors of TIME was performed.

5.1.1 Collection of Metaphorical Expressions of Time

From the English version of the novel a total of 434 metaphorical expressions of time were identified and recorded (refer to Appendix A). This represents an average of 1.823 metaphorical expressions of TIME on each page with narrative (pages with section titles and no narrative were not included in this count). Of course, this means that metaphorical expressions of TIME appear in significant quantities in written American English. And that, in turn, means time and the metaphorical expression of TIME must be an important way of organizing the thoughts and concepts of time in American English.

From the Thai translation of the novel, a total of 444 metaphorical expressions of time were identified. There was an average of 1.898 temporal metaphors on each page of the Thai translation and once again, this indicates that metaphorical expressions of TIME are one way of organizing the thoughts and concepts of time in written Thai.

The metaphorical expressions of time were then categorized according to the conceptual metaphor as defined and described in Lakoff and Johnson (1999, pp. 137 – 169).

5.2 Discussion

One of the most important factors identified by Lakoff and Johnson's theory of conceptual metaphors is that for conceptual metaphors to be culturally coherent within a culture, they must fit within the culture's manner of existing, relating to, and communicating the environment to which the society has adapted...in a systematic way.

If we look at the data collected from the two versions of the same novel and then extrapolate generalizations and assumptions about both the Thai and English societies from that data, we would be in danger of making some ill-considered judgments about

the Thai system of reasoning about time...because, the novel is originally written by a non-Thai who employs American patterns of reasoning about time. So, we are confronted with the conundrum of comparing apples with oranges.

Of course, it is not that bad. A look at the conceptual metaphors identified in this paper reveals that we humans seem to reason about time using a relatively small number of concepts to understand it metaphorically. That is, time can be understood in experiential terms such as space, our relation with space and a host of other fundamental experiences common to the culture in which we exist. This is what it means to be culturally coherent.

As a striking example of one major difference between the Thai and the American systems of reasoning about time, we need only point to the fact that the conceptual metaphors of TIME IS MONEY and TIME IS A MOVING OBSERVER appear in English, but not Thai. Yet, the other five conceptual metaphors—MOVING OBJECT, CONTAINMENT, RESOURCE, SPACE and POSSESSOR—that appeared in the English version of the novel also appeared in Thai translation. What does this tell us?

I have stated previously that if a conceptual metaphor from the English version also appeared in the Thai translation, then it indicates that the Thai translator felt confident enough that it would communicate and provide an understanding of time to others from his culture. If it does this then the possibility is high that the Thai system of conceptual metaphors permits this kind of reasoning about time. When we look at the number of appearances of the five conceptual metaphors appearing in both versions of the book we find that the numbers indicate a strong similarity between the systems.

A look at the table on the next page illustrates the similarities and differences between the two languages in quantitative terms.

	<u>English:</u>	<u>Thai:</u>
MOVING OBJECT	130	79
MOVING OBSERVER	5	---
CONTAINMENT	125	204
RESOURCE	105	147
SPACE	40	11
POSSESSOR	21	3
MONEY	8	---

Table 5.1

The similarities and differences are obvious from the above. That is, MOVING OBJECT, CONTAINMENT, and RESOURCE conceptual metaphors are the most coherent in both languages. The two—SPACE and POSSESSOR—although appearing in both languages are coherent but to differing degrees. In English SPACE and POSSESSOR are significantly more coherent. Of course, the assumptions made here are based solely upon the quantity of each of the conceptual metaphors. A different perspective will be provided in the next section.

However, to continue, the most striking difference between the two languages is that TIME IS MONEY and TIME IS A MOVING OBSERVER appear in English in sufficient quantities to indicate that they are coherent and quite operant. Whereas, there are no appearances in the Thai. As mentioned previously, in every instance where the English employed a MONEY conceptual metaphor the Thai translator employed a RESOURCE conceptual metaphor. And, in each instance where the English MOVING OBSERVER conceptual metaphor appeared, the Thai version inserted a SPACE conceptual metaphor. This indicates that if a conceptual metaphor is not culturally coherent, then it will not be employed because it just will not fit in the Thai system of temporal metaphors. In other words, there are no key terms that will communicate the metaphorized understanding of TIME IS MONEY and TIME IS A MOVING OBSERVER in Thai. The Thai system therefore

employs the culturally coherent RESOURCE and SPACE conceptual metaphors to communicate similar reasoning about time.

In the following section we will discuss what makes it possible for a Thai speaker and an English speaker to reason about time in similar and dissimilar ways.

5.2.1 English and Thai Systems of Conceptual Metaphors of TIME

In the following discussion, we will examine an example that employs some of those features of the conceptual metaphors of TIME shared by the two languages. This will help us to understand just how the two languages are similar and dissimilar in the systemization of conceptual metaphors of TIME and just what makes them culturally coherent, or not.

To determine which features are culturally coherent in the various conceptual metaphors of time, we must refer to the mappings of each. I will not reproduce the mappings here, rather I will extract the key features identified from the MOVING OBJECT mapping to illustrate how this works.

The most important features of the MOVING OBJECT conceptual metaphor consisted of objects and the motion of those objects. In English, the motion of those objects in relation to the location of the observer was also significant. That is, the location of the observer is the present time, the space in front of the observer is the future, and the space behind the observer is the past. So, when time is conceptualized as a moving object, the motion could be conceptualized as occurring in the present, future, or past.

