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# SYSTEMS AND USES OF IDENTIFYING PROCESSES: A SEMIOTIC PERSPECTIVE IN SFL

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Systems and Uses of Identifying Processes: A Semiotic Perspective in SFL

Zhao Ruihua

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

August 2015

# **CERTIFICATE OF ORIGINALITY**

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#### Abstract

Identifying clauses are ubiquitous in daily life. People make use of them to acquire knowledge, to get acquainted with others and to get things done. By examining the identifying clauses one can gain a preliminary understanding of the cognitive patterns of the human mind. In spite of the importance and ubiquity of identifying clauses, relevant studies are few and far between, and most of them have been carried out at a fairly general level and have not produced specific evidence-based insights. This thesis is intended to provide a comparatively complete picture of identifying clauses by exploring them mainly in three respects–grammatical characteristics, semantic implications and experiential / textual uses.

As a systemic functional study, the thesis takes an inductive approach to examine the identifying clause, starting with extensive data analysis and moving to systemic conclusions. Enlightened by Matthiessen (2006a), I combine the text-based method and corpus-based method, collecting the data from two sources - college textbooks / academic books and the Corpus of Contemporary American English. These two sources of data complement each other in view of the indeterminacy in identifying clauses. The data from the corpus are typically used in the examination of the grammatical characteristics, semantic implications and experiential uses of identifying clauses because of the comprehensiveness of the data that include typical and non-typical identifying clauses. The data from the textbooks and academic books, which take the form of long passages, are used particularly in the exploration of the textual uses of identifying processes. The data are approached in a trinocular perspective: from above, from roundabout and from below. The qualitative method is fundamental in this research, and the quantitative method is a supplement in supporting some of the findings obtained via the qualitative method and in presenting the findings from the corpus.

The analyses of the data show that an identifying clause construes two semiotic processes simultaneously. One is denotation (foreground the special case is the extra-stratal realization process foregrounded by certain types of equative verbs), and

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the other is the inter/intra-stratal realization process (a semiotic process specific to identifying clauses). These two semiotic processes show different features in both grammatical characteristics and semantic implications. By examining the realizations of the participants and process of an identifying clause, I found that an identifying clause may have an eight-cell paradigm, four-cell paradigm or two-cell paradigm. The identifying clause is traditionally introduced as being characterized by an eight-cell paradigm, but the four-cell and two-cell identifying processes also exist due to three factors – semantic reversibility, the possible locations of tonic prominence and grammatical reversibility /Subject-Complement switchability. These three factors, examined on the lexicogrammatical stratum, are influenced by the factors on the semantic stratum respectively – external perspectival directionality 1, external perspectival directionality 2 and internal perspectival bidirectionality.

The semantic implications frequently conveyed by identifying clauses are exhaustiveness and contrastiveness. The focus of the present research falls on the former. Traditionally, the exhaustive meaning has been studied mostly in so-called cleft constructions. However, it is also conveyed frequently by identifying clauses, depending on the type of exhaustiveness and the coding direction. In terms of referential exhaustiveness, exhaustiveness is indicated by the definiteness of the nominal group realizing the participant unless the nominal group denotes a class rather than an individual. In terms of realizational exhaustiveness, exhaustiveness is relevant to the coding direction. It is conveyed inevitably in encoding identifying clauses but optionally in decoding ones. In addition, the functions of only in identifying clauses are also investigated. The position variability is a significant feature of only, which is related to the textual and interpersonal statuses of only in an identifying clause. When conveying a meaning of exclusion, only is an Adjunct functioning either thematically or rhematically; when indicating an adjustment of an expectation, only is a mood Adjunct functioning interpersonally. The two main functions of only are (1) restricting the number of the possible interpretations of an identifying clause (in this way reducing the ambiguities inherent in identifying clauses) and (2) reinforcing the exhaustive meaning in an encoding identifying process and supplementing the exhaustive meaning in a decoding identifying process (that does not convey such a meaning in case of no *only*).

The thesis examines the experiential and textual uses of identifying clauses by reference to the thematic and information structures of an identifying clause. The experiential uses of identifying clauses refer to their roles in construing the knowledge of the world, including specifying, defining, demonstration, naming, role identification, symbolization, exemplification, constitution, possession, circumstance, equation, counter-expectation and categorization. An identifying clause can function differently according to the coding direction of the information. The textual uses of identifying clauses refer to their roles played in presenting the knowledge as text, including topic introduction, topic maintenance, topic shift (phase/non-phase), evidence providing and summarizing/evaluation. A certain kind of textual use has a close relationship with a certain type of experiential use, such as definition with topic introduction and categorization.

Apart from these three main aspects, I also present a preliminary corpus-based study of identifying processes. The quantitative study of the data from the corpus shows two findings. First, the equative verbs of the same use tend to show a similar frequency of occurrence. The second concerns the dominant field and the comparatively marginal field of identifying processes in the academic genre.

The thesis is guided by Halliday's conception of language as a system of choices, while at the same time shedding further light on this conception. It also demonstrates the cognitive pattern of the human mind in the process of identifying. The findings of the research can be applied to the evaluation of the quality of a textbook so as to find out a better way to design the textbooks to enhance the quality of education. In addition, the system of identifying clauses can be further expanded by the inclusion of an ergative perspective, the mood and modality and non-structural textual description.

# **Research Output Arising from the Thesis**

#### Journal Articles:

- Huang, G.W. and R.H. Zhao. 2013. A semiotic approach to the indeterminacy in identifying clauses in English. *Foreign Languages in China* 10 (2), 42-49.
- Zhao, R.H. 2014. Exhaustiveness in identifying clauses from a semiotic perspective of SFL. *Journal of PLA University of Foreign Languages* 37 (5), 99-107.
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# Abbreviations

Adj.:	adjective		
Adv.:	adverb		
AG:	adverbial group		
Ass:	Assigner		
Attri:	Attribute		
Ca:	Carrier		
Circ.:	circumstance		
COCA:	Corpus of Contemporary American English		
CN:	common noun		
DA:	definite article		
Id:	Identified		
IFG:	Introduction to Functional Grammar		
Int.:	intensive		
Ir:	Identifier		
NG:	nominal group		
NTT:	Notes on transitivity and theme in English		
PD:	perspectival directionality		
PN:	proper noun		
Poss.:	possessive		
PP:	prepositional phrase		
Prep.:	preposition		
S-C switch:	Subject-Complement switch		
SFL:	Systemic Functional Linguistics		
Tk:	Token		
V:	verb		
Vl:	Value		

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## **Chapter One Introduction**

#### **1.1 General statement**

Human beings frequently make use of the identifying process to identify entities or events to achieve social purposes. In order to give a pre-theoretical sense of the process of identifying, I contrive two conversations as follows. The first shows the way people get to know the world, and the second shows how they get to know each other and get things done.

The first conversation is in class between a teacher (T) and a student (S).

- (1) S: What is a mammal?
  - T: Mammals are vertebrates that feed their young on mother's milk.
  - S: What is vertebrate?
  - *T*: *A vertebrate is an animal with a backbone.*
  - S: What is backbone?
  - *T*: *The backbone is a bony skeletal structure found in vertebrates.*

•••

This is a process of knowledge construction: By means of the identifying processes, the student will construct the knowledge base of 'mammal', including the relevant information like 'vertebrate', 'backbone', etc.

The second scene is in a company. Unlike the identifying processes in the first conversation that construct a knowledge base, those in the second enact a relation of negotiation. The conversation takes place in front of a reception center, between an old lady (O) and young lady (Y).

#### (2) *Y*: *Can I help you*?

- O: I want to see David Miller.
- *Y*: *Do you have an appointment?*
- $O: \bigcirc I$  in his mother.
- Y: I'm sorry. But you need to make an appointment in advance.
- O: Who are you?
- *Y*: <sup>(2)</sup> *I'm the secretary.*
- (David (D) heard them quarrelling and walked out of the office)
- D: (to Y) <sup>(3)</sup> This is my mother. Watch your attitude.
- D: (to O) ④ This is my secretary. She is new here, and she is serious and conscientious.

In this conversation, the speakers use four identifying processes in introducing their identities (as  $\bigcirc - @$  indicate). In the first one, *I'm his mother*, the old lady shows her identity and implies the meaning 'since I'm his mother, I don't have to make an appointment in advance'. But the young lady insists on an appointment, which ruffles the old lady's feathers. The old lady wants to know who the young lady is and poses a question 'who are you' in a brisk tone of voice. The young lady answers 'I'm the secretary', conveying the message 'since I'm the secretary, I have to follow the regulation that visitors need to make an appointment beforehand if they want to see the CEO and no one is an exception'. The two identifying processes intensify the conflict between the two ladies because of the implications. The next two identifying processes<sup>①</sup> and <sup>④</sup> express different meanings and bring disparate consequences. The third identifying process means 'this is my mother, so show some respect', and the fourth one implies 'this is my secretary and she is just doing her job, so do not blame her'. The two identifying processes make explanations and alleviate the conflict between the two ladies.

The two conversations lay a pre-theoretical foundation for the discussion of identifying processes. But identifying processes are much more complex and play an

extremely important role in our understanding of the world and the interacting with others. They are ubiquitous in people's life because people frequently make use of them to acquire knowledge (both common sense and academic knowledge), to get acquainted with others and to get things done. Therefore, the studies of identifying processes will definitely help us get a better idea of the cognitive world of the human mind and the way people identify the world. Since we were born, we have always been exposed to all kinds of identifying processes in the recognition of the world and the interaction with other people. The identifying process is explained by Halliday and Matthiessen as a process where 'one identity is used to identify another' (2004: 227), for example, Tom is the leader, Beijing is the capital of China, honesty is the best virtue, to name just a few. Some identifying clauses, whose process is realized by the copula be, overlap with the traditionally called copular sentences, like the three examples just given. However, identifying clauses also include other cases, those whose process is realized by a specific equative verb, such as silence means disagreement, the meeting took up the whole day and Mary owns the book, as long as the relationship between the two participants is one of identification.

Halliday (1985, 1994) classifies processes into six types. They construe human experience in the transitivity system – material processes, mental processes, relational processes, behavioural processes and existential processes. Relational processes are processes of 'being' and 'having', shown by Matthiessen (1999, 2006a, 2015) as constituting the second frequent choice among the six process types. In spite of the high frequency of occurrence of relational processes, the quantity and quality of the relevant studies are not proportional to the importance, not to mention the identifying processes that are one of the two modes of relational processes. The earliest discussion of identifying processes should be traced back to Halliday's accounts for equative processes (1967a, 1967b, 1968), which is the canonical model of identifying processes. There are followers (e.g. Davidse 1991, 1992, 1996a, 1996b, 2000, 2009, Matthiessen 1990, 1995a) as well as challengers (Davidse 2010, Fawcett 1987, Harvey 2001). These studies focus on developing the system of identifying processes, so the system of identifying processes, so the system of identifying processes, so the system of identifying processes, the system of identifying pr

while another linguist, Painter (1993, 1999), carries out an ontogenetic study of relational processes to explore children's language development.

The reason why the activities of acquiring knowledge, getting acquainted with others and getting things done can be realized via language is that the world is composed of a large number of semiotic systems, among which language is viewed as 'the prototypical semiotic system' (Halliday and Matthiessen 1999: 509) because it is 'a semiotic into which all other semiotics may be translated' (Hjelmslev 1943/1963, cited in Genosko 1994: 62).

My account for identifying processes is from a semiotic perspective in the framework of Systemic Functional Linguistics (hereafter SFL). Explained in the framework of SFL, an identifying process is a process through which the experience of identifying is construed. It is a semiotic process with the root in language that consists of at least<sup>1</sup> three strata – the stratum of meaning, the stratum of wording and the stratum of writing or sound (see more in §3.2 below). In construing the experience of identifying, language first translates the two extralinguistic semiotics in question onto the stratum of meaning in the linguistic system, and then explains the relation between the two extralinguistic semiotics by presenting it in an identifying syntagm on the stratum of wording. The two processes are interpreted in terms of denotation and realization respectively. The two extralinguistic semiotics are denoted by two linguistic realizations, and then the relation between these two extralinguistic semiotics is realized in terms of the mutual realization relationship between the two linguistic realizations in language. Take Gone with the Wind is the best seller in the small store for instance. In order to show the relation between the book Gone with the Wind and the role of the best seller, one needs first to construe his experience of 'the book' and that of 'the best seller' as meaning in language. Only after that can he present the relationship between the two participants by means of an identifying

<sup>&</sup>lt;sup>1</sup> The reason why I use 'at least' is that in SFL (e.g. Halliday and Matthiessen 1999), language is composed of four strata – semantics, lexicogrammar, phonology and phonetics, among which the semantic stratum and phonetic stratum are 'interface' strata interfacing with other semiotic systems and the lexicogrammatical stratum andphonological stratum are purely internal strata. In most parts of the research, I only refer to the relationship among semantics, lexicogrammar and phonology. Therefore, I introduce these three strata in detail and mention the phonetic stratum only in passing.

clause in the linguistic system.

Consequently, an identifying clause involves two semiotic processes simultaneously. One is denotation between the signified and the signifier. The special case is the extra-stratal realization relationship between language and other semiotic systems foregrounded by certain types of equative verbs (see §4.2). The other is the inter/intra-stratal realization relationship between the two participants within the linguistic system. Denotation occurs in all types of clauses – material clauses, mental clauses, relational clauses, behavioural clauses, verbal clauses and existential clauses. It shows the way people construe their experience of world as meaning. But among these clause types, what makes the identifying clauses distinctive is the semiotic process of realization in the semantic configuration- the inter/intra-stratal realization relationship between the two participants. By means of the two inherent semiotic processes, the identifying clause construes a world of its own, a world that is construed semiotically. The two semiotic processes in an identifying clause, denotation (including the special case of extra-stratal semiotic process between the linguistic system and other extralinguistic systems, indicated by identifying process 1) and inter/intra-stratal realization within the linguistic system (indicated by identifying process 2), are presented visually in the figure below.



identifying process 2

Figure 1.1 The two semiotic processes in identifying clauses

In this figure, A and B, representing the specific entities of our experience, are

translated by language as participant 1 and participant 2 respectively. This is identifying process 1. The relation between entity A and participant 1 and that between entity B and participant 2 can be seen as a relation between the signified and the signifier in terms of denotation. The other identifying process, identifying process 2, is between the two participants in language. The two participants may be on different strata (an inter-stratal realization relationship), different ranks (an inter-rank realization relationship) or different axes (an inter-axial realization relationship), the latter two of which are intra-stratal realization relationship. This will be elaborated in  $\S3.2.2.4$ .

To round off the general introduction to the process of identifying, I summarize the feature of identifying processes from a semiotic view in SFL. An identifying clause construes two semiotic processes simultaneously. One is the realization relationship in the semiotic system of language, and the other is denotation (including the special case of extra-stratal realization relationship) between different semiotic systems.

#### 1.2 The purpose of the present study

In the earliest works of transitivity, Halliday (1967a, 1967b, 1968) has made an enlightening investigation of identifying processes. In the subsequent studies he (Halliday 1985, 1994, Halliday and Matthiessen 1999, 2004, 2014) continues to discuss the topic. The two representatives inheriting and developing Halliday's ideas of identifying processes are Davidse (1991, 1992, 1996a, 1996b, 2000, 2009) and Matthiessen (1985, 1990, 1995a). There are also challengers, like Fawcett (1987), who interprets relational processes in a different line. Except for the contributions made by the four scholars, studies on this topic are few and far between, and most of them are conducted at a fairly general level and have not produced specific evidence-based insights. Hence the purpose of the research is simple and clear: To make a thorough examination of identifying processes systematically in the

framework of SFL so as to complete the system of identifying processes and to facilitate the understanding of such processes, and in this way laying a theoretical foundation for future studies and practical applications (see §8.3).

### 1.3 Research methodology and research questions

It is well known (Halliday 1977, Seuren 1998) that for linguistic investigations the two basic approaches are the hypothetico-deductive approach and the inductive approach. The former is best illustrated by Chomsky's approach to language analysis. As a systemic functional study, the thesis takes the inductive approach, embarking on data analysis and moving to systemic conclusions. Enlightened by Matthiessen (2006), I combine the text-based method and the corpus-based method together in dealing with the data from a trinocular perspective –'from above' to seek the registerial strategies, 'from roundabout' to probe into the paradigm and 'from below' to search for the patterns (Matthiessen and Halliday 2009).

With respect to the data of the thesis, two points need to be made clear. One is the sources, and the other is the coverage. The data in the research derive from the Corpus of Contemporary American English (hereafter COCA, Net. 1.) and college textbooks /academic books. The reason why I chose COCA rather than others is relevant to the way I justify the classification of the equative verbs made in *An Introduction to Functional Grammar* (hereafter IFG, Halliday 1994). The classification (Halliday 1994: 123) is based on the meanings conveyed by the verbs, which play an important but not decisive role in categorizing identifying clauses. What I am trying to do is not to challenge the meaning-based classification but to justify it by reference to the field variation of the equally-sized genres of spoken, popular magazine, fiction, newspaper and academic. In my research, the focus falls on the academic genre that consists of the nine fields<sup>2</sup> of education, history, geology/social science, law/political

<sup>&</sup>lt;sup>2</sup> In COCA, the term for education, history, etc., is subgenre rather than field. But in a private conversation with

science, humanities, philosophy/religion, science/technology, medicine and miscellanea since identifying processes occur at a rather high frequency in such a genre and are essential in expounding or exploring the academic issues.

I selected 37 verbs frequently occurring as equative verbs from the word list<sup>3</sup> containing approximately 500,000 word forms and part of speech, which appear at least four times in the 410 million words in COCA (Mark 2011). However, the copular verb *be* is ignored in the corpus study because the amount of work is very considerable and beyond the scope of the present research. The 37 verbs are shown as follows:

become, show, include, suggest, follow, mean, remain, indicate, represent, involve, cause, reflect, contain, form, demonstrate, act as, function as, realize, lack, constitute, illustrate, imply, mark, own, belong to, surround, serve as, exemplify, add up to, equal, spell, deserve, offset, instantiate, outweigh, outlast, outrun. (Net. 2.)

In order to obtain a rather complete picture of the 37 verbs, I have examined a total of 762,680 cases from the corpus.

However, the corpus provides neither full texts<sup>4</sup> nor cases from extralinguistic semiotic systems. In order to compensate for these two weaknesses, data from textbooks /academic books are supplemented. They can provide us with a complete context for an identifying process and semiotics from an extralinguistic system like

Geoff Williams on  $12^{\text{th}}$ , Nov. 2012, we thought that 'field' was more appropriate for education, history, etc. Genre is defined by Martin (1992) as a staged, goal-oriented social process functioning at the level of context of culture. It is contextualized in register, which functions at the level of context of situation and is composed of field, tenor and mode. Field refers to 'what is going on'; it is resonates with the ideational metafunction. According to our understanding, 'subgenre' used in the corpus is inappropriate because education, history, etc. are not different kinds of genre but are different fields realizing the genre of the expounding type (Matthiessen et al. 2010). Matthiessen et al. (2010: 179-80) divide genre into eight types – expounding, including explaining and categorizing, such as encyclopedia; reporting, including inventorying, surveying and chronicling, such as news reports; recreating, including narrating and dramatizing, such as novels; sharing, including sharing experiences and values, such as forums and blogs; doing, including directing and collaborating, such as menu; enabling, including instructing and regulating, such as programmes; recommending, including promoting and advising, such as advertisements; and exploring, including arguing and reviewing, such as instructions.

<sup>&</sup>lt;sup>3</sup>The version of the corpus used for this word list is the one from January 2011, which contains texts up through

June 2010.

<sup>&</sup>lt;sup>4</sup>In COCA, for each authentic example, the corpus provides an extended text. However, when I examine the textual uses of identifying clauses in Chapter Seven, an extended text is not enough; I need a complete text to show the roles played by identifying clauses in a macrostructure of the text.

figures, graphs and pictures. The data from linguistics are predominant because linguistics is itself an interpretation, or a translation, of language phenomena, and is inevitably permeated with a large number of identifying processes. Examples from other fields are the supplements for the linguistic data, such as economics, biology, religion, etc. In examining the grammatical characteristics, semantic implications and experiential uses of identifying processes, I collected data as broad as possible, whereas in exploring the textual uses of identifying processes, I analyzed the texts taken from the two fields of zoology and linguistics. Sometimes long passages rather than single clauses are presented due to the ambiguity from the inherent nature of indeterminacy in language.

In the present study, I examine identifying processes by analyzing the features of the authentic examples from textbooks and COCA (although in some analyses, the constructed examples are used as long as they satisfy the requirements and achieve the purpose), and hence the qualitative method is dominant. The quantitative method is used when I present the corpus-based findings and some of the findings obtained via qualitative study; it is supplementary to the qualitative method.

Throughout the research, the following questions are borne in mind.

- ① How are the extra-stratal identifying processes, i.e. the identifying relations between the linguistic system and other semiotic systems (such as the system of symbol or icon) foregrounded by some certain types of equative verbs, realized via identifying clauses?
- ② How do the choices of the realizations of the participants, process and circumstances on the lexicogrammatical stratum realize the choices on the semantic stratum, and conversely, how do the choices on the semantic stratum influence the choices of the realizations of these elements on the lexicogrammatical stratum?
- 3 How are the implications conveyed by identifying clauses interpreted and what

are the factors influencing the interpretations of the implications?

④ How do the textual factors, such as the thematic structure, information structure and patterns of thematic progression, affect the categorization of the experiential and textual uses of identifying clauses?

The first question is relevant to extra-stratal identifying processes and the following three concern inter/intra-stratal identifying processes. However, it is unreasonable to disconnect extra-stratal identifying processes from inter/intra-stratal ones because the two types of processes are construed in some types of identifying clause simultaneously (see §4.2, §4.5 and §7.4). The purpose of examining the extra-stratal identifying processes first in Chapter Four is to foreground the realization relationship between language and other semiotic systems. The first two questions are answered in Chapter Four, the third one in Chapter Five, and the last one in Chapter Six and Seven.

From the questions above it can be seen that the thesis is significant in two respects. The system (including the uses) of identifying processes is expanded and to a certain extent revised. Furthermore, the findings from the study of the systems of identifying processes can be applied to enhancing the education quality, which is expounded in Chapter Eight.

### 1.4 The object of the present study

The object of the present study is identifying processes, indicated by Halliday (1985) as one of the two modes of relational processes. The other is the attributive mode, for instance, *Tom is a student*.

In an identifying clause, one participant is used to identify the identity of the other participant. In other words, the 'identity of the other participant' is identified in terms of its relation to the 'one participant'. It is therefore the identity in terms of the

RELATION between the two participants rather than the individual concept of identity of each participant that is construed by the clause. Following Halliday and Matthiessen (2004), the thesis includes all the three types of identifying clauses – intensive, circumstantial and possessive. They are differentiated from one another according to the relation of identity between the two participants coded in a clause. The intensive type codes an intensive relation of identity between the two participants (e.g. *Tom is the leader*), the circumstantial type a circumstantial relation of identity (e.g. *Tom resembles his mother*), and the possessive type a possessive relation of identity (e.g. *Tom owns the book*).

Intensive identifying clauses partially overlap with copular sentences. Copular sentences refer to the sentences whose subject and predicate (i.e. subject complement) are linked by copular verbs like *be* and *become*. The predicate may be realized by NGs or adjectival groups. Quirk et al. (1985: 741) regard the semantic role of the subject complement as attribute, classifying it into the two subtypes of identification and characterization and identifying three distinctions between the two subtypes by reference to their ability to reverse and their different preferences for realizations.

Another division of copular sentences is between the specificational type and the predicational type. 'Specificational' and 'predicational' are the terms used by Akmajian (1979) and Higgins (1979). They roughly correspond to Kuno and Wongkhomthong's (1981) 'identificational' vs. 'characterizational' and to Halliday's (1994) 'identifying' vs. 'attributive'. Specificational sentences have other 'names' like 'equational' (Huddleston 1971), 'equative' (Bolinger 1972), 'specificational' and 'descriptionally identifying' (Declerck 1983) and 'specificational /descriptional-identifying' (Davidse 2010). No matter what term is used, the function of the clauses is explained, in a rough way, as specifying a value for a variable. Declerck (1988: 132) relates value to Halliday's (1985) Identifier and variable to Identified and equates Identifier with unknown information and Identified with given information. However, this is unacceptable for two reasons. Intensive identifying clauses cover a much wider range than specificational sentences: Apart from the

clauses whose process is realized by the copular verbs, those whose process is realized by the specific verbs from the equative classes are also included, such as *represent, equal, indicate, symbolize*, etc. Furthermore, although value and variable are similar to Token and Value in SFL, their relationship to given information and new information is much more complex than Declerck's claim, as shown by Halliday (1967a, 1967b, 1968, reviewed in §2.7.1 and §5.4).

#### 1.5 Structure of the thesis

In this chapter, I have shown the panorama of identifying processes, including the basic concepts, semiotic nature and most relevant studies on them. In addition, I have demonstrated the research purposes, research significance, research method, and research questions. The following chapters will probe into identifying processes in detail. Chapter Two reviews the relevant studies on identifying clauses and copular sentences. Chapter Three presents the theoretical framework of the research, which is composed of three parts – the semiotic view, the three metafunctions in SFL and indeterminacy. Chapter Four, Five and Seven examine the grammatical characteristics, semantic implications and experiential and textual uses of identifying clauses respectively. Chapter Six shows the preliminary corpus-based study of identifying clauses. The final chapter, Chapter Eight, is the conclusion of the research.

# Chapter Two An Overview of Identifying Clauses and

## **Copular Sentences**

#### **2.1 Introduction**

The penultimate section in the first chapter naturally leads to the review of the studies on identifying clauses as well as those on copular sentences in the literature.