These features would then realize metaphorical expressions such as:

- 1) *after* a few seconds; 2) the turn of the century is fast *approaching*; 3) only one long lifetime *spanned* the gulf between the Age of Fossil Fuels and the Age of Infinite Power

The examples illustrate the key features of the motion of time conceptualized as objects in the present, future, and past, respectively. These type of metaphorical expressions occur repeatedly in English; hence, they are culturally coherent.

What about the Thai language? Are the same features employed in the Thai system of conceptualizing time as a moving object? A look at the following metaphorical expressions will shed some light on these questions.

- | | | | | | | |
|----|---|------|-------|--------------------------------------|----------------|----------------|
| 1) | หลังจาก | นี้ | อีก | เพียง | สองสาม | นาที; |
| | after | here | again | merely | two [or] three | minutes |
| | after just a few more minutes | | | | | |
| 2) | เมื่อ | วัน | ที่ | 1 มกราคม ค.ศ. 3001 | จะ | ผ่านพ้นไป; |
| | when | day | det. | 1 st of January 3001 A.D. | fut. | pass by |
| | when the 1 st of January 3001 A.D. passes by | | | | | |
| 3) | เมื่อ | วัน | ที่ | 1 มกราคม ค.ศ. 2001 | | ผ่านพ้นไป แล้ว |
| | when | day | det. | 1 st of January 2001 A.D. | pass by | already |
| | when the 1 st of January 2001 A.D. had passed by | | | | | |

A translation of the above reveals that the same motion of time in the present, future, and past is operating in the Thai language as well.

Performing this little exercise reveals that there are similarities in how the two languages systematize conceptual metaphors of TIME. In the analysis of the MONEY and RESOURCE conceptual metaphors that was performed in Chapter 3 we found that the features of possession, desire, value, and usage of money or objects considered useful all mapped onto both the MONEY and RESOURCE conceptual metaphors. However, the English system permits MONEY conceptual metaphors; whereas, the Thai system does not. That is, MONEY conceptual metaphors are not culturally coherent in Thai. The reason for this seems to do with the idea that there is a large set of monetary terms that can be mapped on to the metaphorical sense of time and that provides meaning to the

native American English speaker such as, spend, budget, save, invest, and more. However, the same terms in the Thai language do not seem to operate in the same manner. Hence, the money conceptual metaphor is not culturally coherent in Thai.

From the above discussion and the analyses performed in Chapter 3 what can we conclude about the two systems?

With some certainty, we can assume that the MOVING OBJECT, CONTAINMENT, RESOURCE, SPACE, and POSSESSOR conceptual metaphors form the most culturally coherent system of conceptual metaphors that appear in the English and Thai languages. We cannot say for certain just how coherent MOVING OBSERVER and MONEY may be in English because the quantity of appearances are insufficient. However, there are strong indications that MONEY is quite coherent.

Regarding the Thai system of conceptualizing time metaphorically, we can state with certainty that the MOVING OBJECT, CONTAINMENT, and RESOURCE metaphors are components of the system. However, the numbers do not support the same assumptions regarding the SPACE, and POSSESSOR metaphors. The numbers only indicate that the possibility of their membership in this system remains. However, we can say with one hundred percent certainty that the MONEY conceptual metaphor does not operate in Thai.

5.2.2 Discussion of Hypotheses

In this section I will examine the hypotheses made at the beginning of the project and whether they were correct or incorrect.

The first of the hypotheses was that there are some patterns in the metaphorical expression of time shared by both languages. As can be seen from the discussion in the

preceding section this has turned out to be true with reservations. Some of the conceptual metaphors examined appeared in both languages, but in quantities that would not indicate whether they would have appeared naturally in Thai. In other words, the translator may have employed some of the metaphorical expressions only because they appeared in the original English version. Had he been the writer, he may have employed other more culturally coherent metaphorical expressions of time. However, the fact remains that the translator did employ those metaphorical expressions and that indicates that they do operate in the Thai language.

The second hypothesis outlined the conceptual metaphors of time that I thought would appear in both versions of the novel. For the most part it was true, with the exception that the MONEY and MOVING OBSERVER conceptual metaphors did not appear in the Thai version.

Finally, I hypothesized that English would have a larger number, more kinds, and more variety in their expression of conceptual metaphors of time. The corpus reveals that there were two more conceptual metaphors employed in English; that there were actually 10 more metaphorical expressions of time in Thai than in English; and, the variation is inconclusive because a larger and broader examination needs to be conducted to draw any conclusion concerning this hypothesis.

5.3 Recommendations

This type of comparison relies to a great extent on the cultural biases that exist in two different cultures and is exceedingly difficult. As a non-native speaker of Thai and a non-native participant in the culture I found it a challenge to conduct this research

while trying to learn the language and all its nuances concerning time. If I had this project to do over again I would make the following recommendations:

- 1) I think that this type of research could be best performed by a team made up of one native speaker of Thai and one native speaker of English;
- 2) As originally intended, the resources should come from a broader range of both societies; and,
- 3) The language skills of both members should be at a higher level than where I began this project.

If a similar research project were conducted with the above modifications I believe that a deeper understanding of conceptual metaphors of TIME could be achieved. And, with that would come a deeper understanding of the manner in which we humans reason about the world around us.



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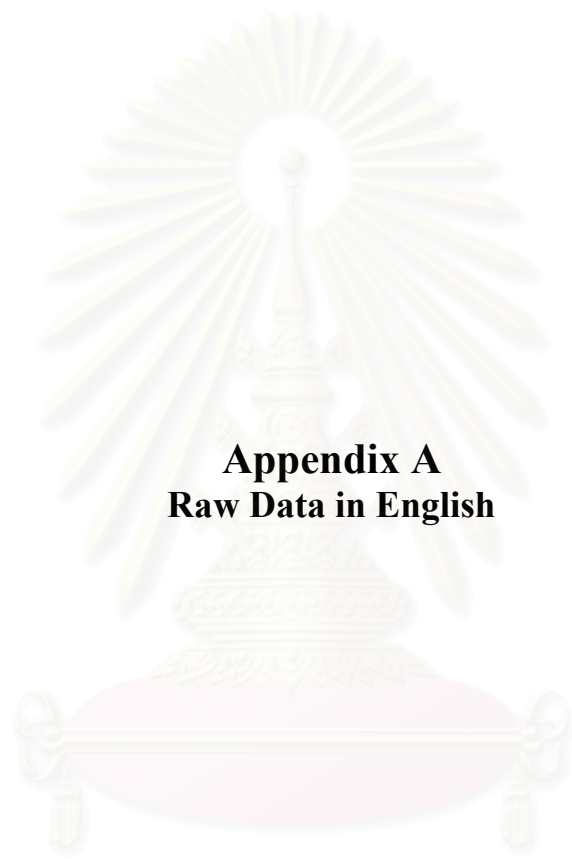


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Appendices

สถาบันวิทยบริการ
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Appendix A
Raw Data in English

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

ENGLISH METAPHORS of TIME

CONCEPTUAL METAPHOR: TIME IS A MOVING OBJECT		
"...had long since..."	PAGE No: 1	No: 001
"...had long since..."	PAGE No: 2	No: 002
"...the age of the Machine-entities swiftly passed."	PAGE No: 2	No: 003
"...fifty years before..."	PAGE No: 8	No: 004
"...only one long lifetime spanned the gulf between..."	PAGE No: 8-9	No: 005
"...when January 1, 3001, had passed uneventfully..."	PAGE No: 9	No: 006
"...ahead of schedule..."	PAGE No: 13	No: 007
"...for as much as five years!"	PAGE No: 17	No: 008
"...near the beginning of the Fourth Millennium."	PAGE No: 18	No: 009
"...from his own time."	PAGE No: 19	No: 010
"...after a few seconds."	PAGE No: 22	No: 011
"...elapsed time..."	PAGE No: 25	No: 012
"...the turn of the century..."	PAGE No: 32	No: 013
"...after a week..."	PAGE No: 33	No: 014
"...during his waking hours which were steadily growing longer..."	PAGE No: PAGE No: 33	No: No: 015
"...five minutes from the dawn of the New Millen- nium..."	PAGE No: PAGE No: 33	No: No: 016
"...near the very end of our Millennium..."	PAGE No: 34	No: 017
"How long..."	PAGE No: 34	No: 018
"...a thousand years from now..."	PAGE No: 34	No: 019

“...question from the past...”	PAGE No: 35	No: 020
“After a few minutes...”	PAGE No: 39	No: 021
“...up to now...”	PAGE No: 39	No: 022
“From time to time...”	PAGE No: 40	No: 023
“When the time came...”	PAGE No: 42	No: 024
“...from his own time...”	PAGE No: 42	No: 025
“...as if time was slightly accelerated...”	PAGE No: 43	No: 026
“...after all these centuries.”	PAGE No: 47	No: 027
“...several hours after...”	PAGE No: 48	No: 028
“...until twenty-six days from now.”	PAGE No: 50	No: 029
“...it was several seconds before...”	PAGE No: 52	No: 030
“...almost five hundred years after your time.”	PAGE No: 53	No: 031
“Not any longer...”	PAGE No: 55	No: 032
“From this moment onward...”	PAGE No: 57	No: 033
“[have a century] ahead of him...”	PAGE No: 59	No: 034
“A little before my time...”	PAGE No: 61	No: 035
“Not as long as you think...”	PAGE No: 62	No: 036
“Just how long...”	PAGE No: 63	No: 037
“...down the centuries...”	PAGE No: 63	No: 038
“...the passage of time.”	PAGE No: 63	No: 039
“...much more than five minutes had passed...”	PAGE No: 63	No: 040
“...from time to time...”	PAGE No: 67	No: 041
“...had long since...”	PAGE No: 67	No: 042

“...your equivalent age range from fifty to seventy.”	PAGE No: 69	No: 043
“...after a thousand years!”	PAGE No: 69	No: 044
“...for a short time...”	PAGE No: 72	No: 045
“...it was a few minutes before...”	PAGE No: 73	No: 046
“Every second, a million years must be passing...”	PAGE No: 76	No: 047
“...coming of the Space Age...”	PAGE No: 78-79	No: 048
“From what year...”	PAGE No: 79	No: 049
“...to this time...”	PAGE No: 80	No: 050
“...from time immemorial.”	PAGE No: 80	No: 051
“...after the third or fourth week...”	PAGE No: 83	No: 052
“...it was certainly long past its shelf life.”	PAGE No: 83	No: 053
“...from twenty or thirty generations [in the past.]”	PAGE No: 84	No: 054
“...soon after your time.”	PAGE No: 84	No: 055
“The next morning...”	PAGE No: 85	No: 056
“After a few minutes...”	PAGE No: 85	No: 057
“...right up to the early 2000s!...”	PAGE No: 88	No: 058
“...as the years went by.”	PAGE No: 91	No: 059
“...hour-long...”	PAGE No: 93	No: 060
“...next month.”	PAGE No: 97	No: 061
“Still ten minutes before liftoff.”	PAGE No: 101	No: 062
“...after centuries...”	PAGE No: 101	No: 063
“...the next morning...”	PAGE No: 103	No: 064
“...it will be days before...”	PAGE No: 104	No: 065