According to Halliday and Matthiessen (2004), relational clauses are classified into three types – intensive, possessive and circumstantial. The intensive type of relational clauses construes an intensive relation between two participants, conveying the meaning 'X is Y'; the possessive type of relational clauses construes a possessive relation between two participants, conveying the meaning 'X has Y or Y belongs to X'; and the circumstantial type of relational clauses construes a circumstantial relation between two participants, conveying the meaning 'X is on/at/with Y'. The three types come into two modes – identifying and attributive. The identifying clause is a clause where 'an entity is being used to identify another' (Halliday and Matthiessen 2014: 276), and the attributive clause is one where an attribute is ascribed or attributed to an entity (ibid: 267). The three types and two modes interact with one the other, generating six categories. They are illustrated by the examples in the table below, with the identifying ones highlighted.

type	intensive	possessive	circumstantial
mode			
identifying	Tom is the leader	Tom owns the book	Tom accompanies Mary
attributive	Tom is a student	Tom has a book	the movie concerns a poor
			miner

Table 2.1 Six categories of relational clauses

Copular sentences in the literature are roughly, though no consensus has been achieved yet, divided into the predicational type and the specificational type (Akmajian 1979, Higgins 1979). The basic difference between the two types of copular sentences lies in the second participant. While the second participant in specificational sentences is referential, the one in predicational sentences are non-referential. This can be illustrated by the contrast between *the robber is Tom* and *the robber is very poor*. Identifying clauses overlap to a certain extent with specificational sentences but cover a much wider range. They include those with the copular verbs such as *be* and *become*, those with the verbs from the equative classes like *represent, equal, symbolize*, those with the phrasal verbs<sup>5</sup> such as *serve as* and *function as*, and so on. In some sense, specificational sentences are part of the intensive type of identifying clauses.

Since there is a close relationship between identifying clauses and copular sentences, the relevant studies on copular sentences are reviewed as well, but with the focus on the longstanding controversial issues. The second concern is the discussions of copular sentences in different frameworks. Third, there is a brief introduction to the studies on verbless clauses. In different languages around the world, the subject and the complement in a copular construction may be linked by copular verbs, particle copulas, pronominal copulas or even zero copulas. The final part, constituting the main part of this chapter, concerns the studies on identifying clauses in SFL. It includes the Hallidayan model of identifying clauses and the followers and challengers of the model. The reason why I review the studies on copular sentences outside SFL and those on identifying clauses within SFL in different ways is that while outside SFL no one is regarded as the leader in the studies of copular sentences and scholars hold different views on the longstanding controversial issues, within SFL there exists one leader, Halliday (e.g. 1967a, 1967b, 1968), whose study of identifying clauses is the canonical model and has many followers and a few challengers. The followers make various modifications and expansions to develop the canonical model,

<sup>&</sup>lt;sup>5</sup>The phrasal verb is called by Greenbaum (1996) the copular prepositional verb.

and the challengers, represented by Fawcett (1987), propose a different line in interpreting relational clauses.

This chapter begins with an introduction to Halliday's key insights into relational clauses. In presenting the studies outside SFL, I make them more accessible by showing how they correspond to Halliday's interpretative and descriptive framework. Then, I return to SFL and provide a detailed account for the history of the description of identifying clauses.

#### 2.2 A trinocular view of relational clauses in SFL

In SFL, relational clauses construe the experience of 'being' and 'having', which 'serve to characterize and to identify' (Halliday and Matthiessen 2004: 210). This explanation implies the three types and two modes of relational clauses: 'Being' and 'having' indicate the intensive type of relational clauses ('X is Y', e.g. *Tom is a student*), the circumstantial type of relational clauses ('X is on /at /with Y', e.g. *Tom is on the bridge*) and the possessive type of relational clauses ('X has /owns Y', e.g. *Tom has an antique ring*), and 'to characterize' and 'to identify' indicate the attributive mode ('X is Y (Adj. /indefinite NG)', e.g. *Tom has a secret*) and the identifying mode ('X is Y (definite NG /PN)', e.g. *Tom is the leader*; 'X takes up /covers /accompanies /causes /resembles Y', e.g. *the meeting took up the whole day*; or 'X owns Y /Y belongs to X', e.g. *Tom owns the book*).

Taking a trinocular perspective, Halliday and Matthiessen (2004: 211) describe relational clauses 'from below', 'from around' and 'from above'. When relational clauses are seen 'from below', they are common in two aspects. The process in the clauses is realized by *be* in the simple present or past tense, and there are two inherent participants. Seeing 'from below' enables us to know not only the common grounds of the realizations of relational clauses but also the differences between attributive clauses and identifying clauses. The second participant in identifying clauses is

definite (such as the + CN or PN), but the one in attributive clauses is indefinite (such as a/an + CN or Adj.). A further distinction between attributive clauses and identifying clauses is shown when they are examined 'from around', that is, whether there is a systemic variant of the relational clause in question. Most identifying clauses have a corresponding passive construction, for example, *Tom is the leader* vs. *the leader is Tom* and *Tom owns the book* vs. *the book is owned by Tom*. However, this is not the case with attributive clauses. It is rare to hear *handsome is Tom* unless in some highly marked situations, and it is ungrammatical to say *a secret is had by Tom*.

Looking 'from below' identifies the realization of relational clauses, looking 'from around' helps us find the possible systemic variants of relational clauses, and looking 'from above' is relevant to the experience construed in relational clauses. The 'from above' perspective is discussed from two aspects (Halliday and Matthiessen 2004: 211-215). One is the nature of unfolding. Relational clauses 'prototypically construe change as unfolding "inertly", without an input of energy - typically as a uniform flow without distinct phases of unfolding' (ibid.: 211), and the unmarked tense is simple present. The other is the nature of configuration. The typical configuration of relational clauses is 'participant 1 + be + participant 2', within which 'the experiential "weight" is construed in the participants, and the process is merely a highly generalized link between these two participants' (ibid: 213-214). This claim is sound in terms of the be-identifying clauses but less acceptable in terms of the identifying clauses with specific verbs (see more in §4.3.3). Looking from above also reveals the relation between the two participants - class-membership in attributive clauses and identification in identifying clauses. Approached in a semiotic way, attributive clauses are interpreted as construing the semiotic relation of instantiation and identifying clauses are mostly interpreted as construing the semiotic relation of realization, either inter-stratally or intra-stratally (the other possibilities are presented in §3.2.3.4).

The trinocular view of relational clauses lays a solid foundation for the review of other accounts for relational clauses (or copular sentences): How do they correspond

to Halliday and Matthiessen's interpretation and what are the criteria ('from below', 'from around' and/or 'from above') of their classification of relational clauses (or copular sentences)?

### 2.3 Studies on copula in different languages

Accompanying the studies on copular sentences are those on the copular verbs in different languages. These languages belong to a variety of language families, such as Altaic – Japanese (Kizu 2005, Narahara 2002), Sino – Tibetan – Chinese (Cheng 2008, Hole 2011, Prince 2012, Tham 2008, Wu 2011), Celtic – Irish (Doherty 1996), Indo – European – French (Heggie 1992, Schlenker 2003), Italian (Moro 1997, Zamparelli 2000:189–244), Polish (Blaszczak and Geist 2000), Russian (Geist 1999, 2007, Partee 2010, Pereltsvaig 2001, 2007), Spanish (Espinal and Mateu 2011, Maienborn 2003) and Welsh (Rouveret 1996, Zaring 1996), Afro-Asian – Hebrew (Doron 1983, Rapoport 1987, Rothstein 2001:205-234), Austronesian – Malagasy (Paul 2001) and Afro-Asiatic – Hausa (Abdoulaye 2007)). A series of books, *The Verb 'Be' and its Synonyms (Part I – Part VI)* (Verhaar 1966, 1968a, 1968b, 1969, 1972, Verhaar and Kahn 1973), have undertook an intensive study on the copular verbs in a wide range of languages.

In addition to the explorations of the syntactic and semantic functions of the copulas, the studies also involve identifying and solving problems in language acquisition. The acquisition of the copula in English is examined in different contexts – the first language (L1) context (e.g. Becker 2000, Guo 2009) and the second language (L2) context. The representatives of the L2 context are Russian (e.g. Ionin and Wexler 2002, Unlu and Hatipoglu 2012), Japanese (e.g. Kusutani 2006, Tode 2003, 2007), Chinese (Hsieh 2009) and Arabic (Alshayban 2012). Some of the scholars investigate the English copula *be* as a linking verb as well as an auxiliary verb (Kusutani 2006). Also, the acquisition of the copula *ser/estar* in Spanish draws scholars' attention. Such studies are likewise carried out in L1 context (e.g. Schmitt

and Miller 2007, Sera 2008) and L2 context (e.g. Geeslin and Guijarro-Fuentes 2005, Prieto 2009).

Here, a clarification needs to be made with respect to the interchange use between 'sentence' and 'clause' and between 'identifying' and 'specificational' in this chapter. In reviewing the studies in SFL, I use 'clause' and 'identifying', but in reviewing the studies outside SFL, I use 'sentence' and 'specificational'. However, this does not mean that all the scholars outside SFL use 'copular sentence'; they may use 'copular clauses' as well, such as Curnow (2000), Mikkelsen (2005, 2008), etc.

#### 2.4 Debates on copular sentences

The review of copular sentences focuses mainly on three controversies: the taxonomy of copular sentences, the terms (only focus on those of the specificational type of sentences), and the meaning of the copular verb *be*. Other issues also receive attentions, such as connectedness and anti-connectedness in pseudoclefts, the implication of exhaustiveness in specificational sentences, etc.

#### 2.4.1 Taxonomy of copular sentences

The ways of classifying copular sentences are basically two. One is bi-division (Akmajian 1979, Bolinger 1972, Gundel 1977, Huddleston 1971, Kruisinga and Erades 1953, Lyons 1977). The copular sentences are divided into two types – specificational and predicational. The other is n-division (see Declerck 1988, Higgins 1979). The copular sentences are divided into more than two types. On the basis of the nature of the participants in a sentence, den Dikken (2006) presents a rather complete summary of the bi-division and the fine-grained division (i.e. n-division) of copular sentences, shown in Table 2.2 and Table 2.3 respectively.
nature of the second participant				representatives
pred	non-referential	Specif	referential	
icati	classifying	icatio	identifying	Kruisinga and Erades 1953
onal	intensive	nal	extensive/equative	Huddleston 1971
	non-equational		equational	Bolinger 1972
	ascriptive		equative	Lyons 1977
	attributive		identificational	Gundel 1977
	predicational		specificational	Akmajian 1979

Table 2.2 Bi-division of copular sentences (adapted from den Dikken 2006: 293)

Table 2.2 above demonstrates the bi-division of copular sentences outlined by different scholars. The second participant in predicational sentences is 'non-referential', 'classifying', 'intensive', 'non-equational', 'ascriptive', 'attributive' or 'predicational', such as *Tom is smart*, while the one in specificational sentences is 'referential', 'identifying', 'extensive /equative', 'equational', 'identificational' or 'specificational', such as the leader is Tom. Table 2.3 below shows the n-division of copular sentences, including Higgins's qua-division and Declerck's quin-division. Higgins (1979) identifies four types of copular sentences – predicational sentences, specificational sentences, identificational sentences and identity statements. In predicational sentences, the first participant is referential and the second participant predicational, for example, Tom is smart /a student. In specificational sentences, the first participant is superscriptional and the second participant specificational, such as the leader is Tom. In identificational sentences, the first participant is referential and the second participant identificational, for instance, the boy with glasses is Tom. In identity statements, both participants are referential, like he is Tom. Declerck (1988) classifies copular sentences into five types - predicational sentences, specificationally-identifying sentences, descriptionally-identifying sentences, identity statements and definitions. Declerck explains predicational sentences as predicating 'a property of the subject NP' (1988: 2), such as Tom is handsome. Specificational sentences are the sentences specifying a value for a variable (Declerck 1991: 521).

For example, -Who is the robber? -The robber is Tom. Descriptionally-identifying sentences typically follow the act of specification (ibid.), describing the characteristics of the specified entity. For instance, if one wants to know more about the robber and continues to ask 'Who is Tom', he may get the answer 'He is the manager of the bank', which presents the characteristics of Tom. Identity statements are distinguished from specificational sentences in that the first participant can be weakly referring in specificational sentences but is referring in identity statements, as in the contrast between the robber is Tom and Dr. Morley is Tom. Definitions, in Declerck's (1988) opinion, are neither predicational nor specificational; they are used to make definitions, for instance, unicorn is a legendary animal that has described since antiquity as a beast with a large, pointed, spiraling horn projecting from its forehead. One can see that Higgins's and Declerck's accounts for predicational sentences and identity statements are the same. The main divergences between them are two. Declerck discusses definitions as a separate category. As for the second difference, Tom is the robber is elaborated for illustration. For Higgins, it is a predicational sentence because the second participant is not specificational, identificational or referential, but for Declerck, it is descriptionally identifying because the first participant Tom is strongly referring and the second participant is non- (or weakly) referring.

types of copular sentences	nature of the	nature of the	representatives
	1st participant	2nd participant	
predicational	referential	predicational	Higgins 1979
specificational	superscriptional	specificational	
identificational	referential	identificational	
identity statements (equatives)	referential	referential	
predicational	referring	non-referring	Declerck 1988
specificationally identifying	weakly	strongly	

Table 2.3 Fine-grained division of copular sentences (adapted from den Dikken 2006: 294)

	referring	referring	
	(attributive)		
descriptionally identifying	strongly	strongly	
	referring	referring	
		or non-referring	
identity statements	referring	referring	
definitions	non-referring		

The classification of relational clauses in terms of mode in SFL (e.g. Davidse 1991, Halliday 1967a, 1967b, 1968, 1985, 1994, Halliday and Matthiessen 2004) is basically bi-divisional, but other types are mentioned as well, such as symbolic identity, identity statement, etc. The classification in SFL is systemic with degrees of delicacy, differing from both the bi-division classification and the n-division classification. The differences among the three types of classifications are diagrammed as below.



Figure 2.1 Differences among the systemic division of relational clauses (in SFL) and the bi-division and n-division of copular sentences (outside SFL)

The first difference is that the bi-division classifies copular sentences into two types, the n-division classifies copular sentences into more than two types, and the systemic division basically classifies relational clauses into two types but with more options in the subsystems in terms of delicacy. Another difference is the criteria on which the classifications are based. As reviewed in §2.2, in SFL relational clauses are viewed from a trinocular perspective, in other words, the classification between attributive clauses and identifying clauses is based on three criteria – the realization of the participants, the passive variants and the experience construed. But the non-SFL classifications are based mainly on the discourse functions of the two participants and

the clause, which is in some way similar to SFL's 'from above' perspective.

#### 2.4.2 Terminological confusion

In the literature, various terms are used to name the identifying (or specificational) relation between two participants, such as 'identifying' (e.g. Dik 1980, Gundel 1977), 'identificational' (e.g. Kuno and Wongkhomthong 1981, Quirk et al. 1985), 'equative' (e.g. Huddleston 1971, Kahn 1973), 'equational' (e.g. Bolinger 1972, Harries-Delisle 1978) and 'specificational' (e.g. Akmajian 1979, Declerck 1988, Higgins 1979). The terminological differences originate from the different understandings of the meaning conveyed by a clause like *the one who won the competition is Tom*.

In SFL, 'extensive', in contrast with 'intensive', used by Halliday (1967a, 1967b, 1968) in the classification of the lexical meanings of be, means 'identifies or is identifiable as, can be equated with' (Halliday 1967a: 66). The clauses expressing such a meaning are 'equative' clauses (Halliday 1967a: 67) and are later explained as having 'two functions, resembling the two terms of an equation, where the one serves to identify the other, as in x=2' (Halliday 1970: 134). In his later works (mainly in the four editions of IFG), such clauses are termed 'identifying' clauses, which convey the meaning 'some thing has an identity assigned to it' (Halliday 1994: 122), that is to say, 'one entity is being used to identify another' (ibid.). Similar view is held by Dik, who claims that the function of an 'identifying sentence' is to convey 'a relation of identity established between two entities' (1980: 32), Huddleston, who explicates the function of an 'equative sentence' as denoting 'the identification of one term by another' (1971: 134), and Kuno, who elucidates the function of an 'identificational sentence' as expressing a relation in which 'what is referred to as NP<sub>1</sub> is the same as what has been referred to as NP<sub>2</sub>' (1970: 351). What they have in common is the emphasis on the relation of identity between two participants. However, other linguists (e.g. Ball 1977, Declerck 1988, Higgins 1979) hold a disparate view that the meaning of identifying is 'the identity of some entity' rather than 'a relation between two entities' (Declerck

1988: 3). They distinguish these two by naming the former specificational sentences and the latter identity statements. Take x=y for example, a specificational interpretation reads it as 'specify the value y to x', whereas in an identity statement interpretation it is read 'x equals y'. Although in SFL there are also identity statements, they are not a type of relational clauses having the equal status of identifying clauses but a subtype of identifying clauses. Explained in Figure 2.1 above, the identity statement is one of the n-types of copular sentences in the n-division outside SFL, but in SFL it is in the subsystem of identifying clauses in the systemic division of relational clauses.

In SFL, 'identifying' does not simply mean 'equative'; it means assigning Token or Value to the participant in question so as to identify its identity. To put it differently, the identity of one participant is embodied in its relation to the other participant. This relational view is originated from the essential idea of system in SFL (Halliday 1994: F40). In SFL, no element is treated in isolation; the role or function of an element in a system is examined in its relation to the role or function of other element(s) in the system. Therefore, an element has a certain function or plays a certain role only when it is in a specific relation to other element(s) in the system.

## 2.4.3 Meanings of be

The classifications of copular sentences (see §2.4.1) are closely associated with the interpretations of the copula *be*. Basically, the controversy over the meanings of *be* is one-*be* versus multiple-*be*.

In generative grammar, the one-*be* perspective is preferred. The representatives are Geist (2007), Heycock (1994), Partee (1986), Williams (1983) and Zamparelli (2000), who claim a copula of predication and argue that specificational sentences are only inversed predications. They all consider identity statements as involving a relation of identity, but they differ in the way they translate such structures into semantic compositions. Even though some scholars present more than one type of

copular sentences, they insist that there is only one meaning conveyed by *be*, i.e. predication (e.g., Adger and Ramchand 2003, Heycock and Kroch 1999, Pereltsvaig 2001).

The multiple-*be* perspective is traced back to Aristotle and Plato's explanation: 'Be is a polysemous lexical item with a variety of different meanings' (Net. 3.). Later, linguists examine this 'polysemous lexical item' extensively. The strongest claim (Mikkelsen 2008) is the four types of meanings of be, which correspond to Higgins's four types of copular sentences (shown in Table 2.3 above) – a copula of predication, a copula of specification, a copula of identification and a copula of identity. In an earlier generative work, Huddleston (1971), following Halliday (1967a), identifies three species of be – intensive be, equative be and identificational be. In addition, Bolinger (1972) categorizes the meanings of be into equational be, locational be and non-equational be. Others like Comorovski (2007), Romero (2005) and Schlenker (2003) hint a three-beview as well – a copula of specification, a copula of equation and a copula of predication. With respect to the two-be position, there is a divergence in the assumptions of the distribution of the two types of copula across the four sentence types advanced by Higgins (1979). Heller (2005) proposes a copula of identity in specificational sentences and identity statements and a copula of predication in predicational sentences and identificational sentences. This is not the stance taken by Mikkelsen (2005), who suggests a copula of identity and a copula of predication. The former type of copula is found in identity statements<sup>6</sup>, while the latter is found in specificational sentences and predicational sentences. Other scholars holding a two-be view are Seuren (1985: 299) (predicative be and specifying be) and Safir (1985: 116) (identificational be and predicational be).

## 2.4.4 Other issues on specificational sentences

Since the seventies, the studies on specificational sentences have centered on the

<sup>&</sup>lt;sup>6</sup>Mikkelsen (2005) splits up identificational sentences and distributes them into the other two types of copular sentences – specificational sentences and identity statements.

clause structure and the semantic interpretations, such as connectedness/anti-connectedness and the nature of specificational sentences.

Connectedness in specificational sentences (Akmajian 1979, Higgins 1979) is investigated most frequently in pseudoclefts (e.g. den Dikken et al. 2000, Heycock and Kroch 1999, Sharvit 1999). It exhibits only in specificational pseudoclefts (Akmajian 1979, Higgins 1979), referring to 'certain types of co-occurrence restrictions [that] obtain between elements in the subject clause of the pseudoclefts sentence and elements in the focus constituent' (Higgins 1979: 22). There are four approaches to connectedness. Conservatives (e.g. Heycock and Kroch 1999) posit an additional level<sup>7</sup> of syntax and take connectedness as an equation between two participants. Revisionists (e.g. Sharvit 1999) analyze all the c-command tests (syntactic tests like binding, scope, negative polarity item licensing and co-reference) and describe connectedness as an equation in function. Connectedness is examined in Question in Disguise I (e.g. den Dikken et al. 2000) and in Question in Disguise II (e.g. Schlenker 2003) as well, in both of which the relation between the two participants in a connected construction is one between a question and answer. The method is supplementing the ellipsed element in the post-copular constituent. For example, in examining the connectedness in what he did was bought the newly *published book*, one can supplement the Subject in the post-copular constituent as in what he did was he bought the newly published book, and in this way taking the pre-copular constituent as a question and the post-copular constituent as an answer.

<sup>&</sup>lt;sup>7</sup> In linguistics, 'level' has a variety of interpretations. 'Level' in SFL can be replaced with 'stratum' when it refers to the different orders of abstraction that constitute the semiotic system of language. But in respect of c-command, 'level' is used in the interpretation of tree structures. The difference is illustrated by the following figures. The left shows 'level' in SFL and the right presents 'level' in c-command.



But in Heycock and Kroch (1999), the 'level' of syntax is a syntactic representation where LF (see Footnote 8) is posited.

#### (1) – What did he do?

- *He bought the newly published book.* 

Both Question in Disguise I and Question in Disguise II are faced with the problem of explaining why question – answer does not take the normal form. Whereas the latter suggests an identity meaning of *be*, the former argues that *be* in such a construction conveys neither identity nor predication but functions as an inflectional element called 'topic phrase' (den Dikken et al. 2000). Consequently, the former needs to explain why *be* is used in addition to explaining why question – answer do not take their normal form. Since the nineties, the opposite pattern of connectedness, anti-connectedness, comes into focus (Cecchetto 2000, 2001, den Dikken et al. 2000, Lahousse 2009, Schlenker 2003, Sharvit 1999), which constitutes 'a problem for any syntactic analysis of specificational sentences and phenomena such as scope, binding and anaphor interpretation.' (Lahousse 2009: 147). This is usually seen in Italian and French, for instance:

(2)?? Ce qui lui a coûté cher,

That what to-him has cost expensive, c'est la Toyota de Jean. it is the Toyota of Jean. (Schlenker 2003: 204)

Another issue that is still in debate is the nature of specificational sentences. In the sixties and seventies, sentences like *the one who won the competition is Tom* are identified as specificational (e.g. Akmajian 1979, Higgins 1979). Since the eighties, divergences have emerged. Following Williams (1983), who suggests that such sentences result from an inversion around the copula, several scholars (e.g. Adger and Ramchand 2003, den Dikken 1995, Heggie 1988, Heycock 1994, Moro 1997, Partee 1986, Zamparelli 2000) regard specificational sentences as inverted predicational structures. Holding a different view, Heycock and Kroch (1999, 2002) and Rothstein (2001) argue that specificational sentences are not inverted predicational sentences but equatives. This is relevant to the taxonomy of copular sentences reviewed in §2.4.1. In SFL, in contrast with attributive clauses, identifying clauses are neither inverted attributive clauses nor equatives. They constitute one of the two modes of relational clauses. In spite of sticking to a basic bi-division of relational clauses in mode, systemic functional linguists (e.g. Halliday 1994, Halliday and Matthiessen 2004) also present a few borderline cases lying in between the identifying mode and the attributive mode, which share some of the characteristics of each of the two modes, such as *he is the richest*.

# 2.5 Studies on copular sentences in different fields

Copular sentences interest linguists from different backgrounds, such as those from traditional grammar, formal linguistics, cognitive linguistics, semantics (differing from the semantics as a linguistic stratum in SFL) and neurolinguistics.

Although done in different fields, some works, such as Chafe (1970), Cruse (1986), Curme (1931), Huddleston and Pullum (2002), Lyons (1968, 1977), Pustet (2003), Quirk et al.(1972, 1985), Rothstein (2001) and Wierzbicka (1988), may influence the way one thinks about identifying clauses. Take Davidse (1991) for example, she benefits a lot by borrowing ideas from Declerck (1988), Higgins (1979) and Langacker (1987, 1990, 1991).

The studies on specificational sentences in the literature pay attention to pseudoclefts. For instance, Heycock and Kroch (1999) investigate the implications of connectedness in pseudoclefts for the  $LF^8$  interface level and conclude that specificational sentences are identity statements rather than inversed predications. Lahousse (2009) presents the differences between connectedness and anti-connectedness of pseudoclefts in terms of semantics and information structure.

<sup>&</sup>lt;sup>8</sup> LF is the abbreviation of Logical Form. It is the mental representation of a linguistic expression and captures 'those aspects of semantic representation that are strictly determined by grammar, abstracted from other cognitive systems' (Chomsky 1977a: 5). Therefore, it is posited in syntax in the explanation of the semantic meaning of a linguistic expression.

Schlenker (2003) discusses connectedness of pseudoclefts in the framework of Question in Disguise Theory. Paul (2001) looks into the pseudoclefts in Malagasy. Zaring (1996) examines the syntactic and semantic ambiguities in the pseudoclefts in Modern Welsh. Apart from pseudoclefts, clefts are also studied extensively. Drenhaus et al. (2011) present the differences between exhaustiveness in clefts and exhaustiveness in only-foci sentences and discover that the violation of exhaustiveness involves different underlying processes in these two constructions by reference to online experimental paradigm (event-related potentials, cf. Drenhaus et al. 2001: 324) from the perspective of neurolinguistics. Reeve (2011) indicates the syntax/semantics mismatch in cleft constructions. The syntax/semantics mismatch is described by Reeve as 'the relative clause appearing at the end of the matrix clause semantically modifies the initial pronoun *it*, but syntactically modifies (...) the clefted XP' (2011: 142). Weinert and Miller (1996) explore the focusing function of clefts by means of thematization and deixis. Other aspects also receiving researchers' concern in the past decades are the information structure and tense in copular sentences. Birner (1995) makes a detailed analysis of the pragmatic constrains on the verbs that are in inversion, and be-inversion is of great importance. Sharvit (2003) offers a solution to the puzzle of Tense Harmony in specificational sentences.