“After a quarter of an hour...”	PAGE No: 105	No: 066
“...before long.”	PAGE No: 106	No: 067
“...[lasted] as long as it did—”	PAGE No: 108	No: 068
“...so far at least...”	PAGE No: 110	No: 069
“...from your time...”	PAGE No: 111	No: 070
“...the end of the fossil fuel age...”	PAGE No: 114	No: 071
“...Age of Infinite Power got under way...”	PAGE No: 114	No: 072
“...centuries after his own time.”	PAGE No: 115	No: 073
“After five minutes...”	PAGE No: 129	No: 074
“...a few days before...”	PAGE No: 130	No: 075
“...until five thousand years after the last stone was laid at Giza.”	PAGE No: 131	No: 076
“...for half of its long day.”	PAGE No: 132	No: 077
“Before the dawn of the Space Age...”	PAGE No: 133	No: 078
“...four million years before.”	PAGE No: 134	No: 079
“...before I was born.”	PAGE No: 135	No: 080
“...century after century...”	PAGE No: 140	No: 081
“...it was soon after...”	PAGE No: 141	No: 082
“How long did he flourish?”	PAGE No: 141	No: 083
“...at the end of the Twentieth Century...”	PAGE No: 144	No: 084
“...after all these years...”	PAGE No: 145	No: 085
“From time to time...”	PAGE No: 146	No: 086
“...from age to age...”	PAGE No: 146	No: 087

“Long time ago...”	PAGE No: 150	No: 088
“After a thousand years?”	PAGE No: 150	No: 089
“Twenty years after that encounter...”	PAGE No: 152	No: 090
“...centuries-long...”	PAGE No: 161	No: 091
“Long ago...”	PAGE No: 162	No: 092
“...had long ago...”	PAGE No: 163	No: 093
“...as long as possible.”	PAGE No: 164	No: 094
“...long ago...”	PAGE No: 166	No: 095
“...at the end of the Cretaceous Period.”	PAGE No: 168	No: 096
“...long before the coming of Man.”	PAGE No: 168	No: 097
“...after so many centuries...”	PAGE No: 172	No: 098
“...week after next...”	PAGE No: 175	No: 099
“After five days...”	PAGE No: 175	No: 100
“...immediately after that...”	PAGE No: 179	No: 101
“After that nothing happened for several minutes...”	PAGE No: 179	No: 102
“...for too long...”	PAGE No: 189	No: 103
“...it could never even reach the Stone Age.”	PAGE No: 194	No: 104
“...a thousand years is a very short time...”	PAGE No: 195	No: 105
“...just moments before her death...”	PAGE No: 197	No: 106
“...from time to time...”	PAGE No: 197	No: 107
“...beyond the first few weeks after conception...”	PAGE No: 202	No: 108
“...after fifteen years...”	PAGE No: 202	No: 109
“...from past ages...”	PAGE No: 206	No: 110

“They were seldom able to keep up with him for long.”	PAGE No: 206	No: 111
“...going all the way back to the <i>Voyager</i> flybys of 1979	PAGE No:	No:
and the first detailed surveys from the orbiting <i>Galileo</i>	PAGE No:	No:
spacecraft of 1996.”	PAGE No: 207	No: 112
“...from time to time...”	PAGE No: 213	No: 113
“...a few weeks before launch...”	PAGE No: 214	No: 114
“...from your period...”	PAGE No: 216	No: 115
“...just after the very worst period in human history!”	PAGE No: 217	No: 116
“...how long would it take...”	PAGE No: 218	No: 117
“By the end of the Twenty-first Century...”	PAGE No: 221	No: 118
“...before the late Twentieth Century...”	PAGE No: 223	No: 119
“...until the end of time...”	PAGE No: 225	No: 120
“...by the end of the Third Millennium...”	PAGE No: 226	No: 121
“...before the end of the universe...”	PAGE No: 227	No: 122
“...the day had long since passed...”	PAGE No: 227	No: 123
“...it was only a few decades before you were born...”	PAGE No: 229	No: 124
“...after all these years...”	PAGE No: 232	No: 125
“...soon after local midnight...”	PAGE No: 237	No: 126
“...no matter how long they waited...”	PAGE No: 237	No: 127
“...it was almost an hour before...”	PAGE No: 241	No: 128
“...from time immemorial...”	PAGE No: 242	No: 129
“...a few weeks from now...”	PAGE No: 245	No: 130

CONCEPTUAL METAPHOR: TIME IS A MOVING OBSERVER		
“...explore the future...”	PAGE No: 34	No: 001
“...transported across the centuries...”	PAGE No: 34	No: 002
“...transported a thousand years hence.”	PAGE No: 34	No: 003
“...immediately brought him up to the present.”	PAGE No: 35	No: 004
“...Poole came back to the present.”	PAGE No: 52	No: 005



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CONCEPTUAL METAPHOR: TIME IS A RESOURCE		
“...lasted a thousand years.”	PAGE No: 1	No: 001
“The message from Earth had taken six hours...”	PAGE No: 7	No: 002
“...it might take centuries...”	PAGE No: 8	No: 003
“...just a few years too late...”	PAGE No: 11	No: 004
“...just a minute.”	PAGE No: 16	No: 005
“...as much as five years!”	PAGE No: 17	No: 006
“...the events of his own time.”	PAGE No: 20	No: 007
“...our date of birth...”	PAGE No: 22	No: 008
“...most of the time...”	PAGE No: 23	No: 009
“...your date of birth...”	PAGE No: 23	No: 010
“...the rest of my life. At least another century...”	PAGE No: 24	No: 011
“...much of the time...”	PAGE No: 32	No: 012
“...his century...”	PAGE No: 32	No: 013
“...he had less and less time...”	PAGE No: 33	No: 014
“...voices of his age...”	PAGE No: 33	No: 015
“...our age...” <i>{period of time; not personal age}</i>	PAGE No: 34	No: 016
“...takes weeks.”	PAGE No: 37	No: 017
“Professor Anderson wasted no time...”	PAGE No: 38	No: 018
“...took somewhat longer.”	PAGE No: 38	No: 019
“Is this the last moment...”	PAGE No: 39	No: 020
“...any oculist of his age...”	PAGE No: 41	No: 021

“...take a few hours...”	PAGE No: 42	No: 022
“...many scientists of his own century...”	PAGE No: 43	No: 023
“...take years...”	PAGE No: 43	No: 024
“...I HAVE LITTLE TIME.”	PAGE No: 51	No: 025
“...YOU HAVE ONLY FIFTEEN DAYS.”	PAGE No: 51	No: 026
“...they had just sufficient time...”	PAGE No: 52	No: 027
“...all the time...”	PAGE No: 54	No: 028
“It had taken more than a year...”	PAGE No: 56	No: 029
“...so little time!”	PAGE No: 59	No: 030
“...have a century [ahead of him]...”	PAGE No: 59	No: 031
“...waste so much time.”	PAGE No: 61	No: 032
“That will take hours!”	PAGE No: 62	No: 033
“...every boy of his generation...”	PAGE No: 68	No: 034
“A thousand lifetimes would not have been enough...”	PAGE No: 71	No: 035
“...a period of consciousness that might last as long as an hour.”	PAGE No: 71	No: 036
“...the master of his own time.”	PAGE No: 71	No: 037
“...landscape of his youth.”	PAGE No: 78	No: 038
“...he wasted no further time...”	PAGE No: 84	No: 039
“...knowledge of his age...”	PAGE No: 89	No: 040
“...the hundred years that had been confidently promised him...”	PAGE No: 89	No: 041
“...the deer hunts and barbecues of his youth.”	PAGE No: 89	No: 042

“...the landscape of his youth.”	PAGE No: 90	No: 043
“...the handheld personal assistants of his own age...”	PAGE No: 98	No: 044
“...take us only a week...”	PAGE No: 106	No: 045
“...I’d have time...”	PAGE No: 107	No: 046
“...no time...”	PAGE No: 108	No: 047
“...television programs of your time...”	PAGE No: 108	No: 048
“...more than few minutes...”	PAGE No: 108	No: 049
“...took a couple of hundred years...”	PAGE No: 109	No: 050
“...most of the time...”	PAGE No: 112	No: 051
“...taken Poole some time...”	PAGE No: 112	No: 052
“...his own era...”	PAGE No: 113	No: 053
“...the politics and economics of Poole’s era...”	PAGE No: 114	No: 054
“A hundredth of a second!”	PAGE No: 115	No: 055
“That few minutes...”	PAGE No: 115	No: 056
“...a hundredth of a second...”	PAGE No: 116	No: 057
“...Ganymede took almost exactly one week...”	PAGE No: 132	No: 058
“...identifying their twenty-four hour standard days...”	PAGE No: 132	No: 059
“...it took less than two days...”	PAGE No: 132	No: 060
“...required two Mede days—or sixteen Earth ones...”	PAGE No: 132	No: 061
“...Earth days, not Mede ones!”	PAGE No: 137	No: 062
“...at least some of the time.”	PAGE No: 141	No: 063
“...I want time...”	PAGE No: 159	No: 064

“...take several hours, at least.”	PAGE No: 159	No: 065
“...all the time...”	PAGE No: 160	No: 066
“...one day...”	PAGE No: 164	No: 067
“...had never found time...”	PAGE No: 171-2	No: 068
“...one day...”	PAGE No: 173	No: 069
“...plenty of time.”	PAGE No: 175	No: 070
“...all the time...”	PAGE No: 176	No: 071
“I may not have much time...”	PAGE No: 177	No: 072
“...all the time.”	PAGE No: 178	No: 073
“I haven’t much more time...”	PAGE No: 181	No: 074
“...all the time...”	PAGE No: 181	No: 075
“...it takes them less than five minutes...”	PAGE No: 183	No: 076
“...what a long time it took...”	PAGE No: 184	No: 077
“...a thousand years...”	PAGE No: 188	No: 078
“Most of the time...”	PAGE No: 188	No: 079
“And all this time...”	PAGE No: 189	No: 080
“It took Halman about ten minutes...”	PAGE No: 189	No: 081
“Most of the time...”	PAGE No: 197	No: 082
“I still have forty-eight hours...”	PAGE No: 198	No: 083
“...a thousand years...”	PAGE No: 201	No: 084
“...time-consuming...”	PAGE No: 202	No: 085
“...paraplegics of his own time.”	PAGE No: 203	No: 086
“...it won’t take me long...”	PAGE No: 206	No: 087