## 2.6 Verbless clauses

The preceding sections review the relevant issues of copular sentences whose Subject and Complement are linked by the copular verb, like *be* in English, *ser* in Spanish and *byt* (past) in Russian. Such copular clauses are verbal copular constructions. However, this is not the only way to realize copular constructions. By illustrating a wide range of languages across the world, Curnow (2000) concludes that a copular clause can be realized in the following constructions:

① particle copular constructions – using a particle copula, such as *po* in Awtuw;

- inflectional copular constructions using an inflectional copula, in which case the complement is treated as a verb, such as Russian short-form adjectives;
- ③ zero copular constructions using a zero copula, in which case no overt morphological material appears, such as *byt* (present) in Russian;
- pronominal copular constructions using a pronominal copula, like hu in Hebrew.

Curnow (2000: 1-2) explains the functions of what he calls 'copular clauses' as (a) encoding the meaning of the identity of the two participants that are usually realized by noun phrases and (b) encoding the meaning of group membership or classification that are typically realized by noun phrases. This is similar to Halliday's distinction between identifying clauses and attributive clauses. Compared with Curnow, Dixon (2002: 5-6) demonstrates a much more comprehensive list of the meanings conveyed by copular sentences, including relation of identity, attribution, location, possession, wanting/benefaction and existence.

Apart from these two representatives, McGregor (1990:292-317, 1992, 1996), a follower of Halliday's classification of relational clauses, examines the copular sentences in the Gooniyandi language of the Kimberley region of northwest Australia. Nordlinger and Sadler (2006) show that in the process of coding the relation between two participants, the choice made from the five strategies (verbal copular constructions, particle copular constructions, inflectional copular constructions, zero copular constructions and pronominal copular constructions) depends on the factors such as tense, aspect, polarity, status of the clause (main or subordinate), the person of the subject and the semantic relationship expressed (identification or classification). Their findings are based on the examination of Rembarrnga, a polysynthetic language of Arnhem Land in Australia.

The study on verbless clauses in generative grammar has a long history and is carried out in the name of 'small clauses' (Chomsky 1981, Stowell 1981, 1983).

# 2.7 Identifying clauses in SFL

In SFL, the linguists who undertake systematic studies of identifying clauses are Halliday (1967a, 1967b, 1968, 1985, 1994), Davidse (1991, 1992, 1996a, 1996b, 2000, 2009, 2010) and Matthiessen (1985, 1988, 1990, 1995a). Others either examine identifying clauses only generally in the introduction to the six types of clauses, such as Eggins (2004) and Thompson (2004), or investigate it occasionally, such as Fawcett (1987), Martin (1992) and Toolan (1992). It has been pointed out in General Statement that except for Painter (1993, 1999), who discloses the roles of relational clauses (including identifying ones) in children's language development, other systemic functional linguists focus on expanding or revising the system of identifying clauses.

Most scholars follow Halliday's classification of relational clauses, i.e. attributive clauses<sup>9</sup> and identifying clauses (the first degree of delicacy presented in Figure 2.1 in §2.4.1 above). Those who propose different classifications of relational clauses are Davidse (2010) and Fawcett (1987), as summarized in the table below.

binary division attributive		Davidse (1991, 1992, 1996a, 1996b)			
		Eggins (2004)			
		Halliday (1967a, 1967b, 1968, 1985, 1994)			
		Martin (1992)			
	identifving	Matthiessen (1990, 1995a)			
		Thompson (2004)			
ternary division	attributive	Fawcett (1987)			
	locational				
	possessive				
quintuple	descriptional-	Davidse (2010)			
division	predicative				
	specificational-				
	predicative				
	specificational				

Table 2.4 Different classifications of relational clauses in SFL

<sup>&</sup>lt;sup>9</sup> Attributive' is one of the two modes of relational clauses in contrast with 'identifying'. It also has other names, such as 'predicational' (Declerck 1988, Higgins 1979), 'property-assigning' (Dik 1980), 'qualifying' (Mathesius 1975), 'characterizational' (Kuno and Wongkhomthong 1981, Quirk et al. 1985) and 'ascriptive' (Kahn 1973).

'an example
of' type
specificational-
identifying
descriptional-
identifying

It can be seen that all the contrasts and comparisons are made around Halliday's studies of relational clauses. Therefore, in this section, the Hallidayan model will be reviewed first (§2.7.1), followed by the studies of the followers (§2.7.2) and those of the challengers (§2.7.3).

#### 2.7.1 The canonical model of identifying clauses

The canonical model of identifying clauses is attributed to the classical works of Halliday *Notes on transitivity and theme in English* (1967a, 1967b, 1968) (hereafter NTT). In NTT, Halliday divides the copular verb *be* into class 0 (*be*<sub>0</sub>), class 1 (*be*<sub>1</sub>) and class 2 (*be*<sub>2</sub>), the first conveying the meaning 'has the attribute of being', the second 'exists, happens, is found or located', and the last 'identifies, or is identifiable as, can be equated with' (1967a: 66). These three meanings of *be* hints at the classification of attributive processes, existential processes and identifying processes. The classification of *be* into class 0, class 1 and class 2 implies that Halliday holds a three-*be*view – a copula of attribution, a copula of existence and a copula of identification.

 $Be_0$  is described as intensive and  $be_2$  as extensive (Halliday 1967a: 67). The distinction between the intensive type and the extensive type of *be* is the precursor of the distinction between the attributive mode and the identifying mode of relational clauses. Identifying clauses in NTT are called equative clauses (Halliday 1967a: 67), their characteristics are demonstrated in the following quotation.

Extensive effective be clauses, which we may call 'equative', answer questions

of **identification**, normally with *which* or *who* ... Here the complement, being extensive... The equative relation is...reversible; clause of this type in fact display the operative/receptive opposition characteristic of effective clauses, and  $be_2$  is thus in effect a 'transitive' verb, although it does not show a morphological opposition of active and passive. (Halliday 1967a: 67, my emphasis)...and it (the equative clause) is presented more fully ... in terms of features realized in two independent oppositions, of '**known/unknown**' and '**value/variable**'. (Halliday 1967a: 69, my emphasis)

From the statement above, one can see that as early as in 1967, Halliday had already indicated the function of identifying clauses (identification), the probe questions for such clauses (which/who), the predominant feature (reversible) and the structural functions of the participants (known/unknown and value/variable).

It is interesting to note that the terms used in NTT for identifying clauses have largely changed in Halliday's later works. Explaining these changes helps us get a better understanding of identifying clauses. The first change is the replacement of 'equative' with 'identifying'. 'Identifying' does occur in NTT, but it refers to a different construction, 'thematic equative' as is named in IFG. This change may result from two aspects. 'Equative' is only one of the several experiential uses that identifying clauses have (for a detailed analysis of the uses of identifying clauses, see Chapter Seven). In addition, from a semiotic perspective, the term 'equative' is less appropriate than 'identifying'. Several systemic functional linguists (Davidse 1992, Halliday 1978, 1994, Halliday and Matthiessen 1999, Matthiessen 1990, 1995a) have emphasized the semiotic nature of identifying clauses. Hence what is in need is a term that can explicate this aspect, but 'equative' is not the best choice. 'Equate' occurs frequently in the domain of logic like mathematics and computer program and involves a meaning of logical identity that departs from the identity discussed in SFL. By the same token, 'variable' is replaced with 'Token' since 'variable' is a term used in standardized logic and inconsistent with the semiotic nature of identifying clauses.

The third change, the substitution of 'Identified/Identifier' for 'known/unknown' is interpreted in terms of the relation between the experiential metafunction and the textual metafunction. 'Known' and 'unknown' are in the information system in the textual domain: A piece of information is presented as either known or unknown to the hearer. While there is a close relationship between the entity that is identified and the known part of a piece of information and between the entity that is used to identify the entity being identified and the unknown part of a piece of information, these two are not always conflated with each other unmarkedly. In some cases, one may find the unknown-Identified and known-Identifier mappings as well. After all, the experiential functions and the textual functions are not freely interchangeable even though they are closely related.

The description of identifying clauses is simplified but systemized in the first three editions of IFG (1985, 1994, 2004). The change from the eight-cell paradigm to a four-cell paradigm makes the model of identifying clauses incomplete but much easier to understand. Take *Tom is the leader* for instance. In NTT, the clause has eight interpretations. In one context, it demonstrates the relation between the player and the role; the question is either 'who plays the leader' or 'what /which role is played by Tom'. In a different situation, the clause shows the relation between the one born to play the role and the role customized for Tom; the question is either 'what /which role is Tom born to play' or 'for whom is the leader customized'. Since the identifying clause is reversible, it has eight interpretations. In IFG (1985, 1994, 2004), the clause is examined only in the first context, and hence has only four interpretations. In the fourth edition of IFG (2014), the accounts for identifying clauses are more complete, with a detailed description of the nature of relational clauses and an inclusion of the intermediate cases between identifying clauses and other clause types.

To sum up, Halliday's studies of identifying clauses serve as the cornerstone of further investigations. They equip us with the basic ideas of identifying clauses, such as the typical features and the three types, and most importantly, they inform us of the semiotic nature of such clauses. However, improvements are needed because most of the studies are undertaken at the expense of a detailed analysis of lexis, which should be the integrated component of lexicogrammar. Furthermore, although IFG points out explicitly that 'the distinction between the "attributive" and the "identifying" ... [is seen] as something rather more continuous – as a continuum within the overall continuum of process type' (Halliday and Matthiessen 2004: 236), the intermediate cases are not supported by sufficient examples and are far from complete. The intermediate cases exist not only between the two modes of relational clauses and among the three types of relational clauses, but also between identifying clauses and other major clause types like material clauses and mental clauses and between identifying clauses and some borderline clause types such as verbal clauses.

#### 2.7.2 Inheritance and development of the Hallidayan model

The followers of the Hallidayan model of identifying clauses are Davidse (1991, 1992, 1996a, 1996b, 2000, 2009), Matthiessen (1990, 1995a), Eggins (2004), Martin (1992) and Thompson (2004). Here the focus falls on the first two linguists; the rest are introduced only briefly because they discuss identifying clauses at a fairly general level. Eggins (2004: 239-49) and Thompson (2004: 96-100; 118-24) make a general introduction to identifying clauses for the outsiders. Martin (1992: 280-5) analyzes identifying clauses very briefly from a semiotic perspective.

2.7.2.1 Kristin Davidse: Successive and comprehensive studies on identifying clauses

A comparatively faithful inheritor of the Hallidayan model of identifying clauses is Davidse. To the best of my knowledge, her successive works (1991, 1992, 1996a, 1996b, 2000, 2009) are the most comprehensive and representative compared with the investigations made by other systemic functional linguists.

In the doctoral thesis (1991), Davidse examines identifying clauses in two dimensions – the identifying dimension and the coding dimension. She distinguishes

the 'relational: identifying: encoding' type from the 'relational: identifying: decoding' type by seeing 'from around'. The configuration of the former type realizes the effective constellation of an 'Agent · process · Affected<sup>10</sup>, structure at the most 'schematic' level (Davidse 1991: 409-417). Such clauses can be coded as passive, as in [Id/VI:] *his greatest achievement is (is represented by)* [Ir/Tk:] *his four-act poetic drama*. The latter type realizes the pseudo-effective structure, which is composed of a real participant, the Medium, and a pseudo-participant (ibid.). Such clauses cannot readily be coded as passive because of the lack of the real interaction between the participants. For instance, [Id/Tk:] *his greatest achievement is (represents)* [Ir/VI:] *the literary masterpiece in the world*.

Inspired by Langacker, Davidse contrasts temporal construal of relations with atemporal ones, showing that 'the verbs used as relational processes depict a constant configuration' (1991: 182). In agreement with Halliday, she takes the simple present as the unmarked tense for relational clauses. Apart from inspecting the tense, she also examines the aspectual aspect and claims that unmarked relational clauses are typically imperfective with an entailment of non-bounded.

In order to explain 'realization' in NTT, Davidse discusses it in detail by resorting to the strata of language. Such a semiotic research is further carried out in her following two works: One is *A semiotic approach to relational clauses* (Davidse 1992) and the other is *Turning grammar on itself: identifying clauses in linguistic discourse* (Davidse 1996a).

In 1992, identifying clauses are explained as 'identifying realization correlations' embodying a 'symbolic coding relation' (Davidse 1992). Such a realization correlation is realized between two different orders of symbolic abstraction and involves the identifying dimension and the coding dimension. These two dimensions together interpret the various codes in human experience. Codes can be coded in two directions – decoding and encoding, which derive from the mapping of the two sets of structural functions of Identified – Identifier and Token – Value. The two coding

<sup>&</sup>lt;sup>10</sup> 'Affected' was the earlier term used by Halliday (1967a, 1967b, 1968) for what we now call Medium.

directions are discussed on the strata of lexicogrammar and semantics. On the lexicogrammatical stratum, the study is based on the eight-cell paradigm proposed by Halliday in NTT. On the semantic stratum, it is carried out in a field-specified way, with the data selected from the fields of linguistics, medicine and economics.

Davidse (1996a) also examines identifying clauses from a semiotic perspective but restricts the data to the field of linguistics. In this article, the dialectic relationship between grammatics (see more in Halliday 1992) and grammar is foregrounded. Similar to Davidse (1992), the research is carried out on the strata of lexicogrammar and semantics. On the semantic stratum, she (1996a) distills four symbolic interpretive modes by analyzing the eight-cell paradigm of identifying clauses on the lexicogrammatical stratum. As a consequence of the different distributions of the structural functions in the identifying and coding dimensions, the eight-cell paradigm consists of two subparadigms. Subparadigm I on the lexicogrammatical stratum realizes the 'expression' subparadigm on the semantic stratum, which is composed of two modes - the diagnostic mode of 'expression: decoding' and the symptomatic mode of 'expression: encoding'. Subparadigm II on the lexicogrammatical stratum realizes the 'motivation' subparadigm on the semantic stratum, which is made up of two modes as well – the reactive mode of 'motivation: decoding' and the catalytic mode of 'motivation: encoding'. Here, I present Tom is the leaderas an illustration to make the two subparadigms more accessible. On the one hand, Tom as the Identified and Token and *the leader* as the Identifier and Value on the lexicogrammatical stratum realize the diagnostic mode of 'expression · decoding' on the semantic stratum. The meaning conveyed by this decoding process is 'playing the role of the leader (Value) is the diagnosis for Tom'. On the other hand, if Tom functions as the Identifier and Token and *the leader* is the Identified and Value on the lexicogrammatical stratum, the clause is an encoding process that realizes the symptomatic mode of 'expression  $\cdot$  encoding' on the semantic stratum. The meaning is 'Tom (Token) is the form taken by the leader', or, 'the symptom of the leader is Tom'.

The three works mentioned above concerns the intensive type of identifying

clauses. The possessive type of identifying clauses are examined in depth in two works: Ditransitivity and possession (Davidse 1996b) and Semiotic and possessive models in relational clauses (Davidse 2000). Davidse (1996b, 2000) analyzes both the simple and causative possessive clauses from two complementary perspectives – the transitive perspective and the ergative perspective. In 1996b, she considers that Possessor – Possessed proposed by Halliday (1994) is too general to 'bring out the different experiential values coded by the distinct mappings of roles from two experiential dimensions' (1996b: 108). To solve the problem, she proposes two submodes of possessive clauses - ownership and belonging-to. With respect to the other set, Token - Value, Davidse (1996b: 111) replaces it with Implicants -Implicatum considering that Token - Value is biased toward the representing dimension and specific to the intensive type of identifying clauses. However, this may cause a problem: Since the use of Token – Value is now restricted to the intensive type and a new set of structural functions of Implicants - Implicatum has been proposed for the possessive type, how to deal with the circumstantial type? Is it necessary to invent a new set of structural functions specific to the circumstantial type?

A short summary for Davidse's research is as follows. Davidse dedicates herself to the exploration of identifying clauses, and her relevant studies are rather fruitful and enlightening. But still, they are not perfect and improvements are needed.

① Davidse seems to equate semiotic realization with stratification and generalizes the relation between the two participants in all identifying clauses as one between the participants that are on different strata in language. In this respect, she had overlooked another two types of semiotic realizations in identifying clauses (the extra-stratal realization relationship between language and other semiotic systems and the intra-stratal realization relationship on the same stratum). In addition, the relation coded in an identifying clause is not restricted to a realization relationship; in some instances, it can be a taxonomic relation typically construed by an identifying clause of constitution (see more in §3.2).

- ② While the intensive and possessive identifying clauses are examined in detail, little attention is paid to the circumstantial type.
- ③ Davidse had made an insightful research of identifying clauses on the strata of semantics and lexicogrammar. However, the study on the lexicogrammatical stratum focuses on the grammar pole, while the lexis pole is left unmentioned.
- ④ Davidse had touched upon the non-structural textual aspects (reference and ellipsis) of identifying clauses, but there is no examination of the structural textual aspects (the thematic structure and the information structure).
- (5) The final point is relevant to Davidse's criticism of the four-cell paradigm of identifying clauses (1996b: 98) in IFG (Halliday 1994). Although the emphasis of the differences between the eight-cell paradigm and the four-cell paradigm is of great importance, the four-cell paradigm in IFG is not a true four-cell paradigm but one simplifying the eight-cell paradigm in consideration of the target readership and the purpose of IFG. IFG is an introduction to SFL, and it assumes that a large number of readers may be unfamiliar with SFL. Therefore, it is reasonable to simplify the process of identifying that is rather abstract and hard to understand.

#### 2.7.2.2 Christian Matthiessen: System and lexis

Matthiessen is another representative among the followers of the canonical model. He (1995a) advocates a semiotic analysis of relational clauses. The semiotic idea runs through his other works (Matthiessen 1990, Halliday and Matthiessen 1999). There are two contributions that make his research unique. One is that Matthiessen (1995a) provides and systemizes what Davidse and Halliday ignored – lexis (e.g. the verbs realizing the process of identifying clauses). However, he makes only a partial description of the lexis (see Matthiessen 1995a: 322-4 Table 4-39 and Table 4-40); the rest are left unjustified or untested. The other is that he (ibid.) distinguishes non-assigned identifying clauses like *Tom is the leader* from assigned ones like *they* 

*elected Tom the leader*. In the latter type, a further distinction is made between expanding assignments and projecting assignments, instantiated by *they elected Tom the leader* and *they considered him the greatest linguist in the 20<sup>th</sup> century* respectively. Furthermore, Matthiessen (ibid.) points out that in expanding assignments only elaboration and enhancement can be found, and in projecting assignments the projection may be either mental or verbal. In this way, the research of identifying processes is extended to the clause complex level. The findings of Matthiessen are shown in Figure 2.2.



Figure 2.2 A system of intensive identifying clauses (adapted from Matthiessen 1995a: 313-318)

Halliday and Matthiessen (1999) take 'semiotic' as one of the central ideas in SFL and demonstrate the way human experience is construed in the ideation base from a semiotic perspective. One of the general motifs in grammar's construing of human experience is 'meaning as expansion' (the other one is projection), explained as 'the way regions of semantic space are opened up and defined by the three vectors of elaboration, extension and enhancement' (Halliday and Matthiessen 1999: 222). One domain of the semantic space opened up by expansion is in relational processes where the three types of relational processes (intensive, possessive and circumstantial) are related to the three types of expansion (elaboration, extension and enhancement), which enables us to explore identifying processes both beyond and below the clause level. Although the central focus is not on identifying clauses, Halliday and Matthiessen (1999) inspire us not only with the ideas of the taxonomy of identifying clauses but also with the ways of undertake a research systematically. In addition, ideas such as indeterminacy in language and the fractal perspective in analysis permeate the whole system of language and benefit my study on identifying clauses.

## 2.7.3 Different voices in SFL from other linguists

Davidse in the preceding section is introduced as one of the followers of the Hallidayan model, but this is only true of her earlier work (1991, 1992, 1996a, 1996b, 2000, 2009). In a later work, she (2010) changed her view on the classification of relational clauses: specificational-identifying, descriptional-identifying, specificational-predictive, descriptional-predictive and specificational 'an example of'. The specificational 'an example of' clauses lie between the identifying clauses and the predicative clauses. They form a cline from the most identifying to the least, as indicated by the figure below.



Figure 2.3 A cline of the intensity of identifying of the five types of relational clauses proposed by Davidse (2010)

Davidse (ibid.) demonstrates two puzzles. One is the instantial attributive clauses that have the potential of being interpreted as identifying, such as *the cat is a thief*, and the

other is the identifying clauses with an indefinite NG that may convey an instantial meaning, such as *typhoid is an example of notifiable disease*. She defends her stance by correlating meaning with form in the four respects of intonation, word order, reversibility and systematic alternates, among which reversibility is viewed as the primary recognition criterion.

The quintuple classification of relational clauses (Davidse 2010) is dealt with in an approach that deviates from her earlier work (see §2.7.2.1). The formal consideration carries weight in the analysis of identifying clauses. But what she takes as one of the most important recognition criteria – the reversibility of an identifying clause – is only a general tendency rather than a criterion. In natural language, there are quite a few examples irreversible but still convey the meaning of identifying, like the clauses whose process is realized by phrasal verbs such as *act as, stand for* and *serve as*.

Another systemic functional grammarian who holds a different view on relational clauses is Fawcett (1987). One of the most important differences between Fawcett's idea of relational clauses and Halliday's is Fawcett's invalidation of the primary distinction between the identifying mode and the attributive mode. Since there is no distinction between attributive clauses and identifying clauses at all, no description is available for the structural functions of the participants in each mode. The reason given by Fawcett is that 'they are not needed in a fully generative grammar, because they appear to relate systematically to choices in other components of the grammar: "Identified" and "Identifier" to THEME and "Token" and "Value" to INFORMATION FOCUS (1987: 177)'. However, this is hardly acceptable because the textual functions are not freely interchangeable with the experiential functions and one cannot simply equate the structural functions in the experiential domain with the information functions in the textual domain (Davidse 1996a, reviewed in §2.7.2.1). A further difference is the incorporation of the clauses that are classified as construing material processes in IFG, such as the clauses whose process is realized by give and acquire, into the possessive type of relational clauses, and the clauses whose process

is realized by the verbs such as *go* and *send*, which are taken as material clauses in IFG, into the locational type of relational clauses. Accordingly, Fawcett divides relational clauses into three types – attributive, locational and possessive.

# 2.8 Summary

In this chapter, the relevant studies on identifying clauses in the literature have been reviewed, including the canonical model of identifying clauses, the inheritance /development of and the challenging to the canonical model. Since identifying clauses have a close relationship with copular sentences, some of the most relevant studies on copular sentences are reviewed as well, but with the focus on the longstanding controversial issues, such as the taxonomy of copular sentences, the meanings of *be*, etc. The classifications of relational clauses in SFL and those of copular sentences in non-SFL studies are different, as indicated in §2.4.1. For example, identity statements and definitions are the types of identifying clauses in SFL, but they are the types of copular sentences in non-SFL. This is shown as follows.



Second, as mentioned in §2.5, studies outside SFL pay attention to pseudoclefts and clefts, including the grammatical characteristics and semantic implications. They are helpful in our understanding of the identifying processes in thematic equatives and predicative Themes.

Having known what has been done in the literature, I am now in a better position

to summarize what should and could be done in the thesis. What should be done means what essential ideas I should inherit from the studies on identifying clauses in the literature; what could be done means the possible gaps I could fill in the thesis.

First, two ideas are essential. One is the semiotic idea. As one can see in §1.1, the process of identifying is inherently semiotic. Hence a semiotic approach is fundamental and any discussion that loses sight of the semiotic nature cannot grasp the essence of identifying processes. The other is indeterminacy. It is necessary to always keep an eye on the indeterminate nature of language since the phenomena in the world, which are translated in language, are filled with indeterminate cases.

There are a number of problems of the past studies of identifying clauses, but the focus of the thesis falls on the following ones:

- ① The focus fell on typical identifying clauses, but non-typical ones have not been systematically examined.
- ② The analyses of the intensive type of identifying clauses outnumbered those of the possessive and circumstantial types of identifying clauses. And the analyses of the circumstantial identifying clauses were especially rare.
- ③ Few studies related semantic meanings to lexicogrammatical realizations in identifying clauses from a semiotic view.
- ④ Grammatical characteristics of identifying clauses were examined at the expense of lexical analysis.
- ③ All the studies were based on the identifying clauses having an eight-cell paradigm. Other possible paradigms and the factors influencing the interpretations were ignored.
- In the SFL framework, few scholars explored the semantic implications conveyed by identifying clauses.
- $\bigcirc$  There was no corpus study of identifying clauses.
- ③ The studies on the grammatical characteristics of identifying clauses outbalanced those on the uses of identifying clauses.

The first five issues are discussed in the fourth chapter, the sixth is dealt with in the fifth chapter, the seventh is presented in the sixth chapter, and the eighth is explored in the seventh chapter.

# **Chapter Three Theoretical Framework of the Research**

## **3.1 Introduction**

The summary of the second chapter informs us of two important points. First, taking a semiotic view and keeping an eye on the intermediate cases are essential in the examination of identifying clauses. Second, the gaps to be filled are relevant to the three metafunctions in SFL:  $\bigcirc - \bigcirc$  listed in §2.8 are related mainly to the experiential metafunction, o mainly to the interpersonal and textual metafunctions, and o mainly to the experiential and textual metafunctions. Therefore, the constituents of the framework of the thesis are semiotic (§3.2), the three metafunctions (§3.3) and indeterminacy (§3.4). Within such a framework, I probe into the grammatical characteristics, the semantic implications and the experiential and textual uses of identifying clauses.

## 3.2 Semiotic view

The representatives in semiotics are Peirce, 'one of the great figures in the history of semiotics' and 'the founder of the modern theory of signs' (Weiss and Burks 1945: 383, cited in Nöth 1995: 39), Saussure, 'the founder of modern linguistics' (Nöth 1995: 56), Hjelmslev, 'the founder of a school of radically structuralist linguistics ('an important school of semiotics' that is 'known as glossematics or the Copenhagen School of Linguistics')' (ibid: 64), Barthes, 'a leading structuralist and one of the earliest propagators of Saussure's semiological program' (ibid: 310) and makes a great contribution to text semiotics, and Eco, who 'makes significant contributions to many areas of theoretical and applied semiotics' (ibid: 325). Among them, it is Hjelmslev who influences the semiotic ideas in SFL mostly. Hjelmslev's semiotic view is the inheritance and development of the Saussurean model. Therefore, apart

from an elaboration of the semiotic view in SFL, I also introduce the Saussurean model and the Hjelmslevian model, but only briefly.