“...lasted a full month...”	PAGE No: 206	No: 088
“One day...”	PAGE No: 206	No: 089
“What does he do with his time...”	PAGE No: 209	No: 090
“...it had taken them a week...”	PAGE No: 210	No: 091
“It will take three minutes...”	PAGE No: 210	No: 092
“...it would take half an hour...”	PAGE No: 211	No: 093
“...he needed only ten minutes...”	PAGE No: 211	No: 094
“...one day...”	PAGE No: 214	No: 095
“...isn't worth wasting time on.”	PAGE No: 217	No: 096
“...we don't know how much time we have.”	PAGE No: 217	No: 097
“...that might take a few months.”	PAGE No: 218	No: 098
“Just a minute...”	PAGE No: 219	No: 099
“...the reply seemed to take longer than the three-second	PAGE No:	No:
round-trip from Europa.”	PAGE No: 234	No: 100
“...many lifetimes.”	PAGE No: 235	No: 101
“...lasted less than fifteen minutes.”	PAGE No: 241	No: 102
“...[it would take 950 years,] give or take a few...”	PAGE No: 244	No: 103
“...the human race should have almost a millennium...”	PAGE No: 244	No: 104
“...he still had plenty of time...”	PAGE No: 246	No: 105

CONCEPTUAL METAPHOR: TIME IS SPACE		
“...at this very moment.”	PAGE No: 8	No: 001
“...Poole wondered if he had awakened ahead of schedule...”	PAGE No: 13	No: 002
“...over the millennium...”	PAGE No: 19	No: 003
“...at birth...”	PAGE No: 22	No: 004
“...up a thousand years.”	PAGE No: 23	No: 005
“...over the centuries.”	PAGE No: 23	No: 006
“...on Universal Time...”	PAGE No: 25	No: 007
“...at the time...”	PAGE No: 25	No: 008
“...at one time or another.”	PAGE No: 68	No: 009
“There had been times when...”	PAGE No: 72	No: 010
“...over the centuries...”	PAGE No: 78	No: 011
“...on time...”	PAGE No: 106	No: 012
“...at 18.00 hours...”	PAGE No: 112	No: 013
“...at mealtimes...”	PAGE No: 112	No: 014
“...on the fifth evening...”	PAGE No: 115	No: 015
“...at mealtimes.”	PAGE No: 117	No: 016
“There had been a time...”	PAGE No: 124	No: 017
“...around the mid-Twentieth Century...”	PAGE No: 124	No: 018
“...at the same time...”	PAGE No: 130	No: 019
“...at several widely spaced times in their history.”	PAGE No: 131	No: 020

“At one time...”	PAGE No: 141	No: 021
“...about a century apart...”	PAGE No: 148	No: 022
“...ahead of time.”	PAGE No: 160	No: 023
“...over the centuries.”	PAGE No: 171	No: 024
“...at last.”	PAGE No: 180	No: 025
“Neither then, nor at any other time...”	PAGE No: 180	No: 026
“...at last...”	PAGE No: 180	No: 027
“...there were moments when...”	PAGE No: 187	No: 028
“...there were times when...”	PAGE No: 205	No: 029
“...over the centuries...”	PAGE No: 206	No: 030
“Over the centuries...”	PAGE No: 207	No: 031
“...over the years...”	PAGE No: 222	No: 032
“...at a certain time...”	PAGE No: 223	No: 033
“...against the time when...”	PAGE No: 228	No: 034
“...working against a deadline of days, weeks, or years...”	PAGE No: 230	No: 035
“...at last...”	PAGE No: 230	No: 036
“...at any other time than this.”	PAGE No: 232	No: 037
“...at the same time—”	PAGE No: 232	No: 038
“...at the approximate time.”	PAGE No: 235	No: 039
“At the same time...”	PAGE No: 239	No: 040

CONCEPTUAL METAPHOR: TIME IS CONTAINMENT		
“...in the 2700s...”	PAGE No: 7	No: 001
“...in 2304...”	PAGE No: 8	No: 002
“...in a minute...”	PAGE No: 15	No: 003
“...in no time.”	PAGE No: 16	No: 004
“...in all places and all ages.”	PAGE No: 16	No: 005
“...in your period...”	PAGE No: 20	No: 006
“...in my own time...”	PAGE No: 21	No: 007
“...in your century!”	PAGE No: 21	No: 008
“...in the far-off Age of Print...”	PAGE No: 21-22	No: 009
“...in this day and age...”	PAGE No: 23	No: 010
“...in his own time.”	PAGE No: 23	No: 011
“...in the Twenty-first Century...”	PAGE No: 25	No: 012
“...in his time.”	PAGE No: 26	No: 013
“...in Poole’s day...”	PAGE No: 28	No: 014
“...in my time.”	PAGE No: 29	No: 015
“...in his own time.”	PAGE No: 31	No: 016
“...in this day and age.”	PAGE No: 31	No: 017
“...in A.D. 1000...”	PAGE No: 34	No: 018
“...in the last two hundred years.”	PAGE No: 34	No: 019
“...what surprises does the Third Millenium hold for	PAGE No:	No:
us?”	PAGE No: 35	No: 020
““Now, in the first minutes of the year 3001...””	PAGE No: 35	No: 021

“Certainly, the people of 2001 who you were just	PAGE No:	No:
watching would not feel as utterly overwhelmed in our	PAGE No:	No:
age as someone from 1001 would have been in theirs.”	PAGE No: 35	No: 022
“...dropped into 2001.”	PAGE No: 36	No: 023
“...in this era...”	PAGE No: 38	No: 024
“In a few seconds...”	PAGE No: 41	No: 025
“...acquire in minutes new skills...”	PAGE No: 43	No: 026
“...in his era.”	PAGE No: 45	No: 027
“In my time...”	PAGE No: 45	No: 028
“Back in his century...”	PAGE No: 46	No: 029
“...in a few thousand more years...”	PAGE No: 49	No: 030
“... WITHIN FIFTEEN DAYS.”	PAGE No: 50	No: 031
“... WITHIN FIFTEEN DAYS.”	PAGE No: 50	No: 032
“...in time and space...”	PAGE No: 58	No: 033
“...in your time...”	PAGE No: 60	No: 034
“...in his mid-thirties...”	PAGE No: 61	No: 035
“...in his time...”	PAGE No: 61	No: 036
“...in five minutes.”	PAGE No: 63	No: 037
“...in his time...”	PAGE No: 63	No: 038
“...in two minutes.”	PAGE No: 65	No: 039
“...in his own time...”	PAGE No: 67	No: 040
“...in his own day...”	PAGE No: 73	No: 041
“Within a few days...”	PAGE No: 74	No: 042

“In almost no time...”	PAGE No: 75	No: 043
“...well into the Twentieth Century...”	PAGE No: 78	No: 044
“...in less than fifteen minutes.”	PAGE No: 79	No: 045
[“...from twenty or thirty generations] in the past.”	PAGE No: 84	No: 046
“Within twenty-four hours...”	PAGE No: 84	No: 047
“In my thirty years of practice...”	PAGE No: 85	No: 048
“...in your century...”	PAGE No: 85	No: 049
“...in my century?”	PAGE No: 87	No: 050
“...in your time...”	PAGE No: 90	No: 051
“...in the early days of his astrotraining...”	PAGE No: 91	No: 052
“...in a Strange Time.”	PAGE No: 92	No: 053
“...in my time.”	PAGE No: 93	No: 054
“...in your time...”	PAGE No: 94	No: 055
“...in his time...”	PAGE No: 100	No: 056
“...back in the old days...”	PAGE No: 101	No: 057
“...in a thousand years...”	PAGE No: 101	No: 058
“...in his own age...”	PAGE No: 103	No: 059
“...in just over an hour.”	PAGE No: 103	No: 060
“In a matter of seconds...”	PAGE No: 104	No: 061
“...in a few minutes...”	PAGE No: 105	No: 062
“[...for] a full minute...”	PAGE No: 105	No: 063
“...in your time...”	PAGE No: 108	No: 064
“...in real time!”	PAGE No: 109	No: 065

“...in your time.”	PAGE No: 110	No: 066
“...in his own lifetime...”	PAGE No: 114	No: 067
“...he was midway in time between <i>Goliath</i> and the	PAGE No:	No:
first ships to cross the western ocean.”	PAGE No: 115	No: 068
“He was a thousand years in the past...”	PAGE No: 116	No: 069
“...in a fraction of a second...”	PAGE No: 117	No: 070
“...in his day...”	PAGE No: 117	No: 071
“...in his own day.”	PAGE No: 124	No: 072
“...in wintertime...”	PAGE No: 125	No: 073
“...not in my time.”	PAGE No: 125	No: 074
“...in another hundred years...”	PAGE No: 126	No: 075
“...in those hot Arizona days...”	PAGE No: 127	No: 076
“...in a matter of minutes.”	PAGE No: 132	No: 077
“...in the days when...”	PAGE No: 132-33	No: 078
“...in only four days.”	PAGE No: 133	No: 079
“...in the thousand years since Discovery had set out	PAGE No:	No:
for Jupiter.”	PAGE No: 134	No: 080
“...in a mere thousand years...”	PAGE No: 134	No: 081
“...in the next few days...”	PAGE No: 137	No: 082
“Back in Poole’s century...”	PAGE No: 137	No: 083
“...in your century...”	PAGE No: 139	No: 084
“...in next to no time.”	PAGE No: 140	No: 085
“...not only in your century...”	PAGE No: 142	No: 086

“...in time...”	PAGE No: 142	No: 087
“...in your day.”	PAGE No: 146	No: 088
“...once in a lifetime opportunity...”	PAGE No: 155	No: 089
“...once in two lifetimes...”	PAGE No: 155	No: 090
“...in the past...”	PAGE No: 156	No: 091
“...in an hour.”	PAGE No: 159	No: 092
“...in a microsec—well, in a millisecond.”	PAGE No: 160	No: 093
“In the final moments...”	PAGE No: 171	No: 094
“...in another hour...”	PAGE No: 174	No: 095
“...in a thousand years.”	PAGE No: 175	No: 096
“...in a few minutes...”	PAGE No: 176	No: 097
“...in a few minutes...”	PAGE No: 182	No: 098
“...in no time...”	PAGE No: 183	No: 099
“...in a moment...”	PAGE No: 195	No: 100
“...in the thousand [years] since his metamorphosis...”	PAGE No: 197	No: 101
“It was rather late in life...”	PAGE No: 201	No: 102
“...in his youth...”	PAGE No: 207	No: 103
“...in exactly one hour.”	PAGE No: 210	No: 104
“...in real time.”	PAGE No: 211	No: 105
“...in a pre-Braincapped lifetime.”	PAGE No: 212	No: 106
“...early in the Twenty-first Century...”	PAGE No: 213	No: 107
“...in his own time...”	PAGE No: 217	No: 108
“...in the Second Millennium!”	PAGE No: 218	No: 109