The semiotic idea in SFL is partly manifested in realization, which is defined by Matthiessen and Halliday (2009: 85) as a relation that orders whole subsystems of language relative to one another in symbolic abstraction, realized either inter-stratally or intra-stratally.

In SFL, language is a semiotic system composed of at least three strata, the stratum of semantics (the stratum of meaning), the stratum of lexicogrammar (the stratum of wording) and the stratum of phonology/graphology (the stratum of sound/writing). The semantic stratum bridges the gap between language and other semiotic systems via the sensorimotor systems within the biological order of systems (i.e. the bio-semiotic systems introduced in Halliday and Matthiessen 1999, see more in §3.2.2.1 below). The lexicogrammatical stratum is an abstract stratum of form lying in between the stratum of meaning and the stratum of sound/writing, and it is because of the insertion of this stratum that the relation between semantics and lexicogrammar is coded as natural rather than arbitrary. Put it in a simple way, the systems in language - the system of meaning, the system of wording and the system of sound/writing – are related in a stratified way, the first locating on the highest stratum, the last on the lowest stratum and the second between the two strata. The three strata are related by two realization cycles. Choices made on the stratum of meaning are realized in choices made on the stratum of wording, which are in turn realized in choices made on the stratum of sound/writing.

It is acknowledged (Davidse 1992, 1996a, Halliday 1994) that an identifying clause construes a relation between the two participants that are on different orders of semiotic abstraction. This means that the two participants in question are either on different strata, constituting an inter-stratal relationship, or on different ranks or axes on one stratum, forming an intra-stratal relationship. It is in these three respects that the inter/intra-stratal process of identifying involves. More abstract than the lexicogrammatical stratum is the semantic stratum that bridges the gap between

language and the extralinguistic world. Central to the process of bridging is, again, realization, and in this way the realization relationship extends beyond language and enables the semantic system to realize choices from extralinguistic semiotic systems in language. Some of the extralinguistic semiotics may be foregrounded in the lexicogrammatical system. In this way, the extra-stratal process of identifying comes into focus.

# 3.2.1 Saussurean model and Hjelmslevian model and the influences on SFL's semiotic view

In order to demonstrate a rather complete picture of the semiotic ideas in SFL, I will begin the discussion with the Saussurean model and the Hjelmslevian model. Hjelmslev, inheriting and developing Saussure's ideas of sign, greatly influences the semiotic view in SFL.

Saussure, Hjelmslev and Halliday represent the traditional structuralists, structuralists and systemic functional semioticists respectively.

#### 3.2.1.1 Saussure: A dyadic model

Saussure presents sign as a dyadic model composed of a signified and a signifier. He emphasizes that a linguistic sign is not 'a link between a thing and a name, but between a concept [signified] and a sound pattern [signifier]' (1916/1983: 66). In his view, the relation between the signified and the signifier is arbitrary, and there is no natural relationship between the sound/shape of a word and the concept it conveys. It makes sense in a small range. But as Hodge and Kress comment, this is 'a very influential and damaging overstatement' (1988: 21) because it may lead to an illusion that many phenomena in language are hard to explain due to the conventional relation between the signifier. The reasons why Saussure came to such a conclusion are two. First, Saussure focuses on individual words or phrases rather than

clauses or texts. Second, the arbitrary relation between the sound/shape of a word and the meaning it conveys can be explained in SFL in terms of the relation between sound/writing on the phonological/graphological stratum and meaning on the semantic stratum in post-infancy adult language. This is also the reason why Matthiessen (2006b) thinks that Saussure's theory of sign can work for protolanguage but not for language. For example, the word construing the experience of a mass of water vapor floating in the sky is pronounced /klaud/ in English and /yun/ in Chinese, and is written in the form of *cloud* in English and  $\vec{z}$  in Chinese. In SFL, the focus falls on clauses as well as texts. Systemic functional linguists advocate that the semantic configuration that construes human experience bears a natural relationship to the wording that realizes the meaning. For instance, the experience of doing and happening is construed in a material configuration of 'Actor + process + Goal', the experience of thinking is construed in a mental configuration of 'Senser + process + Phenomenon', the experience of being and having is construed in a relational configuration of 'Identified/Carrier + process + Identifier/Attribute', etc. This natural relation is traced back to Hjelmslev's stratification idea.

3.2.1.2 Hjelmslev: Stratification in terms of the interaction between content – expression and form – substance – purport

Hjelmslev, whose research has a profound influence on the semiotic view in SFL, enriches the meaning of the Saussurean model. He sees language as 'a semiotic into which all other semiotics may be translated – both all other languages, and all other conceivable semiotic structures' (Hjelmslev 1943/1963: 109, cited in Nöth 1995: 66).

Hjelmslev (1943/1963) proposes a model of language, which is composed of the four semiotic dimensions of content (plane) – expression (plane), form – substance – purport, system – process and paradigm – syntagm. Stratification in Hjelmslev's semiotic model is realized in the interaction between the first two dimensions, with the latter cutting across the former.

The distinction between the content plane and the expression plane is found at the primary level and the abstract level. At the primary level, the distinction between the content plane and the expression plane in Hjelmslev's model is parallel to that between the signified and the signifier in Saussure's model. It is at the abstract level that Hjelmslev's content - expression distinction is differentiated from Saussure's signified – signifier distinction. At the abstract level, the content plane is divided into two strata, namely, substance of content and form of content, and the expression plane is likewise divided into the two strata of substance of expression and form of expression. Two further strata are purport of content and purport of expression. However, since purport is considered as easily causing 'terminological difficulties' (Metz 1971: 2, cited in Nöth 1995: 66) and the distinction between substance and purport is inconsistent (Fischer-Jørgensen 1966:7, cited in Nöth 1995: 66), I am not going to probe into these two strata but just indicate their occurrence in 'the presemiotic sphere of the semiotically unstructured world' (Nöth 1995: 66). The stratification idea influences the semiotic view in SFL, although the stratification in the Hjelmslevian model differs from the stratification in SFL (to which I will return in §3.2.2.3). Because of the stratification at the abstract level, semiotic is analyzed into connotative semiotic, metasemiotic and denotative semiotic. A connotative semiotic is a semiotic whose expression plane is also a semiotic, a metasemiotic is a semiotic whose content plane is also a semiotic, and a denotative semiotic is a semiotic within which no plane is a semiotic. On the basis of the interpretation of the three types of semiotics and the division between the content plane and the expression plane, I present the differences among them in the figure below.



Figure 3.1 Connotative semiotic, metasemiotic and denotative semiotic

From the figure we can see that if a semiotic isconnotative (the top left), its expression plane, i.e. expression plane 1, is also a semiotic consisting of content plane 2 and expression plane 2. If a semiotic is a metasemiotic (the top right), its content plane, i.e. content plane 1, is also a semiotic, which is made up of content plane 2 and expression plane 2. And if a semiotic is denotative (the bottom), neither the content plane nor the expression plane is a semiotic. According to the explanation of the three types of semiotic, we can identify the role of language in the connotative semiotic system and the metasemiotic system. If language is used to explain the meaning of an extralinguistic semiotic, it is the expression plane consisting of its own content plane and expression plane. In this case, the extralinguistic semiotic is a connotative semiotic. If language is the content, or the object, that is examined, it is a metasemiotic whose content plane is composed of its own content plane and expression plane. This is typical in the study of language (linguistics) and the study of grammar (grammatics).

Before a close scrutiny of the semiotic idea in SFL, I summarize the views held by Saussure, Hjelmslev and Halliday in the following table.

Table 3.1 A comparison of the semiotic views held by Saussure, Hjelmslev and Halliday

school	Traditional	Structuralist	Systemic Functional
	Structuralist		

representative	Saussure	Hjelmslev		Halliday	
			purport	of	
			content		
		abstract level	substance	of	semantics
			content		(meaning)
semiotic ideas			form	of	lexicogrammar
			content		(wording)
			form	of	phonology/graphology
			expression		(sound/writing)
			substance	of	phonetics
			expression		
			purport	of	
			expression		
	signifier	primary	expression		expression
	signified	level	content		content

#### 3.2.2 The semiotic view in SFL

Semiotic is an essential component in what has been done by Firth (1968), neo-Firthians and systemicists, and it is in Halliday's (1978, 2003) works that the systemic functional semiotic view is fully developed. Following Firth, Halliday (1978) expounds the semiotic idea in SFL by reference to the two fundamental concepts of system and structure. In SFL, language is a semiotic that primarily realizes systemic, or paradigmatic, choices on different strata, and these choices are then realized in syntagmatic structures.

Different semiotic systems in social life can be expressed via linguistic structures since language 'serve(s) as an encoding system for many (though not all) of the others' (Halliday 1978: 2) and functions as the expression of most of the other semiotic systems in social life. In addition, as a semiotic system, language has its own expression system. Because of the capacity of being an expression system, language can 'translate' other semiotic systems; and because of having its own expression system, what is translated in language can be expressed in sound or writing.

3.2.2.1 A general introduction to the semiotic view in SFL

Systemic functional semiotics involves realization and instantiation. Since a large number of identifying clauses construe a realization relationship between two participants (a minority of them construe a taxonomic relationship), the introduction to the semiotic view in SFL focuses on realization, and instantiation is mentioned only in passing.

In SFL, Hjelmslev's 'plane' is replaced with 'stratum'. Although SFL still makes the important distinction between the content strata (semantics and lexicogrammar) and the expression strata (phonology and phonetics), it is not glossematic but realizational in terms of metaredundancy (to which I will return in §3.2.2.2).

In the system of language, there is an abstract stratum of form lying between the stratum of content and the stratum of expression. In SFL's term, the stratum of content is the stratum of semantics, the stratum of expression is the stratum of phonology/graphology, and the stratum of form is the stratum of lexicogrammar. Choices on the lexicogrammatical stratum realize choices on the semantic stratum, as illustrated by the examplesin §3.2.1.1 above. Semantics as a linguistic stratum consists of three strands of meaning, or, three metafunctions – ideational metafunction, interpersonal metafunction and textual metafunction. Choices made from the three strands of meaning on the semantic stratum are realized in choices made from the transitivity system, the mood and modality systems, and the theme and information systems on the lexicogrammatical stratum.

System is essential in systemic functional semiotics. According to Halliday and Matthiessen (1999), there are four ordered types of systems. The first order systems are the physical systems. The second order systems, the biological systems, are the physical systems with the added property of 'life', i.e. physical systems [+life]. The third order systems, the social systems, are the biological systems with the added property of 'value' or the physical systems with the two added properties of 'life' and 'value', i.e. biological systems [+value] or physical systems [+life, +value]. And the

fourth order systems, the semiotic systems, are the social systems with the added property of 'meaning', the biological systems with the two added properties of 'value' and 'meaning', or the physical systems (+meaning], biological systems [+value, +meaning], or physical systems [+life, +value, +meaning]. Language as a semiotic system realizes physical systems indirectly, mediated by social systems and biological systems. In language, the semantic system bridges the gap between the other systems in language and extra-linguistic semiotic systems. Central to the bridging process is realization. In this way the process of realization extends beyond language, making it possible for the semantic system is related to extralinguistic system(s) in language. The lexicogrammatical system is related to extralinguistic system(s) indirectly through the intermediate system of semantics. Halliday indicates the role of the semantic system in language as 'an interface between the (rest of the) linguistic system and some higher-order symbolic system' (1978: 79) that either realizes an extralinguistic system or is realized in the lexicogrammatical system.

#### 3.2.2.2 Stratification in terms of metaredundancy

In the description of the ordered typology of systems, one can detect the 'transcendent' (Halliday and Matthiessen 1999: 416) aspect of the meaning that lies beyond language. Therefore, I will take the inter/intra-stratal aspect as well as the extra-stratal aspect into account with the purpose of getting a rather complete picture of the process of identifying.

Next, the meaning of stratification in SFL will be elaborated. The research here is by and large guided by the figure below adapted from Matthiessen and Halliday (2009). It is designed to

model the organization of language in context as a number of ordered subsystems – context on the one hand and the linguistic subsystems of semantics (meaning),
lexicogrammar (wording), phonology (sound) and phonetics (sound materialized in the human body and in sound waves) on the other, related by realization and covering the range from meaning in context to the manifestation of meaning in sound in the articulatory and auditory systems of the human body. (Matthiessen and Halliday 2009: 9)



Figure 3.2 Inter-stratal construction of language and its relationship to context (Matthiessen and Halliday 2009: 9)

Following Hjelmslev's division of the content plane, SFL views language as a semiotic system composed of four strata (semantics, lexicogrammar, phonology / graphology and phonetics) with two realization cycles (among the first three strata). The relationship among semantics, lexicogrammar and phonology /graphology is that meaning is realized by wording and wording is in turn realized by sound or writing. Halliday comments on such a statement as 'rather seriously misleading' (1992: 356), and refines it as 'meaning is realized by the realization of wording in sound' (1992: 357) in view of metaredundancy. In this way, the realization relationship becomes an 'iterative one and so opens up the possibilities for construing, not only the context of situation, but also higher levels such as Hasan's symbolic articulation and theme in verbal art, or Martin's strata of genre and ideology' (ibid.). Among these three strata,

it is the stratum of meaning that interacts with extralinguistic semiotics. That is to say, language construes the different types of experience in people's life by translating them on the semantic stratum in language first. And then, what has been translated on the semantic stratum is realized by the choices from the lexicogrammatical system in language.

To make the meaning of realization clearer, I would like to show an example from the everyday experience as an illustration. Suppose that a group of people are looking at a Picasso. They make all kinds of assumptions to figure out the meaning conveyed by the picture, either in meditation or in a discussion with their friends. In this process, the image in the picture is translated in language, and the process of translation is realized by the systemic choices in the meaning potential. One of the most likely choices is to realize the translation via identification. The choices made in the meaning potential are then realized by the choices in the wording potential. If the meaning of identification is chosen, the possible wording can be shown by a structural configuration of an identifying clause as 'Identified + process + Identifier'. Then, they may choose either to speak the result out or to keep it to themselves. This is the realization relationship among the different strata following the translation of the extralinguistic semiotic in language.

Instantiation usually comes hand in hand with realization because the hierarchy of stratification and the cline of instantiation are interdependent semiotic dimensions. Instantiation in SFL is represented by the relation between system and instance (see Halliday 2002). The classical example is the relation between climate and weather. They are not two different phenomena but the same phenomenon seen from the different standpoints of an observer (Halliday and Matthiessen 2004: 26-7), which form a cline with one pole being climate and the other being weather. This is true of the relation between system and instance in language. They form a cline of instantiation, with one pole being system and the other being instance. In addition to instantiation, delicacy also frequently accompanies realization. It shows a range from the most general to the most specific, exemplified by the relation between grammar

and lexis. Grammar and lexis are the two poles on the stratum of lexicogrammar, and lexis is the most delicate grammar (Halliday 1961). In order to have a better understanding of the meanings of and the interactions among the three concepts in SFL, I present the explanations given by Halliday and Matthiessen as follows:

(1) Realization is the relation of one stratum to other strata (in any stratified system, with language as prototypical); when we shift attention from semantics 'upwards' into context or 'downwards' to lexicogrammar and phonology/graphology, we are moving in realization. We can do this at any degree of delicacy, from most general to most specific; and we can do it at any point along the instantiation scale, from system to text. (2) Instantiation is the relation between the system and the instance. When we shift attention along this scale, we are moving between the potential that is embodied in any stratum and the deployment of that potential in instances on the same stratum [...]. Again, this move can be made at any degree of delicacy. (3) Delicacy is the relation between the most general features and the most specific. (Halliday and Matthiessen 1999: 327)

The two modes of relational clauses, attributive and identifying, illustrate the differences between realization and instantiation. The two participants in an attributive clause, the Attribute and the Carrier, are related in terms of instantiation. Take *Tom is a teacher* for example, the meaning of the clause is that Tom instantiates those people in the career 'system' of teacher. In other words, he is one of the people who are engaged in the educational business. The relationship between the two participants is one of generality. On the other hand, the relationship between the two participants, the Token and the Value, in an identifying clause is one of realization, as in *failure spells death*. Suppose that a wolf is chasing an explorer in a virgin forest, and the explorer will probably die if he fails to escape. In this condition, the explorer definitely knows what failure means: It means death. This is not a relation between

the general and the specific (people do not say 'failure' is more general or more specific than 'death') but one between the symbol and the symbolized (the failure to escape symbolizes death).

#### 3.2.2.3 Comparison between Hjelmslevian stratification and Hallidayan stratification

Before closing the discussion of the stratification in SFL, I would like to show the difference between the stratification in the Hjelmslevian model and the stratification in the Hallidayan model by Figure 3.3 below. The figure on the left (adapted from Nöth 1995: 67) presents the stratification in the Hjelmslevian model. It is called 'stratified dyadic sign model' (ibid.), where sign is basically divided into the two planes of expression and content. This dyadic view is inherited from Saussure. Interacting with substance, form and purport, the expression plane is stratified into expression substance, expression form and expression purport, and the content plane is stratified into content substance, content form and content purport. The expression expression or content is dependent on the form of expression or content, and this relationship is indicated by  $\implies$ . The presemiotic sphere is shown by the broken line. The figure on the right shows stratification in SFL. One difference between the Hjelmslevian stratification and the Hallidayan stratification is that the Hallidayan stratification does not involve a dyadic division of sign. The other difference is that the relationship between the different strata in the Hallidayan model is not one of dependency but one of realization, indicated by  $\lambda$ .



Figure 3.3 Comparison between the Hjelmslevian stratification and the Hallidayan stratification

#### 3.2.2.4 Realization

Realization is embodied not only in the inter-stratal relationship between different strata (see the comments on Davidse's studies in §2.7.2.1 above) but also in the intra-stratal relationship on one stratum. The intra-stratal realization relationship is embodied in two respects (Matthiessen et al. 2010: 171-2). One is the inter-rank realization relationship between a higher rank and a lower rank, and the other is the inter-axial realization relationship between paradigmatic choices and syntagmatic choices (Matthiessen 1985, 1988).

The realization relationship between the two participants in an identifying clause is not restricted to the inter-stratal realization relationship between different strata as in 'ph' in this word is pronounced [f], not [p], it is also embodied in the inter-rank realization relationship on the rank scale as in the Subject in the clause is 'what he really wants' and the inter-axial realization relationship as in the material process is realized by 'Actor + process + Goal'. Hence, I reject Davidse's implication that the relationship between the two participants in an identifying clause is realized just BETWEEN different strata. In the three examples just given, the first is an inter-stratal relationship, and the rest two are an intra-stratal relationship on the lexicogrammatical stratum.

Realization is not the only possible type of relationship between the two

participants in an identifying clause. The two participants in an identifying clause may also be related in terms of taxonomy. For example, *andrewsiana, borealis, udensis, umbellulata and uniflora are (constitute) the clintonia*. Although such an identifying clause involves classification (the typical function of attributive clauses), it is exhaustive in constitution and functions to identify all the subtypes of clintonia.

## 3.3 The three metafunctions of identifying clauses

Also running through the study are the three strands of meaning advanced by Halliday (1970, 1985, 1994), i.e. the three metafunctions in SFL's term – the ideational metafunction, the interpersonal metafunction and the textual metafunction. The earlier version of the three metafunctions is the experiential metafunction, the interpersonal metafunction (Halliday and Hasan 1976). Later, in the four editions of IFG (1985, 1994, 2004, 2014), the experiential metafunction together with the logical metafunction constitutes the ideational metafunction instead of grouping it in the ideational metafunction (Halliday 1978, Thompson 2004). Considering that the experiential metafunction and the logical metafunction are related to field and more systemic interdependence than 'between other pairs' (Halliday 1978: 131), I follow Halliday's tri-division of meanings.

The three strands of meaning are on the semantic stratum in the linguistic system, reflecting what is going on in the world and the personal /interpersonal interactions and at the same time organizing these 'messages' in text. Choices made on the semantic stratum are realized in choices made on the lexicogrammatical stratum, which are typically embodied in choices made from the transitivity system, the mood and modality systems, and the theme and information systems respectively. The realization relationship is between the semantic stratum and the lexicogrammatical stratum.

#### 3.3.1 Ideational meanings of identifying clauses

The ideational metafunction of language concerns the construal of human experience as meaning. It has evolved two modes of construal, or, two modes of modeling – logical and experiential. In terms of the experiential metafunction, a clause construes human experience of quanta of change in the flow of events into different process types, namely material processes, mental processes, relational processes, behavioural processes, verbal processes and existential processes. The first three are the major motifs and the last three the minor ones. The six types of clauses construing what is going on in the world have three components – the participants indicating **who** are involved, the process indicating **what** is going on, and the circumstances indicating **when/where/how/why** the process occurs.

Identifying clauses are one of the two modes of relational clauses. They construe human experience of identifying in the intensive, circumstantial and possessive types of relation respect. The clauses always involve two participants, one being the entity to be identified, i.e. the Identified, and the other functioning to identify, i.e. the Identifier. Take *Tom is the leader for now* for instance. The first participant *Tom* is the Identified and the second participant *the leader* the Identifier, the process expresses a meaning that the identity of Tom is identified by representing the role of the leader, and the circumstance conveys a restriction on time.

The logical metafunction involves two systemic dimensions in describing the relationship between the two clauses in a clause complex. One is the tactic dimension: The two clauses in a clause complex are related paratactically or hypotactically. The other is the logico-semantic dimension: The two clauses in a clause complex show a relationship of expansion or projection. Expansion is further divided into elaboration, extension and enhancement, and projection is further divided into verbal, mental and factual projection. The identifying relations examined in the thesis, especially in the exploration of the uses of identifying clauses in §7.5.3, are not restricted to those at the clause level but extend to those in clause /group complexes, which are of the

paratactic elaboration type. There are typical indicators for the identifying relations in clause /group complexes, as in *in other words* in (1, a), *that is* in (1, b) and *i.e.* in (1, c), for instance:

- (1) a. in Arkansas, parents generally can not qualify for Medicaid if their family incomes is more than 25 percent of the poverty level (in other words, more than \$ 4,770 a year for a family of three)
  - b. or a verb followed by the name of a thing (that is, a transitive verb followed by a noun)
  - c. process goals are related to pedagogical skills, i.e. instructional strategies, assessment, work ethic, communication, or classroom management.

## 3.3.2 Interpersonal meanings of identifying clauses

In terms of the interpersonal metafunction, a clause enacts personal and interpersonal relations between the speaker and the hearer. The principal systems are the systems of MOOD and MODALITY.

A clause seen from the interpersonal perspective is divided into two parts: Mood and Residue. Halliday and Matthiessen (2004) point out that the interpersonal metafunction is a function of exchange embodied in the Mood, which is composed of the Subject and the Finite operator. Finiteness covers tense, modality and polarity. The Residue is composed of the three functional elements of Predicator, Complement and Adjunct. To briefly illustrate the interpersonal aspects in identifying clauses, I take *Tom is not the leader* for instance. The clause is a declarative; *Tom* is the Subject, and *the leader* is the Complement. The tense is unmarked for an identifying clause, the simple present. This is a negative clause, indicated by the negative particle *not*. No modality is involved.

The interpersonal metafunction influences the interpretation of the implications conveyed by an identifying clause. As shown by the second pre-theoretical example in

§1.1, identifying clauses can be used not only to exchange basic information of identity but also to reveal personal feelings of the speaker.

## 3.3.3 Textual meanings of identifying clauses

The textual metafunction enables a text to be cohesive and coherent. It is embodied in structural and non-structural features. The structural features are realized in the thematic and information structures, and the non-structural features are realized in the cohesive devices of reference, ellipsis/substitution, conjunction and lexical cohesion. The focus of the thesis falls on the structural features of identifying clauses. In examining the experiential uses of identifying clauses, i.e. the roles played by identifying clauses in the construction of the knowledge of the world, I analyze the information structure of identifying clauses, and in discussing the textual uses of identifying clauses in the presentation of the knowledge as text, I analyze the thematic structure and the patterns of thematic progressions in the macrostructure of a text. In this way the uses of identifying clauses are disclosed.

According to Halliday (1994), the thematic structure of a clause consists of Theme and Rheme. The Theme is the point of departure of a clause developed in the Rheme. Although Halliday (1994: 54-8) gives a brief introduction to the Theme in a clause complex and paragraph (the 'topic sentence' (1994: 54)), his concern is with clausal Themes.

The information structure is composed of Given and New. The Given is the information that is presented as known to the hearer; the New, where the tonic prominence falls, is the information that is presented as unknown to the hearer. In the unmarked situation, an information unit co-exists with a clause, with the Given mapping onto the Theme and the New onto the Rheme. However, this is not always the case. An information unit may extend beyond a clause or a clause may contain more than one information unit. Furthermore, the information that has already

occurred before may receive the tonic prominence. For an identifying clause like *Tom is the leader*, the unmarked interpretation is that the Theme *Tom* is the information that is given, and part of the Rheme *the leader*, which receives the tonic prominence, is the new information. But there are marked cases where the tonic prominence falls on the information that has already occurred in the previous text. They typically convey a meaning of contrastiveness or emphasis. For example, *-Who is the leader? -Tom is the leader*, but *Jack is the one that people can count on*. In the second identifying clause in the clause complex, the Theme *Jack* is mapped onto the New and the Rheme *the one that people can count on* onto the Given.

# 3.3.4 An example illustrating the three strands of meaning in an identifying clause

The present study of identifying clauses involves all the metafunctions, though the experiential and textual metafunctions carry more weight than the interpersonal and logical metafunctions. In the example below the three meanings are labeled separately, but in later examinations they are interwoven with one another in the interpretation of a clause. *Tom is the leader of the team* serves as an illustration.

Experientially, the identifying process identifies the identity of Tom by reference to the role he plays in the team. It typically answers the question 'who /which one is Tom'. In this case, Tom is the one to be identified and the leader of the team is used to identify Tom. But this identifying clause may answer a different question like 'who /which one is the leader of the team', in which case the participant to be identified is the leader of the team and Tom is the one that identifies the identity of the Identified. In one context, Tom is the participant on a lower order of abstraction compared with the more abstract participant the leader of the team on a higher order of abstraction. In a different context, the participant that is more abstract is Tom rather than the leader of the team.