“...in the late Twentieth Century...”	PAGE No: 221	No: 110
“...in the early Twenty-first Century.”	PAGE No: 222	No: 111
“...in a few decades...”	PAGE No: 223	No: 112
“...in 2005...”	PAGE No: 225	No: 113
“...in 2007...”	PAGE No: 225	No: 114
“...in 2008...”	PAGE No: 225	No: 115
“...in that same year...”	PAGE No: 225	No: 116
“...in the Third Millennium.”	PAGE No: 225	No: 117
“...in a finite time.”	PAGE No: 228	No: 118
“...in five hundred years.”	PAGE No: 230	No: 119
“...in those days...”	PAGE No: 230	No: 120
“...in many times.”	PAGE No: 233	No: 121
“...in one hour, ten minutes.”	PAGE No: 235	No: 122
“...in the past...”	PAGE No: 244	No: 123
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“...the corruptions of time and its patient, unsleeping	PAGE No:	No:
servant, Entropy.”	PAGE No: 3	No: 001
“...ecological disasters of previous centuries...”	PAGE No: 7-8	No: 002
“...the earliest records of the Space Age.”	PAGE No: 11	No: 003
“...how many channels would the Third Millennium	PAGE No:	No:
have?”	PAGE No: 19	No: 004
“...relics of the past.”	PAGE No: 32	No: 005
“...the greatest minds of the past...”	PAGE No: 34	No: 006
“...wildest fantasies of the past.”	PAGE No: 34	No: 007
“...the people of 2001...”	PAGE No: 35	No: 008
“...the technology of this age...”	PAGE No: 39	No: 009
“...the world of the Third Millennium...”	PAGE No: 43	No: 010
“...the medical science of this age.”	PAGE No: 59	No: 011
“...the Twenty-first Century’s ‘smart cards’.”	PAGE No: 61	No: 012
“...choose which of the myriad distractions this age	PAGE No:	No:
could offer.”	PAGE No: 71	No: 013
“...the technology of this day and age.”	PAGE No: 78	No: 014
“...the world of the early Twenty-first Century.”	PAGE No: 79	No: 015
“...some ladies of this era...”	PAGE No: 92	No: 016
“...the smog-choked cities of the Twentieth Century...”	PAGE No: 114	No: 017
“...environmental disasters of the Oil Age.”	PAGE No: 114	No: 018

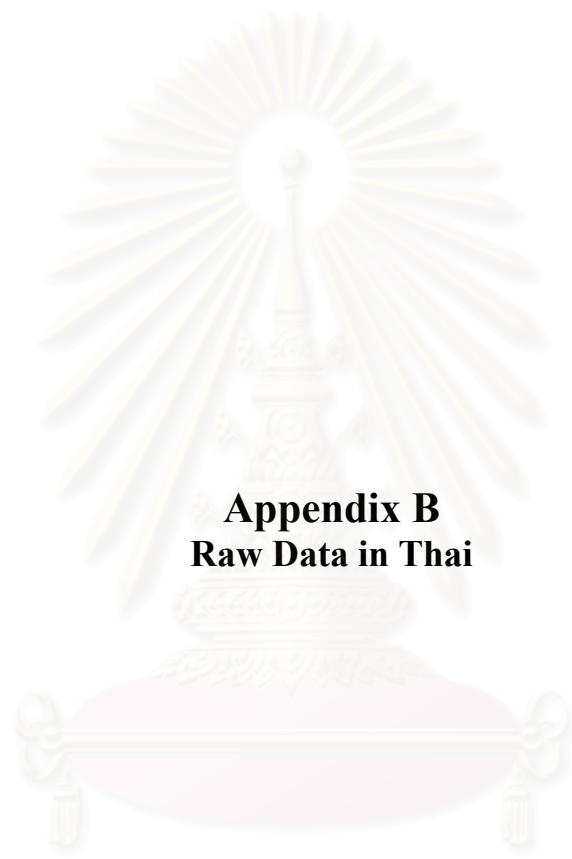
“...the classic records of the Space Age.”	PAGE No: 115	No: 019
“...the future would still have unpleasant biological	PAGE No:	No:
surprises in store for mankind.”	PAGE No: 221	No: 020
“...the trauma of the last weeks.”	PAGE No: 243	No: 021



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จุฬาลงกรณ์มหาวิทยาลัย

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“...spend much time together...”	PAGE No: 21	No: 001
“...spending less and less time there...”	PAGE No: 135	No: 002
“...How do I spend my time?”	PAGE No: 135	No: 003
“Ted Khan spent years...”	PAGE No: 147	No: 004
“...spent lifetimes...”	PAGE No: 167	No: 005
“...spends much of its life...”	PAGE No: 181	No: 006
“Altogether, he spent less than an hour on Planet Earth.”	PAGE No: 204	No: 007
“...spent much of his life...”	PAGE No: 245	No: 008

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย



Appendix B
Raw Data in Thai

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จุฬาลงกรณ์มหาวิทยาลัย

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สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Biography

Mr. Dale R. Kvalheim was born on 30 September 1948 in Seattle, Washington USA. In 1982, he graduated from the Faculty of Education with a Bachelor's degree in Education from Seattle University. From 1982 to 1985, he taught English as a Second Language in the Dallas Independent School District of Texas. From 1987 to 1990, he taught English as a Second Language at Ruam Rudee International School in Bangkok, Thailand. From 1990 to 1993, he taught English as a Foreign Language at the Royal Thai Police Cadet Academy in Sampran. From 1993 to the present he has been teaching English as a Foreign Language at South-East Asia University. In 1997, he continued his education by entering the Master of Linguistics program at Chulalongkorn University.



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