Interpersonally, this clause is a declarative with positive polarity and zero

modality; it is temporal rather than modal in terms of finiteness. The speaker has other choices as well. He may choose a negative clause to narrow down the number of the candidates in question, like *Tom is not the leader of the team*. He may also choose to add a tag question to seek the confirmation from a third party in the conversation, such as *Tom is the leader of the team, isn't he*, or to add a modality to show his uncertainty or willingness, such as *Tom may/should be the leader of the team*.

Textually, the speaker chooses the participant to be identified Tom, the information that is presented as known, as the starting point, and identifies his identity, the unknown information, in the rest of the clause in answering the question 'who /which one is Tom'. In answering the question 'who /which one is the leader of the team', he chooses the participant that identifies the identity of the leader of the team, the information presented as new to the hearer Tom as the point of departure. However, the speaker may choose the leader of the team as the point of departure depending on the context of situation. In a more marked situation, he may choose not the new information as Identifier but the information that has already occurred to convey contrastiveness or emphasis.

In spite of the various possibilities of interpreting the identifying clause, I only present the most unmarked interpretation of the clause in Table 3.2 below (the elements are labeled in SFL's terms). In the most unmarked case, the clause is used to answer the question 'who /which one is Tom'. The entity Tom is less abstract than the leader of the team. The Given Tom, the information that is presented as known, is conflated with the Theme, Identified and Subject, and the New *the leader of the team*, the information that is presented as new, is conflated with the Rheme, Identifier and Complement.

Table 3.2 Analysis of the identifying clause in the unmarked situation in the three strands of meaning

	Tom	is	the leader of the team
experiential	participant:	process:	participant:
	Id/Tk	identifying	Ir/Vl
interpersonal	Subject	Finite:	Complement
		'present'	

	Mood		Residue
textual	Theme	Rheme	
	Given		→ New

## 3.4 Indeterminacy: A concept running through the study

Indeterminacy should not be foregrounded because it is something 'normal and necessary' in 'an evolved and functioning semiotic system' and forms 'part of the background' in 'construing human experience' (Halliday and Matthiessen 1999: 547). In spite of its inherent nature in language and people's life, it is still necessary to explain indeterminacy for a better understanding of identifying clauses, because an identifying clause is easily ambiguous and in some cases overlaps with other clausetypes.

## 3.4.1 Indeterminacy in relation to fuzziness

Indeterminacy is related to fuzzy set theory. Fuzzy set theory is one way of representing certain aspects of indeterminacy in language: Indeterminacy is partly at the theoretical level, and fuzzy set theory can be used at the representational level. The fuzziness theory is first proposed by Zadeh (1965) in the explanation of the many-valued logic. The logic of human mind is not true or false but more-or-less true or more-or-less false. Later, he (1972) makes a stronger statement that even many-valued cannot fully explain the nature of human logic since the world humans to live in is permeated with fuzzy cases.

Fuzziness plays an essential role in human cognition because of the classes encountered in the real world are fuzzy – some only slightly and some markedly so. The pervasiveness of fuzziness in human thought processes suggests that much of the logic behind human reasoning is not the traditional two-valued or even multi-valued logic, but a logic with fuzzy truths, fuzzy connectives and fuzzy roles of inference. (Zadeh 1972: 467-8)

Zadeh emphasizes the pervasiveness of fuzziness in the real world. As Matthiessen comments, it is 'construed by language as an essential property of how we construe [...] our experience of world' (1995b: 1871).

Fuzziness has a close relation with Halliday's idea of indeterminacy, which was first reflected in Halliday's account for the notion of cline in 1961. The notion of cline is also important in his later works (e.g. 1967a, 1967b, 1970, 1981, 1992, 1996). Another notion reflecting the idea of indeterminacy is topology (see Martin and Matthiessen 1990). Taking the system of process types for instance, Matthiessen explains topology as follows:

PROCESS TYPE is a clause system for construing of experience of quanta of change in the flow of events into different domains of experience – material [...], mental [...], verbal [...] and relational [...]. These different options (classes) are distinguished by a variety of grammatical criteria [...], but these criteria do not yield categorically different options (classes) but rather a set of options whose more delicate subtypes are more or less different. We can interpret this situation theoretically in terms of typology. (Matthiessen 1995b: 1874)

The remarks above indicate that the clause system construing human experience is not divided into clear-cut categories but located in a continuous space filled with indeterminate cases. In the detailed analysis of identifying clauses in Chapter Four (§4.5), one can see that identifying clauses are also in this continuous space, adjoining material clauses, attributive clauses and verbal processes (see Figure 4.19 in §4.7). Therefore, apart from typical identifying clauses, attention is also paid to the indeterminate cases that share some characteristics of typical identifying clauses and some of material, attributive and verbal ones.

Typology and topology are complementary perspectives in my examination of

identifying clauses. In presenting identifying clauses as a distinctive class, I examine them from a typological perspective with the focus on the distinctions between identifying clauses and other clause types. But in exploring the links between identifying clauses and other clause types, I examine them from a topological perspective with the focus on the indeterminate cases that share some characteristics of typical identifying clauses and some of other clause types.

#### **3.4.2** The sources of indeterminacy in language

The reason why categories in the languages over the world are in a continuous space instead of being separated into clear-cut parts is that the boundaries between the different types of experience in human world, which are translated by language, are themselves indeterminate. The fuzzy boundaries in human experience can be exemplified by the indeterminate cases between the two colors of 'white' and 'black' (a spectrum would serve as a better example, but restricting the number of the colors in question into two enables us to pin down the point more easily). Here, I demonstrate two color bars to illustrate the nature of indeterminacy.



#### Figure 3.4 Indeterminacy in the world

Although the two color bars serve different purposes, both of them refer to the same phenomenon. The first one, which is divided into separated panes, is presented for the convenience of analysis, but it is the second one, which shows no explicit boundary,

that reflects faithfully what is actually going on in the world. The color bar is a cline ranging between the white color and the black color. The two poles, the white color (indicated as color 1) and the black color (indicated as color N), are described as 'white' and 'black' respectively by the shading tool in Word Document. Here the focus falls on the cases between the two poles. From left to right, there are color 2 described by the shading tool as 'white, darker 5%', color 3 as 'white, darker 10%', color 4 as 'white, darker 15%', etc. As one can see, color 2, 3 and 4 lean towards the white color, though not as typical as color 1 labeled as 'black'. Moving from right to left, there are color N-1 depicted by the shading tool as 'black, lighter 5%' and color N-2 as 'black, lighter 10%'. Contrary to the non-typical cases of color white, color N-1 and N-2 lean towards the black color. As the two colors continue to move in the direction shown by the arrows, they will meet with one the other somewhere on the cline. This is indicated by color X, which may be labeled as 'grey' by the shading tool.

However, in the real world, the boundaries between the categories are not as clear-cut as in the first color bar, and there are innumerable possibilities even between color 1 and color 2, color N and color N-1, and so forth (as the second color-bar shows). Such an explanation for indeterminacy in the world also accounts for indeterminacy in the language that translates human experience. Human experience is construed in the three major types of clauses, i.e. material clauses, mental clauses and relational clauses. On the borderlines of these three types are behavioral clauses that show some characteristics of material clauses and some of mental ones but lean towards material ones, verbal clauses that present some characteristics of material clauses that demonstrate some characteristics of relational clauses and some of mental ones but lean towards mental ones but lean towards mental ones but lean towards relational clauses and some of mental ones.

In the color bars, the indeterminate cases are overlaps, but in language, indeterminacy is much more complex. Halliday and Matthiessen (1999: 549) classify

indeterminacy into six types – ambiguity, blends, overlaps, neutralizations, complementarities and probability. In identifying clauses, the indeterminate phenomena are typically of two types. One is ambiguity: For an identifying clause, more than one interpretation is available if no context is specified. The other is overlap. For example, identifying clauses may overlap either within relational clauses with attributive ones, like *Tom is the richest*, or outside relational clauses with other clause types such as material clauses (e.g. *Tom received the book*) and verbal clauses (e.g. *recent findings indicate the dunes formed within the past 7,000 years*). These indeterminate cases lead to various clines of identifying clauses (see §4.5 and §4.6).

However, language construing the experience of a non-discrete world is only one of the several reasons for indeterminacy in language. The other two reasons (Matthiessen 1995b: 1872) are the nature of language and the negotiation between people. In SFL, language is a natural system, as argued in terms of realization in §3.2. The third reason is that 'fuzziness leaves room for, and is the result of, innumerable acts of negotiation' (ibid.). The identifying clause is a representative reflecting the possibility of negotiation between people because of the ambiguities in such clauses (see §4.3 and §4.4).

Although indeterminacy is essential, this does not mean the world is in a mess and only consists of irregularities and chaos. Both differences and sameness make up the world humans to live in. This is also true of identifying clauses. In order to show the identical features of the two participants in an identifying clause, meanwhile one needs to discern the differences between them. By the same token, if one wants to present the differences between the two participants, meanwhile he needs to identify the identical features. Seeing the relationship between the two participants in an identifying clause from a relative perspective means the identity of one participant is identified in its relation to the other participant. The coexistence of differences and sameness is reflected in the analysis of the ostrich text in §7.5.3.1.

In consideration of the pervasiveness and importance of indeterminacy in language, I take the indeterminate cases into account as well in analyzing identifying clauses.

## **3.5 Summary**

This chapter presents the theoretical framework of the thesis, which is made up of three parts. The first and third parts introduce systemic functional semiotics and indeterminacy, the two ideas running through the research. Taking a semiotic perspective enables us to know the nature of identifying clauses more deeply and clearly, and being alert to indeterminate cases helps us examine identifying clauses in a more complete way. The second part elaborates the three metafunctions in SFL. Although the research of identifying clauses is largely in the experiential and textual domains, it also involves interpersonal and logical factors in some analyses because it is impossible to examine identifying clauses just from the experiential aspect or textual aspect in isolation. In the experiential domain, the participants and the process in identifying clauses and their roles in categorizing identifying clauses are explored in Chapter Four. On the basis of the findings in Chapter Four, the examination of the implications conveyed by identifying clauses and the relevant influential factors are presented in Chapter Five. The experiential uses of identifying clauses are discussed in the first half of the seventh chapter, and the textual uses of identifying clauses and the factors that influence the interpretations of the uses are explored in the latter half of Chapter Seven.

# **Chapter Four Grammatical Characteristics of Identifying**

## Clauses

## **4.1 Introduction**

In the preceding chapters, a panorama of identifying clauses has been demonstrated, including the general statement, the previous studies and the theoretical framework. In this chapter, I investigate the grammatical characteristics of identifying clauses by analyzing the participants, the process and the circumstances in the experiential domain. The findings in this chapter will support the subsequent examinations of the implications in identifying clauses in Chapter Five and the uses of such clauses in Chapter Seven.

At the beginning of General Statement, I have argued that the process of identifying occurs not only within the linguistic system but also between language and other extralinguistic systems. Therefore, my account for identifying processes concerns both of these two aspects. The identifying relation between the linguistic system and other semiotic systems (typically foregrounded in an identifying clause whose process is realized by a verb of symbolization, signification and indication), i.e. the extra-stratal identifying relation, is examined in §4.2. With respect to the inter/intra-stratal identifying relation, it is explored both on the lexicogrammatical stratum (§4.3 and §4.4) and on the semantic stratum (§4.6). The intermediate cases are investigated systematically in §4.5 and partially in §4.6. The analysis involves the participants, the process and the circumstances, but it is the process that serves as the starting point. This is because the three basic elements of a clause function differently (Halliday and Matthiessen 2004: 175-6): The process (realized by VGs) is the most central element, the circumstances (realized by AdvGs and PPs) are the most peripheral, and the participants (realized by NGs) lie in between, as shown in the

Figure 4.1 below. Therefore, I take the verbs realizing the process in an identifying clause as the starting point of the research considering the central status of the process.



Figure 4.1 Central and peripheral elements in the experiential structure of a clause (adapted from Halliday and Matthiessen 2004: 176)

## 4.2 Extra-stratal identifying relations

In this section, I will discuss the extra-stratal identifying relations by drawing examples from the fields of linguistics and economics to foreground the relations between language and other semiotic systems such as figures and diagrams. The system of figures and diagrams is the subtype of iconic semiotic, which enjoys the same status as the system of images (see Chandler 2002: 36-43). The world humans to live in consists of innumerable semiotic systems, such as the linguistic system, the visual system (in the meaning of a social semiotic system with a visual expression plane such as pictorial semiotics), the body-language system, the proto-language system, etc., among which figures, diagrams and symbols are common visual signs found in linguistics and economics. But note that the extra-stratal realization relationship between language and other semiotic systems is not equal to denotation. While denotation occurs with all types of clauses, the extra-stratal realization is specific to identifying clauses. It refers to the realization of the semiotic from the system of figures, diagrams and symbols in language, which is foregrounded in

certain types of identifying relations, like symbolization, signification and indication.

In the literature, the relationships between different semiotics are widely examined, especially in multimodality (the classical examples are Kress and van Leeuwen 1996, 2001). The focus here is the identifying relationships between images (including figures and diagrams) and texts. Lemke (1998) investigates the combination of a diagram and text in a scientific article, O'Halloran (1999) presents a system for analyzing mathematical formalism, Royce (1998) probes into the relationships between images and texts, and Martinec and Salway (2005) introduce a system of semantic relations between images and texts. Barthes (1961/1977a, 1964/1977b) advances three types of image-text relationships - anchorage (text supporting image), illustration (image supporting text) and relay (text and image being equal). He (1964/1977b: 40) explains anchorage as language having the function of elucidation, illustration as image realizing the text (ibid.), and relay as text advancing 'the action by setting out, in the sequence of messages, meaning that are not found in the image itself.' (1964/1977b: 41). Although the scholars have different focuses, some connections among the studies are detected. Martinec and Salway (2005: 341) relate Barthes' anchorage and illustration to Halliday's (see 1994: 225-9) logico-semantic relationship of elaboration and relay to the logico-semantic relationship of enhancement. Apart from elaboration and enhancement, there also exist the logico-semantic relationships of extension and projection. By combining logico-semantic relationship with 'status', Martinec and Salway (2005: 357-63) show a system of image-text relationships, including 'image-text independent (exposition)', 'image-text independent (text more general)', 'image-text independent (image more general)', 'image-text independent, extension', 'image-text independent, enhancement', 'image-text independent, locution', 'image-text independent, idea', 'image-text complementary (exposition)', 'image-text complementary (text more 'image-text complementary (image more general)', 'image-text general)', complementary (extension)', 'image-text complementary (enhancement)', 'image-text complementary (locution)' and 'image-text complementary (idea)'. In the two

examples as follows, the identifying relationship between figures and texts is one of projection, which accounts for 'cases when content that has been represented by text or images is re-presented in the other mode' (Martin and Salway 2005: 349). The first example presents a figure re-presenting what has been described in a passage of text, and the second presents a passage of text re-presenting what has been shown in a figure.

Identifying clauses, as well as implicit identifying processes, usually construe the relationship between a figure and a passage of text from two perspectives – visualization and verbalization. The following two examples explain the identifying relationship between the linguistic system and the system of iconic semiotic, the first illustrating the process of visualization and the second illustrating the process of verbalization.

## 4.2.1 Text followed by a figure

The first example is a combination of 'text (linguistic sign in writing form) plus figure (visual sign)'. It comes from Halliday and Matthiessen (1999: 277)<sup>11</sup>.

<sup>&</sup>lt;sup>11</sup>This example originates from Evans, M.K. 1969. *Macroeconomic Activity. Theory, forecasting and control.* New York: Harper and Row Publishers, 89.

(1)1b With these considerations in mind, we can construct the marginal cost of funds scheduleshown in 2b Figure 4.6. Region A represents financing done by the firm from retaining earnings (RE) or depréciation (D)...Region B represents financing done by borrowing from banks or bonds. The sharp rise in the true cost of borrowing is not primarily due to a rise in the market interest rate at which firms must borrow... Region C represents financing done through equity capital...the gradual upward slope is due to the fact that as a firm offers more and more of its stock on the market, this will invariably depress its price and raise the yield that is paid. (Halliday and Matthiessen 1999: 277)



Figure 4.2 Figure 4.6 in (Halliday and Matthiessen 1999: 277)

The text-to-image relations in this example are realized by identifying processes both extra-stratally and inter/intra-stratally. At the most general level, Figure 4.6 as a whole denotes the description in the text. Next, I move to the constituents in the text and figure. *Region A* in the text refers to, or denotes, the area in the figure labeled A. The wording Region A is interpreted in the text by means of an identifying clause, Region A represents financing done by the firm from retaining earnings (RE) and depreciation (D), with Region A being the Token and financing done by the firm from retaining earnings (RE) and depreciation (D) the Value. This is the same case with Region B and Region C. Reference or denotation can also be modeled as an identifying relation, such as *Region A* referring or denoting the area in the figure labeled A, with *Region A* being the Value and the area A the Token. By the same token, Region B, Region C, the marginal cost of funds schedule, the sharp rise in the true cost of borrowing and the gradual upward slope are Value and their corresponding

areas in the diagram are Token.

There are all together six identifying relations ((1, a) to (6, a)) between the text and the figure that visualizes it, shown by the broken lines. They are the extra-stratal realization relationships foregrounded by the semantic configurations of identifying, which are in turn realized in wordings. The wordings in the text are visualized in the figure through the mediation of the semantic stratum. The six implicit identifying relations are made explicit in the six identifying clauses as follows:

- (1) a. [Id/VI:] the way to represent the wording 'the marginal cost of funds schedule' visually is [Ir/Tk:] by showing it in Figure 4.6
- (2) a. [Id/VI:] the way to represent the wording 'financing done by the firm from retaining earnings (RE) or depreciation (D)' visually is [Ir/Tk:] by showing it as RE+D in region A in Figure 4.6
- (3) a. [Id/V1:] the way to represent the wording 'financing done by borrowing from banks or bonds' visually is [Ir/Tk:] by showing it as region B in Figure 4.6
- (4) a. [Id/V1:] the way to represent the wording 'financing done through equity capital' visually is [Ir/Tk:] by showing it as region C in Figure 4.6
- (5) a. [Id/VI:] the way to represent the wording 'the sharp rise in the true cost of borrowing' visually is [Ir/Tk:] by drawing a steep upward slope in Figure 4.6
- (6) a. [Id/V1:] the way to represent the slow rise in equity financing visually is [Ir/Tk:] by drawing a gradual upward slope in Figure 4.6

It is seen clearly from the wordings above that the relationship between the text and figure is established by means of the process of identifying. They show **how** the meaning of the text is visualized in the figure. The refined statement of 'meaning is realized by the realization of wording in sound' made by Halliday (1992: 357) with respect to the realization relationship enables us to conclude that the components of the figure (the whole figure, regions A, B, and C, the steep upward slope and the gradual upward slope) realize meaning of the text in the realization of wording in

writing. Since the figure in this example functions as the visual expression of the text, it is the Token in the identifying relation.

Then, the focus is shifted to the inter/intra-stratal identifying relations in the text, shown by the solid lines. The inter/intra-stratal identifying relations are not realized in the same way. Some of them are construed in 'figures' (Halliday and Matthiessen 1999: 227), whereas others are construed as 'elements' (ibid.). This is the distinction between (2, b), (3, b) and (4, b), shown by the red lines, and (1, b), shown by the blue line. (1, b) is the identifying relation on the lexis pole on the cline of lexicogrammar. The analyses of these relations are shown as follows:

- (1) b. [Id/V1:] the marginal cost of funds schedule that is shown in [Ir/Tk:] Figure
  4.6
- (2) b. [Id/Tk:] region A represents [Ir/Vl:] financing done by the firm from retaining earnings (*RE*) or depreciation (*D*)
- (3) b. [Id/Tk:] region B represents [Ir/Vl:] financing done by borrowing from banks or bonds
- (4) b. [Id/Tk:] region C represents [Ir/Vl:] financing done through equity capital

(1, a - 6, a) and (1, b - 4, b) differ in the realizations of the participants in the clauses. Although both of the two sets of clauses are intensive identifying clauses with a typical verb of symbolization *represent* realizing the process, the realizations of the participants in (1, a - 6, a) involve a circumstantial element of Manner. This is motivated because the former set of identifying relations concern **how** the system of language is related to the extralinguistic system.

## 4.2.2 Figure followed by a text

The figure-to-text example in this section, adopted from Chandler (2002: 119), shows

how a figure is translated by language. In this example, the text explains the semiotic square introduced by Greimas (1987: xiv, 49) for a better analysis of paired concepts by 'mapping the logical conjunctions and disjunctions relating key semantic features in a text' (Chandler 2002: 118).

Considering the length of the example, I explain only parts of the square for illustration. In the text, *the double-headed arrows represent bilateral relationships* is an identifying clause, the first participant being the Token and the second the Value. In other words, *the double-headed arrows* refer to, or denote, bilateral relationships. Just like the first example, the reference or denotation can be modeled as an identifying relation, but at a different level. The double-headed arrows in the figure are worded as *bilateral relationships* in the text, the arrows being the Value and the wording *bilateral relationships* the Token.

(2)



In Figure 3.6, the four corners (SI, S2, Not S1 and Not S2) represent positions within the system which may be occupied by concrete or abstract notions. The double-headed arrows represent bilateral relationships. The upper corners of the Greimasian square represent an opposition between S1 and S2 [...]. The lower corners represent positions which are not accounted for in simple binary oppositions [...]. The horizontal relationships represent an opposition between each of the left-hand terms (S1 and Not S2) and its paired right-hand term (Not S1 and S2). The terms at the top (S1, S2) represent 'presences', while their companion terms (Not S1 and Not S2) represent 'absences'.

Figure 4.3 Semiotic square (i.e. Figure 3.6 in Chandler 2002: 119)

The extra-stratal identifying relations between the figure and text in the example can be construed by the following identifying clauses.

- (1) c. [Id/V1:] the way to describe what is conveyed by Figure 6 verbally is [Ir/Tk:] by wording it as 'the semantic square'
- (2) c. [Id/VI:] the way to describe what is conveyed by the four corners in Figure 6 verbally is [Ir/Tk:] by wording it as 'positions within the system which may be occupied by concrete or abstract notions'
- (3) c. [Id/V1:] the way to describe what is conveyed by the double-headed arrows in *Figure 6 verbally is* [Ir/Tk:] *by wording it as 'bilateral relationships'*
- (4) c. [Id/V1:] the way to describe what is conveyed by the upper corners of Figure 6 verbally is [Ir/Tk:] by wording it as 'an opposition between S1 and S2'
- (5) c. [Id/V1:] the way to describe what is conveyed by the lower corners of Figure 6 verbally is [It/Tk:] by wording it as 'positions which are not accounted for in simple binary oppositions'
- (6) c. [Id/V1:] the way to describe what is conveyed by the horizontal relationships in Figure 6 verbally is [Ir/Tk:] by wording it as 'opposition between each of the left-hand terms (S1 and Not S2) and its paired right-hand term (Not S1 and S2)'
- (7) c. [Id/V1:] the way to describe what is conveyed by the terms at the top in Figure 6 verbally is [Ir/Tk:] by wording it as 'presences'
- (8) c. [Id/VI:] the way to describe what is conveyed by the terms at the bottom in Figure 6 verbally is [Ir/Tk:] by wording it as 'absences'

Like the first example, the second example contains extra-stratal identifying relations as well as inter/intra-stratal ones. But contrary to the first example that visualizes the meaning of the text in a following figure, the second example makes manifest what is conveyed by the figure by verbalizing it in a following text. The components of the figure (S1, S2, Not S1, Not S2, double-headed arrows, upper corners and lower corners) are realized by meaning of the text in the realization of wording in writing. Since the text functions as the explanation of the figure, the figure is the Value and the text the Token. The inter/intra-stratal identifying relations in the text are analyzed as follows:

- (1) d. [Id/Tk:] the four corners (S1, S2, Not S1 and Not S2) represent [Ir/Vl:] positions within the system which may be occupied by concrete or abstract notions.
- (2) d. [Id/Tk:] the double-headed arrows represent [Ir/VI:] bilateral relationships
- (3) d. [Id/Tk:] the upper corners of the Greimasian square represent [Ir/Vl:] an opposition between S1 and S2
- (4) d. [Id/Tk:] *the lower corners represent* [Ir/Vl:] *positions which are not accounted for in simple binary oppositions*
- (5) d. [Id/Tk:] the horizontal relationships represent [Ir/Vl:] an opposition between each of the left-hand terms (S1 and Not S2) and its paired right-hand term (Not S1 and S2)
- (6) d. [Id/Tk:] the terms at the top (S1, S2) represent [Ir/V1:] 'presences'
- (7) d. [Id/Tk:] their companion terms (Not S1 and Not S2) represent [Ir/Vl:] 'absences'

In the figure-to-text example it is important to distinguish the role of the constituents of the figure in the inter/intra-stratal realization relationship from the role of the figure in the extra-stratal realization relationship. In the former, the elements of the figure, such as the four corners, the double-headed arrows, etc., are on a lower order of abstraction and function as the Token. However, in the latter, the meaning of the figure is manifested by the text, and the figure is the Value. This is contrary to the extral-stratal realization relationships in the text-to-figure example, where the figure re-presents what is described in the text and is therefore the Token.

#### 4.2.3 Two perspectives: Visualization vs. verbalization

The analyses of the two examples above indicate that like the identifying relationship construed in the clause, the identifying relationship between a linguistic sign (in this case, the text) and visual sign (in this case, the figure) can be interpreted from two perspectives – visualization and verbalization.<sup>12</sup>To be more specific, either the figure visualizes the text or the text verbalizes the figure. In the former case, the figure pictures what is described in the text, whereas in the latter case, the text glosses what is shown in the figure. The reason why it is possible to interpret the relationship between the two semiotic systems from two perspectives is that the identifying relationship is bidirectional in terms of coding. In visualization, what is described in the text is the Value, and what is re-presented in the figure is the Value, and what is glossed in the text is the Token. The mutual realization relationship between verbalization and visualization finds its support in Halliday's claim that '…as language becomes a metaphor of reality, so by the same process reality becomes a metaphor of language' (1978: 191).

One will understand better the relationship between the text and figure by reference to what is introduced in §3.2.1.2. In visualization, the figure is the expression of the text. Hence, the text is a metasemiotic whose content plane is also a semiotic. The content plane has its own content plane (the semantic stratum and the lexicogrammatical stratum) and expression plane (the phonological/graphological stratum). In verbalization, the text is the expression of the figure is a connotative semiotic whose expression plane, i.e. the text, is a semiotic consisting of the content plane (the semantic stratum and the lexicogrammatical stratum) and the lexicogrammatical stratum) and the lexicogrammatical stratum of the semantic stratum and the lexicogrammatical stratum) and the lexicogrammatical stratum) and the lexicogrammatical stratum of the semantic stratum and the lexicogrammatical stratum) and the lexicogrammatical stratum and stratum and

<sup>&</sup>lt;sup>12</sup>A pair of natural examples would be helpful in the explanation of visualization and verbalization. Visualization also occurs in an identifying clause such as *Figure 29 represents the spread of Sino-Tibetanlanguages*, with *Figure 29* being the Token and *the spread of Sino-Tibetan languages* the Value. As for verbalization, it is usually found in bilingual dictionaries used for glossing, for example, *linguistics:* 语言学 (*yuyanxue*). *Linguistics:* 语言学 is the common form in English - Chinese bilingual dictionaries. It is an implicit identifying relation (indicated by the colon) that can be worded as *linguistics is* 语言学. In this case, *linguistics*, the Token, is the word interpreted in Chinese as 语言学, and the clause construes the experience of glossing.

expression plane (the phonological/graphological stratum). No matter which interpretation is taken, the two semiotic systems are related to each other via the relation of identifying. The analysis in the table below shows how the two participants, the figure and the text, are interpreted in the process of identifying from the perspectives of visualization and verbalization.

Table 4.1 Roles of text and figure in an identifying relation from the two perspectives of visualization and verbalization

visualization		
text	(is expressed by)	figure
content		expression
metasemiotic		denotative semiotic
Vl		Tk

verbalization		
text	(expresses)	figure
expression		content
denotative semiotic		connotativesemiotic
Tk		Vl

However, this table cannot vividly reflect the semiotic nature of the process that is seen from two perspectives. In order to show that the text is a metasemiotic in visualization and the figure is a connotative semiotic in verbalization and that visualization and verbalization are complementary perspectives, I present them in the figure below. The left cube shows visualization, where the content of the text is visualized in a figure. In this case, the figure is the expression, and the text is the content consisting of semantics, lexicogrammar and phonology/graphology. On the right, the cube demonstrates verbalization, where the content of the figure is verbalized in a text. In this case, the figure is the content, and the text is the expression consisting of the three strata.



Figure 4.4 Interpretation of visualization and verbalization from a multistratal perspective

In summary, taking figures as an instance of extralinguistic semiotic systems, this section examines the extra-stratal identifying relations between the linguistic system and other semiotic systems. In the construal of the extra-stratal identifying relations, the semantic stratum in language is essential because it bridges the gap between the other linguistic strata in language and the extralinguistic systems. This is shown by the double-headed arrows in the cubes in Figure 4.4, which indicate the interactions between the figure and the semantic system of the text. The single-headed arrow in the left cube means "text realized by figure", but in the right the single-headed arrow means "figure realized by text"

# 4.3 Inter/intra-stratal identifying relations within the language system

Having examined the extra-stratal identifying relation between language and other semiotic systems, I will focus on the inter/intra-stratal identifying relations. In the semiotic system of language, the process of identifying occurs between different orders of abstraction, either inter-stratally or intra-stratally. Here, a simple example analyzed from a trinocular perspective illustrates, but only briefly, the relations among

the three basic elements in an identifying clause (the participants, the process and the circumstances) in terms of the three strands of meaning (experiential, interpersonal and textual).

trinocular perspective	the leader	is	Tom			
from 'above': category	meaning	representing:	representing: the leader is identified by			
		being represent	ted by Tom			
	experiential	participant 1:	process:	participant 2:		
		Id/Vl	intensive	Ir/Tk		
from 'around':	interpersonal	Subject	'present'	Complement		
structural functions			Finite			
		Mood		Residue		
	textual	Theme	Rheme			
		Given — New				
from 'below': realizations		NG:	VG:	NG:		
	DA + CN	copular V	PN			

Table 4.2 Analysis of the identifying clause from a trinocular perspective

Notice that the analysis in the table shows only one of the several possible interpretations of the identifying clause. The clause construes an intensive relation of role-playing between Tom and the leader, which conveys the meaning that the role of the leader is played by Tom. It is assumed to answer the question 'who /which one is the leader'. In this case, the participant Tom (the pink area) is less abstract than the leader (the blue area), functioning as the Token. Consequently, the identifying clause identifying the identity of the leader is an encoding process (see the explanation of decoding and encoding in \$4.3.2 below). This encoding process, where the Identified is conflated with the Subject and the Identifier with the Complement, conveys the exhaustive meaning both referentially and realizationally (see Chapter Five). Furthermore, the Identified is conflated with the information that is known, and the Identifier is conflated with the new information (see Chapter Seven). All of these show first that the identifying clause is a typical one. This is seen from four aspects (see \$4.3.3 below): The NGs realizing the participants are definite (DA + CN *the leader* and PN *Tom*); the verb realizing the process is one from the equative classes (a

neutral verb *be*); the clause is probed by 'who /which one is the leader'; the clause can be revered as *Tom is the leader*. Second, the interpretation of the identifying clause is the most unmarked, in which case the Identified, Subject, Theme and Given are conflated, and the Identifier, Complement, Rheme and New are conflated.

What is presented above, however, is just a sketch of identifying clauses, far from being complete. Experientially, the analysis shows only one of the eight possible interpretations that originate from the interactions between the identifying dimension and the coding dimension (see §4.3.2 below) and the ability to reverse; it leaves the other seven possibilities aside. Interpersonally, the addition of such aspects as negation and modality may lead to an entirely different interpretation of the clause. What is more, the textual meaning is embodied not only in the thematic and information structures but also in the thematic progression patterns.

## 4.3.1 Realizations of the participants in identifying clauses

Identifying clauses have their own characteristics in respect of the realizations of the participants. Take the second participant for example, it can be realized by NGs (typically definite).

the	leader	is	Тот
NG			NG
DA	CN		PN

It can also be realized by -ing/-to non-finite clauses.

the	position	is	preceding	the	noun
NG			NG		
DA	CN		-ing nominalizat	ion: act	
			process	participant	
			V	NG	
				DA	CN

the	aim	is	to pass	the	exam
NG			NG		
DA	CN		-to nominalization: event		
			process	participant	
			V	NG	
				DA	CN

Furthermore, it may be realized by a clausal nominalization.

the	main	idea	is	that the	is	inherently	semiotic
				identifying			
				process			
NG				NG			
DA	Adj.	CN		clausal nominalization: fact (relational process)			
				participant:	process:	circumstance:	participant:
				Carrier	attributive	Manner	Attribute
				NG	V	Adv.	Adj.

Since most identifying clauses are reversible, the first participant can also be realized by a NG, an *-ing/-to* non-finite clause or a clausal nominalization. This is summarized by Matthiessen as 'the Carrier, Token, and Value may be a nominal group, either congruent or metaphorical, or a downranked clause (either a projection clause ['fact'] or an expansion clause ['act']...)' (1995a: 308). In other words, the participants can be a thing, act or fact. In addition, both of the two participants in an identifying clause can be a downranked clause simultaneously, such as *asking a question like this means provoking the entire nation, to link the S and R point is to ensure that no new anchors are introduced* and *what surprised us most is the fact that he killed Mary*. Matthiessen further points out that 'the Value can be a nominal group used to represent the meaning of a prepositional phrase, adverbial group, etc.' (ibid.).

by air	is	the	best choice
PP		NG	
		DA	CN

However, there are some restrictions on the realizations of the participants in the different types of identifying clauses. This will be elaborated in §4.5.3.

## 4.3.2 Two dimensions in identifying clauses: Identifying and coding

In order to get a better understanding of identifying clauses, I begin the discussion with relational clauses. As one of the three major clause types, relational clauses construe human experience of being and having. In IFG (1994, 2004, 2014), they are divided into the two modes of attributive and identifying and the three types of intensive, possessive and circumstantial. The two modes and the three types interact with one another, generating six categories of relational clauses.

In the attributive mode, the two participants are Carrier and Attribute. The Carrier, realized by an Adj., may be a member of a class having a certain quality like *she is beautiful* (she is one of those girls who are beautiful). Or the Carrier, realized by an indefinite NG, is a member of a certain class like *she is a teacher* (she is one of those people who are teachers). In the identifying mode, the two participants are Identified and Identifier.

Before examining the two participants in identifying clauses, I will make clear what is meant by 'identify' in identifying clauses first. If one looks up the word in a dictionary, at least five explanations will be found (Net. 4.)<sup>13</sup>. In my account, 'identify' in identifying clauses is interpreted in terms of the RELATION of identity between two participants. This relation is one of synonymyin many cases. In other words, the meaning of 'identify' is the relation of sameness or similarity. Such a relation is established on the basis of a particular identity. In this respect, I take a similar stance with Halliday (1994), Dik (1980), Huddleston (1971) and Kuno (1970) in interpreting 'identify' as a relation of identity in identifying clauses (see §2.4.2)

<sup>&</sup>lt;sup>13</sup> The five meanings given by The Collins Dictionary are: 1. To prove or recognize as being a certain person or thing, determine the identity of; 2. To consider as the same or equivalent; 3. (intransitive followed by *with*) To consider (oneself) as similar to another; 4. To determine the taxonomic classification of (a plant or animal); 5. (intransitive followed by with) (psychology) To engage in identification.

above).

In IFG, Halliday defines Identified as the participant that 'is to be identified' and Identifier as the participant that 'serves as identity' (1994: 122). First, it can be inferred from the definition that identifying clauses, at least for most of them, are reversible. Moreover, the definitions demonstrate that identifying clauses are tricky ones that are easily ambiguous if they occur without any specification of the context in question. The ambiguities in identifying clauses can be seen from the example Tom is the tallest one. IFG (1994) would interpret its structure as Identified ^ Identifier for the sake of simplicity, in which case the tonic prominence falls on the tallest one. That is, the Identified Tom is the participant to be identified, and the Identifier the tallest one is the one that serves as identity; the meaning of the clause is 'Tom IS IDENTIFIED BY the tallest one'. In a different case where the tonic prominence falls on Tom, the structural function of Identifier is realized by Tom, and the Identified is realized by the tallest one; the meaning of the clause is 'Tom IDENTIFIES the tallest one'. The detailed account for ambiguities will be presented in the examination of the eight-cell, four-cell and two-cell paradigms of identifying clauses in §4.3.4. It is the interaction between Identified and Identifier that constitutes the identifying dimension of identifying clauses.

The other set of structural functions in identifying clauses is Token – Value. They are extremely important, as Halliday indicates:

The Token – Value structure is **probably the most difficult** to come to terms with in the entire transitivity system. It is also, **arguably, the most important**, in that it tends to dominate in certain highly valued registers (such as scientific, commercial, political and bureaucratic discourse) where meanings are inherently symbolic ones. (Halliday 1994: 126, my emphasis)

The remarks above show that apart from the complexity and importance of the Token – Value structure, Halliday also points out that the registers likely to be dominated by

this structure are scientific, commercial, political, bureaucratic discourse, etc. They are the registers where I collect my data.

Halliday explains Value as 'meaning, referent, function, status, role' and Token as 'sign, name, form, holder, occupant' (1985: 115). To discern Token and Value in a clause, Halliday and Matthiessen (2014: 280) provide us with a practical method: Token is the Subject in an operative clause and Value is the Subject in a receptive clause (in case of the process realized by be, replace be with represent). From the explanations of Token and Value it can be seen that Value is on a higher order of abstraction. Take the intensive identifying clause *Tom is the tallest one* for instance. In one situation, if Tom is less abstract than the tallest one, Tom is the Token, and the tallest one is the Value; the meaning of the clause is 'Tom REPRESENTS the tallest one'. In a different situation, if Tom is more abstract than the tallest one, *Tom* is the Value, and the tallest oneis the Token; the meaning of the clause is 'Tom IS REPRESENTED BY the tallest one'. It is the interaction between Token and Value that constitutes the coding dimension of identifying clauses. But the meanings coded in the three types of identifying clauses vary: Representation in intensive identifying clauses, circumstance in circumstantial identifying clauses and possession in possessive identifying clauses (see more in § 4.6).

The different possibilities of mapping Token – Value onto Identified – Identifier result in two coding directions. A decoding process is one where Token is mapped onto Identified and Value onto Identifier.An encoding process is one where Token is mapped onto Identifier and Value onto Identified.

## 4.3.3 A lexicogrammatical analysis of identifying clauses

Since we now have a general idea of the fundamental concepts in identifying clauses, such as Identified, Identifier, Token, Value, etc., we will take a closer look at the three elements in identifying clauses. *The leader is Tom*, presented as follows, illustrates the experiential aspects in an identifying clause.
the	leader	is	Tom			
participant:		process:	participant:			
Id/V1		intensive	Ir/Tk			
coding: encoding						
NG		VG	NG			
DA	CN	copular V	PN			

This is a typical identifying clause. According to Halliday (1994: 123), a typical identifying clauses presents four characteristicsof equal importance: (i) the NG realizing the second participant is definite, which may be a CN with the DA *the* or other specific determiners, or else a PN, or a pronoun; (ii) the verb realizing the process is one from the equative classes, such as *be, equal, stand for, exemplify, represent, mean, serve as*, and the like; (iii) the probe for identifying clauses are *which?, who?, which /who ... as?*; (iv) the clauses are reversible.

For the convenience of later discussions, I would like to explain characteristic (ii) and (iv) further here. Since my analysis of identifying clauses takes the verbs as the starting point, it is necessary to introduce the classification of equative verbs made by Halliday first. Halliday (1994: 123) classifies equative verbs into 'neutral' like *be* and *become*, 'role-playing' like *play* and *function as*, 'indication' like *mean* and *indicate*, 'equation' like *equal* and *add up to*, 'inclusion' like *comprise* and *include*, 'signification' like *constitute* and *form*, 'exemplification' like *exemplify* and *illustrate*, and 'symbolization' like *symbolize* and *stand for*.

'Process'is similar to 'relator' (Harvey 1999:72), which is in most cases realized by VGs and in some cases by the cohesive devices such as comma or colon.Relators are divided into neutral relators that do not indicate the type of meaning construed by the clause in question and do not show contrast in voice (like the copula *be*) and specific relators that indicate explicitly the type of meaning construed in the clause and show a contrast in voice (such as *symbolize, signal, mean*, etc.). These two types of relators are on the lexicogrammatical cline, with the neutral ones on the grammar pole and the specific ones on the lexis pole. They are found in all the three types of identifying clauses. In intensive identifying clauses, the verbs realizing the process can be *be* and other specific verbs denoting a meaning of representation, such as *represent*, *play*, *example* and *equal*; in circumstantial identifying clauses, the process can be realized by *be* and other specific verbs expressing a meaning of circumstance, such as *cover* and *cause*; and in possessive identifying clauses, the process can be realized by *be* as well as other specific verbs conveying a meaning of possession, such as *own* and *belong to*.Since *be* is neutral and does not indicate the type of meaning conveyed by a clause and specific verbs specify the type of meaning, the neutral verb *be* 'opens up more semantic space', whereas specific verbs 'narrow down the semantic space' and rely less on the context for the interpretation of the clause'.(Harvey 1999: 84) Consequently, in interpreting identifying clauses with *be*, one needs to pay more attention to the context in question and the roles of the two participants, while in interpreting those with specific verbs, one can get more information from the verbs realizing the process (see §4.4 below).

In the following analysis, the equative verbs are examined in four groups, including one group that has not been mentioned in Halliday's classification. In addition, 'reversible' needs to be clarified. For those clauses with *be*, being reversible means being switchable. That is to say, the two participants in a clause are switchable. For those clauses whose process is realized by specific verbs, being reversible means being acceptable in the corresponding active or passive form<sup>14</sup>. 'Reversible' will be further elaborated in detail at the beginning of §4.3.4.2 below.

In spite of Halliday's emphasis on the equal status of the four characteristics, the following examinations show that they do not have the same priority in the interpretation of the different types of identifying clauses. In some cases, the identification of the nature of a clause relies more on characteristic (i) than on the other three characteristics, but in other cases, characteristic (ii) carries more weight.

<sup>&</sup>lt;sup>14</sup> Because of the different meanings of 'reversible' in *be*-identifying clauses and those whose process is realized by specific verbs, Halliday and Matthiessen (2004) use 'operative /receptive' rather than 'active /passive' (Halliday 1994) in presenting the way to identify Token – Value in an identifying clause. 'Operative /receptive' is preferred in the description of a *be*-clause that does not show the voice contrast. But in my account, since I have made a distinction between 'reversible' in *be*-identifying clauses and 'reversible' in other identifying clauses and since people are more familiar with 'active /passive', I use 'active /passive' rather than 'operative /receptive'.

### 4.3.3.1 Identifying processes realized by neutral verbs

Identifying clauses with the process realized by neutral verbs refer mainly to *be*-clauses, but clauses with *become* and *remain* are also accounted. It will be argued that the realizations of the participants (i.e. characteristic (i) mentioned in §4.3.3 above) play a more significant role in indicating the nature of *be*-clauses because of the neutral verb *be*.

Instead of viewing be as the most general verb without any meaning, Davidse (1991: 205) maintains that be has three meanings<sup>15</sup>- attributive, identifying and existential, on which basis she claims that be is not just a linking verb. This division perhaps originates from Halliday's (1967a) classification of  $be_0$ ,  $be_1$  and  $be_2$  (see §2.6.1 above). However, it is still too general to have any specific meaning in identifying clauses, because it is tautological to say that the meaning of be in an identifying clause is identifying. In an identifying clause whose process is realized by be, the 'experiential weight' is loaded onto the two participants, and the process is only a highly generalized link between the two participants (Halliday and Matthiessen 2004: 213-4). Hence, in the examination of identifying clauses with be, the focus falls on the two participants and their relations. *The leader is Tom* is presented again as an illustration. In this clause, is has no specific meaning but functions as a generalized verb linking the Identified the leader and the Identifier Tom. It is a typical identifying clause whose characteristics are in accord with Halliday's observation: The second participant is realized by a PN Tom; the process is realized by a verb from the equative classes; the clause can be probed by questions like 'who /which one is the leader'; and the clause can be reversed as *Tom is the leader*. But the examples below, all of which are authentic either from textbooks or from COCA, show that the situation in *be*-identifying clauses is not as simple as itseems.

(3) [Id/Tk:] an office is [Ir/VI:] a place (typically) with chairs, desks, and typewriters

<sup>&</sup>lt;sup>15</sup>Davidse's 3-*be* position is different from the 3-*be* position presented in Literature Review, which refers to a copula of specification, a copula of equation and a copula of predication.

located in downtown and (inherently) with doors and windows in a building

- (4) [Id/V1:] the result in the latter case is [Ir/Tk:] a derived verb root which is locative, and which is therefore subject to the accompaniment of a location noun in accordance with (S12-17)
- (5) [Id/V1:] the cause of the riot is [Ir/Tk:] a picture of the wall
- (6) [Id/Tk:] the interdependence between the figure taxonomy and the element taxonomy is [Ir/VI:] a specific example of what was observed to be a quite general tendency above in Part II
- i. Identifying clauses used to make definitions<sup>16</sup>

It would be safe to start with (3), which is explicitly declared as an identifying clause by Halliday and Matthiessen (1999: 435). This clause demonstrates two of the four characteristics a typical identifying clause: The process is realized by the copula be and the reversed clause, a place (typically) with chairs, desks, and typewriters located in downtown and (inherently) with doors and windows in a building is an office, is acceptable. However, the NG that realizes the second participant is indefinite, and the clause is probed by 'what is an office' or 'what is an office like'. Since be is experientially light and the realization of the second participant is not typical for an identifying clause, the decisive factor influencing the interpretation of the clause is the relation between the two participants. Although the Identified and the Identifier in (3) denote indefiniteness via the indefinite articles, the relationship between them is one of identification established at a generic level. This generic relationship can be explained in terms of hyponymy: An office is a kind of place. But the clause does not end there; it continues to describe what kind of place is 'office' by means of a PP that functions as the Qualifier in the second NG, and in this way narrowing down the scope of the concept of 'place'. The relationship between the two participants is

<sup>&</sup>lt;sup>16</sup>Definitions can be simple definitions' completed in one sentence or less' and expanded ones expressed in 'full paragraphs or even groups of paragraphs' (Trimble 1985: 81). Simple definitions are further divided into formal, semi-formal and non-formal, among which formal definitions 'are commonly expressed identifying relational clauses' (Harvey 1999: 55).

diagrammed semiotically in Figure 4.5.



Figure 4.5 Intra-stratal realization relationship between the two participants in a definition

The figure indicates that the relationship between the two participants in (3) is realized intra-stratally along the cline of lexicogrammar. In this interpretation, the Identified *an office*, which functions as Token, is located on the lexis pole and hence on a lower order of abstraction on the lexicogrammatical stratum, and the Identifier *a place (typically) with chairs, desks, and typewriters located in downtown and (inherently) with doors and windows in a building*, which functions as Value, is located on the grammar pole and hence on a higher order of abstraction on the lexicogrammatical explanation (the gloss) explains the meaning of the lexis (the term). It is an identifying process in a generic sense expanding 'the naming resources of language, in both everyday discourse and technical or scientific discourse' (Halliday and Matthiessen 2004: 227) and usually found in textbooks, dictionaries and encyclopedia.

The analysis of the structural functions of the participants in a definition finds its solid support in Halliday and Matthiessen (1999: 76), who identify the term as 'a lexicalized token' and the gloss as 'a grammatical value'. If one looks up 'office' in a

dictionary, the function of Token is only realized by the lexis to be defined, and the function of Value is only realized by the gloss used to define.

Another scholar discussing definitions is Lyons. He indicates that 'standard dictionaries identify words by means of their form, listing them according to a purely conventional ordering of the letters of the alphabet' (1981: 20). Interpreted in this way, the relationship between the two participants is realized not intra-stratally on the lexicogrammatical stratum but inter-stratally between the phonological stratum and the lexicogrammatical stratum. The term 'office' in the dictionary is listed according to its sound form and located on the phonological stratum; it is less abstract than the gloss on the lexicogrammatical stratum. Figure 4.6 shows the inter-stratal realization relationship between the two participants in the definition.



Figure 4.6 Inter-stratal realization relationship between the two participants in a definition

It is obvious that Lyons's (1981) interpretation of definition is not the same as Halliday and Matthiessen's (1999). Seen from Halliday and Matthiessen's point of view, a definition is an identifying process between the two poles on the lexicogrammatical stratum, but seen from Lyons's point of view, a definition is an identifying process between the lexicogrammatical stratum and the phonological stratum. No matter which viewpoint is taken, the term is always on a lower order of abstraction than the gloss and always functions as Token.

Apart from Halliday and Matthiessen (1999) and Lyons (1981), the one who has conducted an intensive study on definitions (in English technical discourse) in metafunctional dominance and interaction is Harvey (1999). In Harvey's view, definitions can be examined in terms of coding direction. In the decoding process, the coding direction is from the term, the familiar and concrete element, to the gloss, the more abstract but newsworthy element, for example, [Id/Tk:] *AIDS is* [Ir/VI:] *a serious (often fatal) disease of the immune system transmitted through blood products especially by sexual contact or contaminated needles*. In the encoding process, the coding direction is from the gloss, the familiar but more abstract element, to the term, the unfamiliar but concrete element, for example, [Id/VI:] *South Africa is* [Ir/Tk:] *the gold kingdom*. At the first sight, it seems that in a definition, the term can be either Token or Value. However, the clause with the term functioning as Token and the one with the term functioning as Value are not the same. The former primarily construes defining whereas the latter primarily construes naming. Hence, as noted, the term in a definition is the Token, and the gloss is the Value.

What has been discussed above – the hyponymous relationship between the two participants – is only one of the two requirements for the validity of the identifying relation in definitions. The other is the element that narrows down the superordinate concept either by a PP (as *with chairs, desks, and typewriters located in downtown and (inherently) with doors and windows in a building* in (3) *an office is an place (typically) with chairs, desks, and typewriters located in downtown and (inherently) with chairs, desks, and typewriters located in downtown and (inherently) with doors and windows in a building*) or by a restricted relative clause (as *which is locative, and which is therefore subject to the accompaniment of a location noun in accordance with (S12-17)* in (4) *the result in the latter case is a derived verb root which is locative, and which is therefore subject to the accompaniment of a location noun in accordance with (S12-17)*), and in this way equalizes the term and the gloss in a definition. Such an element is called 'Condition' (Halliday and Matthiessen 1999:

76). It specifies the term 'to the extent where it matches (or is functionally equivalent to) the gloss' (Harvey 1999: 63). If one removes the Condition in (3) away from the second participant, the consequent clause, *an office is a place*, is attributive, and the relationship between the two participants is one of attribution rather than identification.

Therefore, in the clauses whose process is realized by the copula *be*, *be* is only a highly generalized linking verb and the influential factors are the realizations of the two participants and the relations between them.

ii. Identifying clauses used to pin down a certain point

The two cases (4) The result in the latter case is a derived verb root which is locative, and which is therefore subject to the accompaniment of a location noun in accordance with (S12-17) and (5) the cause of the riot is a picture of the wall are of the same type, although the former contains a restricted relative clause. The first participant in each of the two clauses is realized by a definite NG, and the second participant is realized by an indefinite NG; both of the two clauses are reversible. However, one may reject the assertion that they are identifying clauses on the recognition of the indefinite article *a* in the NGs that realize the second participant. The function of the indefinite articles in these two clauses differs both from that of a in a definition like (3) an office is an place (typically) with chairs, desks, and typewriters located in downtown and (inherently) with doors and windows in a building and that of a in an attributive clause like Tom is a student. In (3) a denotes a class, whereas in the two clauses it denotes an individual. In an attributive clause, a indicates ANY one of the members in a class, whereas in an identifying clause, it specifies a SPECIFIC object despite the indefinite realization of the second participant. In this case, the speaker has a unique referent in his mind, but he presumes that the hearer does not know the exact identity of the referent and presents it via an indefinite article (Dik 1980: 104). Identifying clauses of this type are typically used to pin down such issues as reason, consequence,

means, answer, motivation, problem, etc.

However, one may confuse the result in the latter case is a derived verb root which is locative, and which is therefore subject to the accompaniment of a location noun in accordance with (S12-17) with another kind of clauses (for example, the relationship between them is one (a relationship) that is hard to explain) considering that on the surface the second participant in each of them is realized by an indefinite NG with a restricted relative clause. But they are differentiated from one the other in the following aspects. First, the clause in the parentheses is attributive rather than identifying. This is seen from the function of the clause and the restricted relative clause in the NG. The function of the restricted relative clause in the clause used to pin down a point is similar to that of the Qualifier in the definition in that both of them narrow down the concept denoted by the second participant, while the restricted relative clause in the example in the parentheses functions not as a Condition but as a 'Describer'. This clause may be reduced and roughly equal to the relationship between them is an unexplainable one. The 'predominantly descriptive nature results from the build-up description' (Harvey 1999: 62) of the adjective hard, and the Attribute can be probed by 'what is the relationship like', a question typically used to probe the attribute in attributive clauses (Halliday 1994: 121). The two participants are on the same order of abstraction but differ in generality. The relationship between them is one of the members in the class of those relationships that are hard to explain. As a consequence, this clause, which functions to classify, should be distinguished from the result in the latter case is a derived verb root which is locative, and which is therefore subject to the accompaniment of a location noun in accordance with (S12-17), whose function is to pin down a certain point, in spite of their apparent similarities in the forms.

The structural configuration in the identifying clauses of pinning down a certain point can only be Value ^ Token. That is to say, the participant to be pinned down, such as *the result* in *the result in the latter case is a derived verb root which is locative, and which is therefore subject to the accompaniment of a location noun in accordance*  *with (S12-17)* and *the cause* in *the cause of the riot is a picture of the wall*, is always the Value, and the participant to pin down the point is always the Token.

iii. Identifying clauses used to show examples

Now the focus is shifted to (6) the interdependence between the figure taxonomy and the element taxonomy is a specific example of what was observed to be a quite general tendency above in Part II. Such a clause is an 'is an example of' identifying clause. Differing from Halliday (1967a), Davidse (2010) argues that instead of being categorized as a subtype of identifying clauses, 'is an example of' clauses lie between specificational-predicative clauses and descriptional-identifying clauses on the continuum of copular clauses. Here, I examine the 'is an example of' clause in a different way. First, there is no room for questioning the identifying nature of the reversed form of (6), a specific example of what was observed to be a quite general tendency above in Part II is the interdependence between the figure taxonomy and the element taxonomy, within which a specific example of what was observed to be a quite general tendency above in Part II functions as Value and the second participant, realized by a definite NG, functions as Token. Similar cases are found in (7, a – c).

(7) a. an instance of Event is PartyAtMyHouseThisSaturday
b. a familiar illustration of this is the fact that ...
c. a special case of probability is 'certainty'

All the three instances are identifying processes, conveying a meaning of exemplification. The reversed forms,

- (7) a. i.PartyAtMyHouseThisSaturday is an instance of Event
  - b. i. the fact that ... is a familiar illustration of this
  - c. i. 'certainty' is a special case of probability

, are similar to (6) the interdependence between the figure taxonomy and the element taxonomy is a specific example of what was observed to be a quite general tendency above in Part II in that all of them are realized by 'definite NG + is + an example of + NG'. It has been mentioned immediately above that Davidse (2010) rejects the view that 'is an example of' clauses are identifying clauses and separately labels them the 'specificational "is an example of" type. What she bases her claim on is the instance-category distinction denoted by the indefinite NGs, such as an example, an *instance*, a case, etc. It is true that the difference in generality, or, the difference between instance and category, is the relationship construed in an attributive clause, but it should be between the two participants in a clause rather than in the NG. For instance, in *Tom is a student*, the instance-category relationship is between *Tom*, the Carrier, and *a student*, the Attribute. But in (6) this relationship is within the NGa specific example of what was observed to be a quite general tendency above in Part II between what was observed to be a quite general tendency above in Part II as a class and a specific example as a member of the class, while the relationship between the two participants in the clause is still one of identification. The difference between the instance-category relationship in the attributive clause and that in (6) is better illustrated in Figure 4.7. In the left figure, the dot represents Tom, who is one of the members of the class of students. In the right figure, the dot on the higher order of abstraction represents a specific example, which is one of the members of the class of what was observed to be a quite general tendency above in Part II, and the dot on the lower order of abstraction represents the interdependence between the figure taxonomy and the element taxonomy. It has a one-to-one relation with a specific example.

the interdependence ... is a specific example of Tom is a student what was observed ... in Part II a specific what was example Tom observed ... in • higher order students Part II same order of abstraction of abstraction lower order of abstraction the interdependence..

Figure 4.7 Semiotic representations of the different types of instance-category relationship in an attributive clause and 'is an example of' identifying clause

The two participants in the attributive clause are the same in abstraction but differ in generality, and the two participants in (6) differ in abstraction but are the same in generality. The second participant in (6) is narrowed down from a class of several members to a class of one member, and is therefore equal to the first participant. In this respect, the relationship between the two participants in (6) is one of equation. Apart from the semiotic evidence, the identifying nature of the 'is an example of' clauses can also be justified in terms of ideational metaphor, which is commonly realized by nominalizations. (Halliday 1994: 352) The 'is an example of' clauses, including the similar structures with *instance*, *illustration* and *case*, can be de-nominalized (though may not in the most delicate fashion) as follows:

- (6) ii. [Id/Tk:] the interdependence between the figure taxonomy and the element taxonomy exemplifies [Ir/Vl:] what was observed to be a quite general tendency above in Part II
- (7) a. ii. [Id/Tk:] PartyAtMyHouseThisSaturday instantiates [Ir/Vl:] Event
  - b. ii. [Id/Tk:] the fact that ... [Ir/VI:] illustrates this
  - c. ii. [Id/Tk:] 'certainty' exemplifies [Ir/VI:] probability

The reason why one may confuse the 'is an example of' clauses with attributive clauses is that it is hard to identify the nature of a clause just from the generalized linking verb *be* in case of the second participant realized by an indefinite NG. This problem has been solved by de-nominalization as in (6, ii - 6, c, ii). In the de-nominalized forms of the 'is an example of' clauses, the relationship between the two participants is made explicit by the specific verbs *exemplify*, *instantiate* and *illustrate* from the equative classes, and consequently the confusion brought by *be* is lessened. In this way, the discussion moves from grammar to lexis along the cline of lexicogrammar, as indicated in Harvey's (1999) explanation of 'relator'. In the

On the basis of the two arguments, the semiotic one and the metaphoric one, I regard the 'is an example of' clauses as a subtype of identifying clauses functioning to exemplify. Clauses such as PartyAtMyHouseThisSaturday is an instance and 'certainty' is a special case look like the 'is an example of' clauses at first sight, but a closer scrutiny reveals that they belong to a different type of relational clauses. The relationships construed in such clauses are attributive. The reasons why they are distinguished from the 'is an example of' clauses are also explained in the semiotic and metaphoric respects. First, there is no process of narrowing down a class of several members into a class of one member, and the two participants are semiotically different in generality. Take PartyAtMyHouseThisSaturday is an instance for example. The clause is interpreted as 'PartyAtMyHouseThisSaturday is one of those programs that could serve as instances'. Metaphorically, they cannot easily be de-nominalized in the same way as done in the 'is an example of' clauses, for example, \*PartyAtMyHouseThisSaturday instantiates. Hence, 'is an example of' clauses and 'is an example' clauses are different types of relational clauses, the former being a subtype of identifying clauses while the latter being a subtype of attributive ones.

The final concern is the allocation of the structural functions of Token – Value in the identifying clauses of exemplification. In such clauses, the exemplified can only

be Value, and the example can only be Token. This is the same as the identifying clauses of defining and pinning down a certain point.

In view of the neutral nature of the copular verb *be* (a highly generalized linking verb with little experiential weight), one may have difficulties in identifying the nature of the clauses whose process is realized by *be* and meanwhile the second participant is realized by an indefinite NG, because such clauses are easily confused with attributive ones. In this case, the focus falls on the meaning conveyed by the two participants, the relationship between them, and the use of the clauses.

Copulas other than *be*, viz, *become* and *remain*, are pseudo-copulas or semi-copulas; they share some (but not all) characteristics of the main copular verb *be*. They are interpreted as phased version of being (Halliday and Matthiessen 2014: 269): *Become* indicates 'begin to be something', involving an inceptive state, and *remain* means 'continue to be something', emphasizing on a durative state. Just like the case with the identifying clauses with *be*, the relationship between the two participants in an identifying clause with pseudo-copulas and the use of the clause in question play an essential role in differentiating identifying clauses from attributive ones. Let us consider (9) and (11).

- (8) when we refer to climate we are construing general principles and tendencies that 'explain' the multidimensional microvariation that is what we actually have to live with when gardening or planning an outing – and what farmers and sailors have had to struggle with wherever, as a result of settlement, [Id/Tk:] weather became [Ir/V1:] the dominant factor in shaping the human condition
- (9) [Ca:] Vast areas of land have become [Attri:] desert
- (10) the metric foot that is, a foot with a fixed number of syllables became established in Chaucer's time, (...), and [Id/Tk:] it remained [Ir/V1:] the norm of mainstream English verse for the next five centuries
- (11) for a longtime, [Ca:] he remained [Attri:] a bachelor

There is an important distinction between identifying clauses with *be* and those with *become* and *remain*: Identifying clauses with *be* are reversible, while those with *become* and *remain* are irreversible because of the voice restriction (passivization). Take (8) and (10) for example. We say neither *the dominant factor in shaping the human condition is become by weather* nor *the norm of mainstream English verse for the next five centuries is remained by it.* 

In summary, the identifying clauses whose process is realized by neutral verbs are divided into two categories – those whose process is realized by *be* and those whose process is realized by *become* or *remain*. The identifying clauses of the former type are reversible in terms of switchability. However, there are also exceptions. Some types of *be*-identifying clauses, such as those used to make a definition, to pin down a certain point and to exemplify, have a fixed interpretation of Token and Value. The identifying clauses of the latter type are not reversible in terms of passivization and hence can only have the Token ^ Value structure.

### 4.3.3.2 Identifying processes realized by verbs of assignation

Verbs of assignation usually realize mental and verbal processes, such as *see*, *look upon*, *interpret*, *conceive*, *explain*, *view*, etc. In identifying clauses, they (in past participles) occur with *be* and *as* in the form of '*be* + verb (past participle) + *as*', like *be seen as*, *be looked upon as*, *be interpreted as*, and so on. Matthiessen (1995a, reviewed in §2.6.2.2) examines the projection type of identifying clauses. The difference between his research and mine is that whereas Matthiessen focuses on the assigned identifying clauses with explicit Assigner, such as *they consider Einstein the greatest scientist in the 20<sup>th</sup> century*, mine concerns the assigned identifying clauses whose Assigner is implicit, such as *Einstein is considered as the greatest scientist in the 20<sup>th</sup> century*. Let us consider the following authentic examples:

- (12) [Id/VI:] the Recipient role is treated as [Ir/Tk:] the 'destination' of DIRECTION
- (13) [Id/VI:] the presence of voice, (...), was taken as [Id/Tk:] the 'positive' value of the feature in question...
- (14) [Id/VI:] the process of change in language can be looked upon as [Ir/Tk:] the replacement of one system of 'analogies' and 'anomalies' with another
- (15) [Id/VI:] frequency in the text is to be interpreted, (...), as [Ir/Tk:] the manifestation of underlying possibility in the system
- (16) [Id/VI:] field can be characterized as [Ir/Tk:] the deployment and organization of the ideation base.
- (17) ... [Id/VI:] optionality is ... restated as [Ir/Tk:] simple transition network
- (18) ... [Id/VI:] the resulting sounds are described as [Ir/Tk:] the 'stops'...

The structures of these clauses are 'participant + process + participant' rather than 'participant + process + circumstance (Role)'. This is justified by the distinction between participant roles and circumstantial roles elaborated by Fawcett, who distinguishes participant roles, 'those that are inherently associated with process expressed by the Main Verb', from circumstantial roles, those that 'are specified in a set of networks that are separate, though in some cases independent' (1987: 134). Fawcett (1987) emphasizes the distinction between participant roles and circumstantial roles in spite of the possible cases where the boundary between them is fuzzy. One example illustrating the typical circumstance of Role is shown as below.

(19)

Ι	come	here	as a friend
Actor	process: material	circumstance: Location	circumstance: Role

Halliday indicates that 'what is important is the notion of the "circumstance" as a kind of **additional** minor process, **subsidiary to** the main one...' (1994: 152, my emphasis), and in this respect the circumstances in a clause can be left out without

affecting the understanding of the clause. In other words, the circumstances in a clause are grammatically optional. For example, leaving as a friend out in (19) will not pose any problems for the understanding of *I come here*. But in (12) - (18), this is not the case. The second participant in these clauses cannot be left out because they are participant roles obligatory in the clauses. The difficulty of distinguishing the participant roles from the circumstantial roles results from one question: To which element is as attached? It is part of the process when attached to the verb but part of the circumstance when attached to the second NG. Halliday (1994: 157) makes a systematic distinction between you'll grow + into a big girl and you'll turn into + a real terror on the basis of the placement of the preposition into. He (ibid.) identifies the former as construing a material process plus a circumstance of Role in view that the preposition is attached to the second NG and forms part of the circumstance and the latter as construing a relational process plus a participant of Attribute in view that the preposition, together with the verb, is part of the process. This is because circumstances are subsidiary to the process and hence are less closely related to the verb that realizes the process. If the configuration of (12) - (18) were taken as 'participant + process + circumstance (Role)', the preposition as would be attached to the second NG. But the variants of (12) as follows show that this is untenable.

### (12) a. What is the Recipient role treated as?Not How is the Recipient role treated?

In addition, two types of thematic structure, preposing (i.e. preposed Subject) and predicating (i.e. predicative Theme) (Halliday and Matthiessen 2014: 122), can also be used as tests.

# (12) b. i. the 'destination' of DIRECTION the Recipient role is treated as Not as the 'destination' of DIRECTION the Recipient role is treated ii. it is the 'destination' of DIRECTION that the Recipient role is treated as

Furthermore, since the circumstance roles are minor processes subsidiary to the main process, they can be left out without affecting the understanding of the original meaning. If *as* in the identifying clauses (with the assignation verbs) were part of the circumstance of Role, leaving the circumstance out would not affect the meaning. However, leaving the second participant out will lead to incomplete information and ungrammatical structure as in (12, c) or information that deviates from the information conveyed by the original clauses as in (15, c). This is different from *today* in *Tom is the leader today*, where the leaving out of *today* does not affect the understanding of Tom's role as the leader.

- (12) c. \*the Recipient is treated
- (15) c. ?frequency in the text is to be interpreted

It is seen clearly from the analyses above that the preposition *as*, together with the assignation verb, realizes the process. The expressions *is treated as*, *was taken as*, *can be looked upon as*, *is to be interpreted as*, *is characterized as*, *is restated as* and *are described as* can be replaced with *be*. And just like *be*, they are generalized links between the two participants in an identifying clause. This on the one hand justifies once again that the preposition is not part of the circumstance, and on the other hand leads us to seek the differences between the identifying clauses with *be* and those with the assignation verbs. Examining (12) - (18) from an ergative point of view will shed light on the distinction between these two types of identifying clauses.Here, (12) is presented as an illustration.

(12) d. the Recipient role is treated as the 'destination' of DIRECTION by X
 X (e.g. we/she/John) treat (s) the Recipient role as the 'destination' of DIRECTION

From the variant of (12) one can tell that the feature that distinguishes the identifying clauses with the assignation verbs from those with *be* is the existence of an implicit Agent. Differing from the verbs from the equative classes that typically realize identifying processes, verbs such as *take*, *treat*, *look upon*, *interpret*, *characterize*, *restate* and *describe* are usually found in mental and verbal processes and require a Senser or Sayer. In (12) – (18), although these verbs cannot be taken literally as mental or verbal, there is an implication of Agent. Therefore, in such identifying clauses, the intervention of an Agent is detected even it does not show explicitly.

The verbs typically used in mental clauses but now functioning as a generalized link between the two participants in an identifying clause are restricted to those sense-via-mind verbs such as view, regard, consider, see, understand, recognize, and the like. This has been noted in the literature, both within and outside SFL. Within SFL, Matthiessen (1995a) claims that only the verbs realizing the cognitive and desiderative types of mental processes function in a projected identifying clause. Other types are implausible because 'perception and emotion don't project' (Matthiessen 1995a: 317). Outside SFL, Lenci (1998: 268), influenced by Chomsky, points out that the copular functions may be added to some verbs on the basis of their original meanings, such as seem, believe, etc. A large number of these verbs are epistemic verbs, most of which realize the cognitive type of mental processes in SFL. Other verbs realizing mental processes, such as the sensory verbs look, sound, smell, *feel* and *taste*, cannot be used in this way. Second, the verbs typically used in verbal processes but now realizing identifying processes are not simple verbal verbs ('speaking' only), such as speak, tell and talk, but the complex verbal verbs that share common ground with the mental ones (speak-via-mind), for example, describe, declare and say. Different from the simple verbal verbs focusing on either what is said or the activity of saying, the complex verbal verbs concern the IDEA conveyed by the activity of saying.

(20) a. she is declared as the most poshest contestant ever

b. research is being described as the academic Trojan horse whose personnel have all but captured the city of the intellect

c. \*he is told as the most promising student in the class

d. \*he is talked as the most promising student in the class

Although it seems uncommon to say *he is said as the most promising student in the class*, it is possibleto use a hypotactic VG complex of projection in the clause – *he is said to be the most promising student in the class*. But we cannot say *he is told /talked to be the most promising student in the class*.

The verbs in mental and verbal processes require a conscious participant, although in some cases the participant is conscious only metaphorically. In this sense, the identifying clauses with the assignation verbs have the capacity to project the outer experience in the world as wordings or ideas in our inner world, and implicate the source of the information. Accordingly, the specific verbs realizing identifying processes are divided into 'non-sourced' and 'sourced' (Harvey 1999: 75). In an identifying clause with non-sourced verbs, the relation between the two participants is not affected by an outside source, but in an identifying clause with sourced verbs, the relation between the two participants is related, either explicitly or implicitly, with a conscious, or metaphorically conscious source, who initiates the relation. The sourced-verbs in Harvey's account are in most cases assignation verbs, which are divided into 'externalized' (Harvey 1999: 76), embodied in the verbal relational verbs such as *call*, *state* and *declare*, and 'internalizing' (ibid.), embodied in the mental relational verbs such as see, consider and regard. Both of the two types of assigning verbs involve an Assigner (typically a human Agent) either implicitly as in the lion is seen as the king of the forest or explicitly as in most people see the lion as the king of the forest. Even though sometimes the Assigner is implicit, 'sourcing can still be detected in the verbs realizing the process' (Harvey 1999: 84). As regard to the identifying clauses with explicit Assigner, source can be found in the Mood (as

Subject) or in the Residue (as Adjunct). The cline of the explicitness of the source in identifying clauses is shown in the figure below.



Figure 4.8 Cline of the explicitness of the source in identifying clauses with assignation verbs

The identifying clauses with the assignation verbs may be confused with clauses as (21) and (22), the two authentic examples taken from textbooks.

- (21) the students are also encouraged...to acknowledge <u>semiotic systems other than</u> <u>that of language</u>: form of art...ritual and other behaviour patterns... [Goal:] language [process:] <u>is set apart</u>, (...), [circumstance: Role] as the prototypical semiotic system
- (22) time units in the world of food preparation <u>never serve as participants in a figure;</u>
  [Goal:] they [process:] <u>are involved</u> [circumstance: Manner] <u>indirectly</u>
  [circumstance: Role] as circumstances of Duration

On the surface, (21) and (22) seem to be the same as (12) - (18), but a close examination reveals that they are not. The tests (i.e. probe question, preposed Subject and predicative Theme) showing that *as* is part of the process in (12) - (18) also show that *as* in (21) and (22) is part of the circumstance of Role. Take (21) for example.

(21) How is language set apart? – Language is set apart as the prototypical semiotic system.

Not What is language set apart as?

- i. as the prototypical semiotic system language is set apart Not the prototypical semiotic system language is set apart as
- ii. it is as the prototypical semiotic system that language is set apartNot it is the prototypical semiotic system that language is set apart as

In addition, the circumstances in (21) and (22) can be left out without affecting the original meaning conveyed by the clauses. According to the context of co-text (highlighted by the underlines), (21) emphasizes the separation of language from other semiotic systems and (22) focuses on the indirect involvement of time unit. If *is set apart as* in (21) and *are involved as* in (22) are replaced with *be*, the original meanings are changed even though these two clauses may be acceptable in other contexts.

 (23) a. the students are also encouraged...to acknowledge <u>semiotic systems other than</u> <u>that of language</u>: form of art...ritual and other behaviour patterns... [Goal:] language [process:] <u>is set apart</u>, (...)

b. *time units in the world of food preparation <u>never serve as participants in a</u> <u>figure;</u> [Goal:] <i>they* [process:] <u>are involved</u> indirectly

Having compared 'participant 1 + process (assignation verbs) + participant 2' with 'participant + process (be + verb: past participle) + circumstance (Role)', I will demonstrate the features of the identifying clauses with the processes realized by the assignation verbs.

In almost all cases the assignation verbs can be replaced by *be*, and the clauses with such verbs are similar to *be*-identifying clauses. But before exploring further the closeness of the identifying clauses with the assignation verbs to *be*-identifying clauses, I would re-state the differences between them. First, although the assignation verbs function as a generalized link between the two participants in a clause, they are not as experientially light as *be*. The hidden mental or verbal sense flavors the

identifying clause in question. Second, the assignation verbs imply an Agent lurking behind the process.

Now attention is shifted to the similarities between the identifying clauses with *be* and those with the assignation verbs. The discussion begins with the participants. Definiteness plays an important role in determining the nature of the clause in question. To illustrate this point, I re-present (3) and (4) in §4.3.3.1 as (24) and (25), but with the substitution of the assignation verbs for *be*.

- (24) an office is interpreted as a place (typically) with chairs, desks, and typewriters located in downtown and (inherently) with doors and windows in a building
- (25) the result in the latter case is described as a derived verb root which is locative, and which is therefore subject to the accompaniment of a location noun in accordance with (S12-17)

Since the identifying nature of (3) and (4) has been justified in §4.3.3.1, it is not necessary to repeat here. What is now in focus is the allocation of the two structural functions of Token and Value in such identifying clauses. In order to realize an identifying process, the verb typically used in mental and verbal processes is a past participle, and it has no active counterpart (as (12, d) shows) unless it occurs in an assignment by projection. Consequently, the identifying clauses with the assignation verbs only have the Value ^ Token structure.

The features of the identifying clauses with the assignation verbs are summarized as follows. First, the structure of the identifying clauses with the assignation verbs, i.e. 'participant 1 + process + participant 2', should be distinguished from 'participant + process + circumstance'. Second, the identifying clauses with the assignation verbs are similar to those with *be* in terms of the importance of the relationship between the two participants in determining the nature of the clauses whose second participantis realized by an indefinite NG. Third, the identifying clauses with the assignation verbs imply an Agent. Fourth, because of the apparent passive form of the identifying

clauses with the assignation verbs, the allocation of the structural functions in such clauses is Value ^ Token. The summary of the relationship between the two participants in an identifying clause with the assignation verbs is shown in the figure as below.



Figure 4.9 Features of the identifying clauses with assignation verbs

4.3.3.3 Identifying processes realized by phrasal verbs of role-playing

The meaning of role-playing can be denoted by the verbs like *be* and *play*. In addition, it can also be conveyed by the phrasal verbs such as *function as*, *serve as*, *act as*, *work as* and *perform as*, which are called by Greenbaum (1996) 'copular prepositional verbs'. The verbs *function*, *serve*, *act*, *work*, and *perform* are usually used in material clauses, but together with *as* realize the identifying process of role-playing. The 'role' in role-playing is, again, not the Role in the circumstantial meaning but part of the process. This is seen from the variants of the identifying clause in (26), which is collected from COCA.

- (26) What does it serve as? It (the spatial metaphor of the commonsense model) serves as the sources of processes in their model of the mind Not How does it serve?
- i. the sources of processes in their model of the mind it serves as Not as the sources of processes in their model of the mind it serves
- ii. it is the sources of processes in their model of the mind that it serves asNot it is as the sources of processes in their model of the mind that it serves

The question is what the relations among the identifying clauses with the role-playing phrasal verbs, those with the neutral verb *be* and those with the assignation verbs are.

All the three types of identifying clauses are sensitive to the definiteness of the participants. Unlike the equative verbs such as *represent*, *symbolize* and *signify*, the neutral verb *be*, the assignation verbs and the role-playing phrasal verbs are semiotic-free. This will be explained in detail in §4.3.3.4 below.

In addition, it has been shown via (26) that the role-playing phrasal verbs are similar to the assignation verbs in that they typically realize processes other than the identifying ones. However, these verbs have the same function as *be* in linking the two participants of equal status. But the identifying clauses with the role-playing phrasal verbs differ from both those with *be* and those with the assignation verbs. Compared with those with *be* that are reversible, the identifying clauses with the role-playing phrasal verbs are not reversible; compared with those with the assignation verbs are not reversible; and those with the set with the role-playing phrasal verbs that have no active counterpart, the identifying clauses with the role-playing phrasal verbs do not have passive counterpart, as shown by the variants of (26 - 28), another two examples from COCA.

- (26) [Id/Tk:] *it serves as* [Ir/VI:] *the sources of processes in their model of the mind \*the sources of processes in their model of the mind are served as by it*
- (27) [Id/Tk:] the dean of the school will act as [Ir/Vl:] the marshal of graduation ceremony

\*the marshal of graduation ceremony will be acted as by the dean of the school

(28) [Id/Tk:] kidneys and lungs function as [Ir/VI:] the most important physiological buffer systems
\*the most important physiological buffer systems are functioned as by kidneys and lungs

Because the identifying clauses with the role-playing phrasal verbs are not reversible,

the allocation of the structural functions can only be Token ^ Value.

On the basis of the analysis above, I present the relationship between the two participants in the identifying clauses with the role-playing phrasal verbs as below.



Figure 4.10 Relationship between the two participants in the identifying clauses with role-playing phrasal verbs

4.3.3.4 Identifying processes realized by verbs of signification, symbolization and indication

Verbs of signification, symbolization and indication are typical equative verbs, such as *represent*, *signify*, *stand for*, *betoken*, *mark*, and so on. One of the features of such verbs is their semiotic-sensitivity. It means the possibility of the verb to be followed or preceded by a symbol such as '+', '-', ' $\psi$ ', ' $\sqrt{}$ ', etc., or a mark such as ' $\Delta$ ',  $\dot{\gamma}$ ', ' $\dot{\gamma}$ ', etc., in other words, one of the participants in the clause is a symbol, mark, and the like. The identifying processes realized by the verbs of signification, symbolization and indication are far more semiotic-sensitive than the three types of identifying processes discussed above. The first type shown in §4.3.3.1, the identifying processes realized by the copular verb *be*, is labeled 'neutral' by Halliday (1994: 123). 'Neutral' refers to the experiential lightness of the copula. Consequently, no semiotic feeling is aroused at the first sight of *be*. The assignation verbs and role-playing phrasal verbs, such as *consider*, *treat*, *interpret*, *describe*, *act*, *serve*, etc., are not from the equative classes but frequently realize mental, verbal or material processes. The identifying clauses with the verbs of signification, symbolization and indication are distinct from the first three, for they denote an inherent semiotic meaning that is directly embodied

in the verbs realizing the process, like *symbolize*, *signify* and *mark*. And they have their own characteristics, which are exemplified by the following authentic clauses from COCA and textbooks.

- (29) semantically, [Id/Tk:] these (finite verbal operator 'will' and finite verbal or some other form of modality 'could, is/are likely') represent [Ir/VI:] future time and probability
- (30) [Id/Tk:] a tick represents [Ir/Vl:] acceptance
- (31) [Id/Tk:] the vertical axis [Ir/VI:] represents process time
- (32) 'John runs' signifies an episode...
- (33) [Id/V1:] the operation of insertion is symbolized by [Ir/Tk:] '+'
- (34) [Id/Tk:] the 'dative' marks [Ir/VI:] the indirect object
- (35) [Id/Tk:] the Latin word 'casus'...means [Ir/VI:] 'falling' or 'derivation'

The semiotic-sensitive verbs of signification, symbolization and indication foreground an extra-stratal identifying relationship between language and other semiotic systems (see §4.2 above). Take (31) for instance, *the vertical axis* denotes an extralinguistic symbol, which can be realized by a drawing like ' $\blacksquare$  '. The symbol is translated by language in the identifying clause to convey the process time. On the other hand, *process time*, which is within the linguistic system, is represented by the symbol ' $\blacksquare$  '. This is called by Halliday and Matthiessen 'symbolic identity' (1999: 514). Such a process involves an extralinguistic symbol and extends beyond the strata of language. The verbs presented at the beginning of this section can all realize the extra-stratal identifying relationship between language and other semiotic systems, as in (31, a), the variant of (31).

(31) a.the vertical axis represents/symbolizes/signifies/realizes/marks/stands for/means process time The neutral verb, assignation verbs and role-playing phrasal verbs can also replace *represent* in (31).

### (31) b. the vertical axis is/is taken as/is described as/serves as process time

When the verb realizing the process in (31) is replaced with *is*, *is taken as*, *is described as* and *serves as*, (31, b) is grammatically acceptable. The difference is the disappearance of the original semiotic flavor brought by the semiotic-sensitive verbs. As argued in the General Statement (§1.1), all identifying processes are inherently semiotic, an identifying process like (31, b) is a semiotic process, but the verbs used in (31, b) differ from those in (31, a) in their capacity of conveying the semiotic meaning directly. The neutral verb and the verbs of assignation and role-playing do not necessarily convey a semiotic meaning. However, the verbs of signification, symbolization and indication convey the semiotic meaning directly, and this is especially true of the identifying clauses with the verbs of symbolization, shown by the contrast between (33, a, i) and (33, a, ii – iii).

(33) a. i.the operation of insertion is symbolized by '+'
ii. ?the operation of insertion is/is taken as/is described as '+'
iii. ? '+' serves as the operation of insertion

Another distinction between (31, a) and (31, b) is that the identifying relationship in (31, a) is one between the linguistic system and the symbolic system, within which the structural functions of Token and Value are easily recognized even though no specification of the context is provided since a symbol is less abstract than the entity symbolized in most cases. However, the interpretation of (31, b) depends largely on the context, contrived as (31, b, i) and (32, b, ii) below. In the first context, the vertical axis is a symbol; while in the second context, it may be interpreted in a different way.

### (31) b. i. *(in a textbook)*

[in the following diagram], the vertical axis is/is taken as/is described as/serves as process time

ii. (in a factory, a master worker is introducing a machine to an apprentice) the vertical axis [of the machine] is/is taken as/is described as/serves as process time

The identifying relationship between the two participants in (31, b, i) is the same as that in (31, a): Both demonstrate a relationship of symbolization. However, (31, b, ii) is divergent from (31, a) in that the relationship between the vertical axis and process time in (31, b, ii) may be not one of symbolization but a neutral one. Therefore, the verbs that are semiotic-sensitive are at the same time less sensitive to the context, while those that are semiotic-free are at the same time more sensitive to the context.

Due to the characteristic of being semiotic-sensitive, the verbs of symbolization, signification and indication can foreground some of the meanings that cannot be conveyed directly by the neutral, assignation and role-playing verbs. In this respect, characteristic (i) of identifying clauses (the NG realizing the second participant is definite) (see §4.3.3 above) no longer has priority, and characteristic (ii) (the verb realizing the process is one from the equative classes) enjoys equal status with characteristic (i). (30) is presented as an illustration.

### (30) i. a tick represents acceptance

ii. a tick is acceptance

Let us consider (30, i) first. In this clause, the two participants, *tick* and *acceptance*, are realized by indefinite NGs. In recalling (3) in §4.3.3.1, one will find that the two participants in (3) are also realized by indefinite NGs. Although in both (3) and (30, i) the relationship between the two participants is established in a generic sense, they are different types of identifying clauses. First, (3) construes the experience of definition

or restatement, whereas (30, i) construes the experience of symbolization. The second difference is that (30, i) foregrounds the extra-stratal realization relationship between language and other extralinguistic semiotic systems because of its semiotic-sensitive nature. The figure below illustrates the characteristics of (30, i).



Figure 4.11 Semiotic interpretation of (30, i)

The figure demonstrates that there are two semiotic systems involved, the linguistic system and the symbolic system. (30, i) is likely to be used on an occasion of questionnaire survey. Usually, if the respondents accept something or some event, they will draw the symbol ' $\sqrt{}$ ' on the questionnaire rather than writing down the word 'tick' to show their acceptance. And it is often the case that they will draw '×' to indicate the objection. Therefore, in spite of the indefinite NGs, (30, i) is like (31) in foregrounding an extra-stratal identifying relationship<sup>17</sup>. But not all clauses whose process is realized by the semiotic-sensitive verbs are identifying ones; they may also be attributive clauses, such as (32).

Now, I shift my attention to (30, ii). The question is whether (30, ii) is an identifying clause or not. Until now, two types of identifying clauses with the two participants realized by indefinite NGs have been discovered – definition and symbolization. Other possibilities will be shown in the discussion of the clines of identifying clauses in §4.5.4. With respect to (30, ii), it is certainly not a clause of definition. Furthermore, just like (31, b, ii), it is not easy to determine the clause type

<sup>&</sup>lt;sup>17</sup>Notice that 'acceptance =  $\sqrt{}$ ' is valid only in some context of cultures, such as China, Great Britain, etc. But in Brazil, the symbol of acceptance is a dot '.' rather than a tick, and objection is indicated by 'F'. (Thanks for the suggestion of Veloso Francisco from Hong Kong Polytechnic University, who is from Brazil.)

because it may also be explained as 'tick is one of those symbols that are used to represent the volition of acceptance'. In this case, it is an attributive clause.

The second difference between the identifying process realized by the verbs of signification, symbolization and indication and those realized by *be* and other verbs is that some of the former type of processes, such as those realized by *show*, *indicate* and *imply*, are easily confused with verbal processes. To illustrate this, I show the contrast between the contrived (36, i) and (36, ii) as below.

### (36) i. [Id/Tk:] his silence implied [Ir/VI:] his agreement

ii. [Sayer:] he [verbal:] implied [Verbiage:] his agreement

There is no doubt that (36, i) is an identifying clause of symbolization, within which the symbol *his silence* is the Token and the symbolized *his agreement* is the Value. But in (36, ii) the relationship between the two participants is no longer a relational one, although the verb realizing the process remains *implied*. What differentiates (36, i) from (36, ii) is that in (36, i) the first participant is unconscious whereas in (36, ii) the first participant is conscious. Such confusion does not exist in the clauses whose process is realized by the verbs other than those of symbolization, signification and indication.

## (37) his silence is/is considered as/serves as/equals his agreement \*he is/is considered as/serves as /equals his agreement

Although not all of the verbs of signification, symbolization and indication have this feature, it is certain that none of the other types of verbs will cause this confusion.

Apart from foregrounding an extra-stratal identifying relationship between language and other extralinguistic semiotic systems, the verbs of symbolization, indication and signification also realize an inter/intra-stratal identifying process within the linguistic system, as in (29), (34) and (35). Compared with the identifying clauses

with *be* that are reversible in terms of switchability and those with the verbs of assignation and role-playing that are irreversible in terms of passivization, the identifying clauses with the verbs of symbolization, indication and signification are reversible in terms of passivization.

### 4.3.3.5 Identifying processes realized by verbs of equation

Equation verbs refer to such verbs as *equal*, *add up to*, *amount to*, *sum up to*, *come to*, *aggregate*, *total*, and the like. They are called equation verbs because they indicate an equal status between two participants in terms of quantity, quality or value. When the verbs of equation indicate a relationship between two participants in terms of quantity, the clause in question construes an identifying process only. However, when they indicate a relationship between two participants in terms of quality and value, the clause in question may construe an identifying process or an attributive one, as in *believing in BBC's ethos equals a faith*, *job tribunal rules*. In the following two instances, the first shows equation in quantity, and the second shows equation in quality/value.

### (38) one plus two equals three

(39) the evidence adds up to the fact that he didn't murder that man

The first instance whose process is realized by *equal* is reversible in passivization, but the second one whose process is realized by *add up to* is irreversible.

### (38) i. three is equaled by one plus two

(39) i. \*the fact that he didn't murder that man is added up to by the evidence

### 4.3.3.6 Summary of § 4.3.3.1 – § 4.3.3.5

From §4.3.3.1 to §4.3.3.5, I examine the verbs that realize the process of identifying clauses and the NGs that realize the participants along the cline of lexicogrammar, in this way classifying five types of identifying clauses on the basis of the verbs – clauses with the neutral verb be, clauses with the assignation verbs, clauses with the role-playing phrasal verbs, clauses with the verbs of symbolization, signification and indication, and clauses with the equation verbs. Some of the verbs have already been discussed by Halliday (1994), but only generally without further analysis. In my account, I not only present a further type of verbs (verbs of assignation) but also explore the characteristics of the different types of equative verbs by making a detailed comparison among them.

The comparison is carried out mainly in three respects – the nature of the verbs, the realizations of the participants and the clauses' ability to reverse. These three aspects interact with one another. In respect of the nature of the verbs, the verbs of symbolization, indication and signification are the most semiotic-sensitive, and the verbs of assignation are the least because they do not typically realize identifying processes and flavor the clause in question with a mental or verbal sense. The second semiotic-sensitive verbs are the verbs of equation that indicate an equal status between two participants, followed by the phrasal verbs of role-playing that convey a meaning relating to function and role. Next comes the neutral verb *be*, which is experientially light and does not specify any particular meaning. The more semiotic-sensitive a verb is, the less context-sensitive it is. The semiotic-sensitivity and context-sensitivity of the equative verbs are demonstrated in the figure below.



Figure 4.12 Semiotic-sensitivity and context-sensitivity of equative verbs

If the verb realizing the process is semiotic-sensitive, characteristic (i) of identifying clauses (the NG realizing the second participant is typically definite) (see §4.3.3) and characteristic (ii) (the verb realizing the process is one from the equative classes) enjoy equal status. However, if the verb realizing the process is not semiotic-sensitive, characteristic (i) has the priority in indicating the nature of a clause. In terms of the reversibility of an identifying clause, there are two cases. When the process is realized by specific verbs, the reversibility of the clause is a grammatical issue relevant to the voice contrast; when the process is realized by *be*, the reversibility of the clause depends on the use of the clause and the meaning conveyed by the participants. Therefore, the identifying processes realized by *be* are analyzed more frequently on the lexis pole, and those realized by *be* are analyzed more frequently on the grammar pole.

### 4.3.4 Eight-cell paradigm, four-cell paradigm and two-cell paradigm

In investigating the realizations of the elements (the participants and the process) in identifying clauses in §4.3.3, I discovered three paradigms – the eight-cell paradigm, the four-cell paradigm and the two-cell paradigm. The three types of identifying clauses are discussed in detail in the following sections.

4.3.4.1 Reflections on Davidse's eight-cell paradigm: The role of circumstances

Davidse (1996b) explains the eight-cell paradigm of identifying clauses (introduced in §2.6.2.1 above) by giving an example of role-playing (*Alec Guinness is Smiley*) with a specification of the different context of situations where they occur (Davidse 1996b: 101). Here, I will introduce a different example *my brother is the tallest* to show the possible influence of the circumstantial elements in the clause on the interpretations of an identifying clause resulting from the internalization of the context of situation in

question. In other words, the interpretations of an identifying clause may be influenced by the construction of the features of the context of situation of the text circumstantially in the clause.

Toward a more systematic and clearer presentation, I show the analysis of the example in the table as below (the bold type indicates the place where the tonic prominence falls).

Table 4.3 Eight-cell paradigm of the intensive identifying clause (adapted from Davidse 1996b: 101)

	active	passive
Subparadigm I	my brother = Tk	
	my brother =?	
	decoding	
I: a	my brother is the tallest one	I: b <b>the tallest</b> one is my brother
	Id/Tk Ir/Vl	Ir/Vl Id/Tk
	the tallest one =?	
	encoding	
I: c	the tallest one is <b>my brother</b>	I: d <b>my brother</b> is the tallest one
	Id/Vl Ir/Tk	Ir/Tk Id/Vl
Subparadigm II	the tallest one = Tk	
	my brother =?	
	encoding	
II: a	my brother is <b>the tallest one</b>	II: b <b>the tallest one</b> is my brother
	Id/V1 Ir/Tk	Ir/Tk Id/Vl
	the tallest one =?	
	decoding	
II: c	the tallest one is <b>my brother</b>	II: d <b>my brother</b> is the tallest one
	Id/Tk Ir/Vl	Ir/Vl Id/Tk

In the following analyses, the eight possibilities of the allocations of the structural functions are indicated by the sub-headings in the table for convenience. I

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will use Subp[Ia] (participant 1 as Token) to indicate [Id/Tk:] ^ [Ir/Vl:], Subp[Ib] to indicate [Ir/Vl:] ^ [Id/Tk:], Subp[Ic] to indicate [Id/Vl:] ^ [Ir/Tk:], Subp[Id] to indicate [Ir/Tk:] ^ [Id/Vl:], Subp[IIa] (participant 1 as Value) to indicate [Id/Vl:] ^ [Ir/Tk:], Subp[IIb] to indicate [Ir/Tk:] ^ [Id/Vl:], Subp[IIc] to indicate [Id/Tk:] ^ [Ir/Vl:], and Subp[IId] to indicate [Ir/Vl:] ^ [Id/Tk:]. Next, let us consider the identifying clause *my brother is the tallest one*.

The contextualization for Subp [Ia] and Subp [Ib] is contrived in the dialogue as follows, which involves two friends chatting on campus.

- A: My brother is in the basketball team.
- *B: Who is your brother?* (What characteristic distinguishes your brother from the other family members?)
- *A*: (I) a. *My brother is the tallest one (in my family). /*(I) b.*The tallest one (in my family) is my brother.*

The participant to be identified (my brother) is identified by the value (the tallest one). *My brother* is the Identified, and *the tallest one* is the Identifier. In this process, the identity of 'my brother' is decoded as being the tallest one, in which case *my brother* is the Token and *the tallest one* the Value. In other words, being the tallest one in the family is the characteristic of 'my brother' that distinguishes him from the other family members. In a different situation, what the speaker is seeking is the one who is identified as the tallest one in the family rather than the essential characteristic that identifies the identity of 'my brother'. One can see this from the dialogue below.

### A and B are talking about A's family members

- *B: Who is the tallest one (in your family)?* (Who has the characteristic of being the tallest one in your family?)
- *A*: (I) c. *The tallest one is* **my brother**. /(I) d.**My brother** *is the tallest one.*
In this case, *my brother*, which still functions as Token, is not the Identified but the Identifier, and *the tallest one*, which still functions as Value, is the Identified. In this encoding clause, the identity of the tallest one is identified by 'my brother'.

For Subp [IIc] and Subp [IId], the third context is contrived in the following conversation.

#### *B* is looking at a picture in *A*'s room.

- *B: Who is the tallest one (in the picture)?* (To whom is the form of being the tallest one assigned in the picture?)
- A: (II) c. The tallest one is my brother. /(II) d. My brother is the tallest one.

In contrast to what happened in the first two family situations, A in the picture situation immediately above identifies 'my brother' as the value to whom the form the tallest one is assigned. In other words, the identity of the tallest one in the picture is decoded as 'my brother', in which case the Identified *the tallest one* is the Token and the Identifier *my brother* the Value. If, on the other hand, the speaker is interested in the form that 'my brother' takes in the picture, then the Token *the tallest one* is the Identifier and the Value *my brother* the participant to be identified.

*B* is looking at a picture in *A*'s room.

*B: Which one is your brother (in the picture)?* (What form is assigned to your brother in the picture?)

A: (II) a. My brother is the tallest one. /(II) b. The tallest one is my brother.

In this process, the identity of 'my brother' is coded in the form of the tallest one in the picture.<sup>18</sup>

<sup>&</sup>lt;sup>18</sup> In IFG, Halliday (1994: 126) shows the motivations of the different interpretations of the structures of an identifying clause in respect of MARKEDNESS. The choice of a certain structure is led by the desire for the unmarked voice (active) or the unmarked information structure (Given - New). Since (I, a), (I, c), (II, a) and (II, c) are unmarked for information, here I only present the analysis of (I, b), (I, d), (II, b) and (II, d).

<sup>(</sup>I) b. Who is your brother?

*The tallest one is* (is represented by) *my brother* 

Adding the circumstantial elements to the clauses and in this way construing the features of the context of situation of the text circumstantially, I present the consequent clauses as follows:

(40) *Alec Guinness is Smiley [in the play]* 

(41) my brother is the tallest one[in the family]

(42) my brother is the tallest one [in the picture]

In the three examples (40) - (42), the insertion of the circumstance of Place is shown in the square brackets. In the first example, even with the circumstantial element *in the play*, the clause still has eight possible interpretations. In terms of role-playing (Davidse 1996b), the concern is the actor playing the role of Smiley or the role played by Alec Guinness. In this case, *Alec Guinness* is the Token, and *Smiley* is the Value. If the clause is seen from the other perspective, role-tailoring (ibid.), *Smiley* is the Token and *Alec Guinness* is the Value. In this context of situation, it is hardly surprising that the playwright who appreciates Alec Guinness's artistic talent designed a role customized for him. However, this is not the case with (41) and (42) because the circumstantial elements in these two instances restrict the eight interpretations of *my* 

Ir/Vl:	passive	Id/Tk:
New 🚽		Given

(I) d. Who is the tallest one?

My brother	is (represents)	the tallest one		
Ir/Tk:	active	Id/V1:		
New Given				

(II) b. Which one is your brother?

The tallest one	is (represents)	my brother
Ir/Tk:	active	Id/V1:
New 🗲		- Given

(II) d. Who is the tallest one?

My brother	is (is represented by)	the tallest one
Ir/V1:	Passive	Id/Tk:
New -		Given

All the four interpretations are marked for information, but they differ in the markedness for voice. Different from (I, d) and (II, b) that are unmarked for voice, (I, b) and (II, d) are marked for both voice and information. However, as Halliday (ibid.) claims, although cases like (I, b) and (II, d) are 'unmotivated'because they are 'double marked', they can occur in 'some highly specific context'. Therefore, in my account, all the eight possible interpretations are considered.

brother is the tallest one to four by construing features of the context of situation of the text circumstantially. In the family situation, 'my brother' is the concrete entity in the world, and being the tallest one is the abstract characteristic of the entity. Because of the restriction from the circumstantial element, my brother is always the Token and the tallest one always the Value. In this situation, one may seek either the characteristic of the entity that distinguishes him from the other family members or the entity that has the unique characteristic in the family. In the picture situation, the tallest one is the concrete form seen directly in the picture, and 'my brother' is the abstract value of the form. Consequently, the tallest one is always the Token and my brother always the Value. In this situation, one may seek either the identity of the one who takes the form of the tallest one in the picture or the identity of 'my brother' by referring to the form he takes in the picture. Therefore, (40) is different from (41) and (42) in that the circumstantial element in (40) has no influence on the interpretations of the clause whereas the circumstantial elements in (41) and (42) restrict the possible interpretations of the clauses from eight to four. This is because the circumstantial elements in (41) and (42) internalize the context of situation within the clauses and function as a valid restriction for the interpretations of the clauses in question.

However, the nature of the four interpretations of (41) and (42) is different from that of the four interpretations of the four-cell identifying clauses (to which Iwill return immediately in § 4.3.4.2). The four interpretations of (41) and (42) are the results of the restriction from the circumstantial elements. That is to say, a clause such as (41) or (42) has four interpretations in some specified context. But a four-cell identifying clause is interpreted in four ways even no specification of context is provided.

4.3.4.2 Eight-cell paradigm, four-cell paradigm and two-cell paradigm: Analysis of the types of identifying clauses

Before embarking on the analysis of the three paradigms, I will explain the meaning

of 'reversible' first, which has been briefly introduced in §4.3.3 above.

One prominent characteristic of identifying clauses summarized by Halliday and Matthiessen (2014: 268) is that differing from attributive clauses identifying ones are usually reversible. What is meant by 'reversible' in Halliday and Matthiessen (ibid.) is that the clause in question can be passivized. However, the meaning of 'reversible' is not as simple as it seems, it should be interpreted from three aspects. One is the realization of 'reversible', i.e. how is 'reversible' realized. The realization of 'reversible' is discussed in terms of VOICE. On the one hand, it means PASSIVIZATION provided that the process is realized by specific verbs. On the other hand, if the process is realized by the neutral verb be, the realization of 'reversible' is the switch between the Subject and the Complement (in short, s-c switch). In this respect, whether a clause is reversible means whether the reversed form (either in passivization or in S-C switch) is grammatical. Another is 'reversible' in the interpreting perspective, concerning the two complementary perspectives of an identifying clause. In other words, when the clause is interpreted from a different perspective, whether is it meaningful? For example, in interpreting the identifying clause Tom is the leader, one can interpret it from the two perspectives of role-playing and role-tailoring. Furthermore, 'reversible' also refers to the focus of information, relating to the known and new information and is realized as the **tonic prominence**. The first 'reversible' is grammatical, while the latter two are semantic, labled as semantic reversibility 1 and semantic reversibility 2 respectively. Consequently, we should consider both the GRAMMATICAL and SEMANTIC aspects in determining the plausibility of a clause in its reversed form. The grammatical reversibility is related to the departure of information (the contrast between A and B, C and D, E and F, and G and H, as shown below), the semantic reversibility 1 is related to the coding dimension of information (the contrast between A - D and E - H), and the semantic reversibility 2 is related to the identifying dimension of information (the contrast between A - B and C - D, and between E - F and G - H). One will see in due course ((i) - (iii)) in this section) that the clause's ability to reverse has a great influence on

the number of the interpretations of an identifying clause.

Therefore, the interactions between the two sets of structural functions of Token – Value and Identified – Identifier, realized as the clause's reversibility, are essential in the classification of the identifying clauses into the eight-cell paradigm, the four-cell paradigm and the two-cell paradigm. Interacting with one another, theoretically they generate the following eight possibilities if no context is specified (P1 is short for participant 1 and P 2 for participant 2).

- A. [Id/Tk:] P 1 process [Ir/Vl:] P 2 (i.e. Subp [Ia])
- B. [Ir/VI:] **P 2** process [Id/Tk:] P 1 (i.e. Subp [Ib])
- C. [Id/V1:] P 2 process [Ir/Tk:] P 1 (i.e. Subp [Ic])
- D. [Ir/Tk:] **P**1 process [Id/Vl:] P2 (i.e. Subp [Id])
- E. [Id/VI:] P 1 process [Ir/Tk:] P 2 (i.e. Subp [IIa])
- F. [Ir/Tk:] **P** 2 process [Id/Vl:] P 1 (i.e. Subp [IIb])
- G. [Id/Tk:] P 2 process [Ir/Vl:] P 1 (i.e. Subp [IIc])
- H. [Ir/VI:] **P** 1 process [Id/Tk:] P 2 (i.e. Subp [IId])

From A to D, P 1 functions as Token, and P 2 functions as Value; from E to H, P 1 serves as Value, and P 2 serves as Token. If P 1 is the Token, there are two possibilities, shown as A (Subp [Ia]) where P 1 is the Identified and C (Subp [Ic]) where P 1 is the Identifier. If the clause within which P 1 is the Token is grammatically reversible, there will be two further possibilities, shown as B (Subp [Ib]) and D (Subp [Id]). If, on the other hand, P 1 is the Value, the clause in question is interpreted as E (Subp [IIa]) where the focus falls on P 2 or G (Subp [IIc]) where the focus falls on P 1. Since the clause in question is grammatically reversible, two further possibilities are presented, shown as F (Subp [IIb]) and H (Subp [IId]). In order to include all the eight interpretations, the identifying clause in question is required to be reversible grammatically (voice) and semantically reversible (either

passivized or S-C switched) but meanwhile semantically irreversible in the first sense, or if it is grammatically reversible but meanwile semantically irreversible in the second sense, it has a four-cell paradigm, in which case either A - D or E - H, or C - D or G - H are not acceptable. If the clause in question is neither grammatically nor semantically reversible, it has a two-cell paradigm, in which case only A /C or E /G are acceptable.

The discussion of the different paradigms of identifying clauses also takes the verbs realizing the process as the starting point, but here the verbs are grouped according to not their meanings (as discussed in §4.3.3 above) but their grammatical functions.

i. Identifying processes realized by the copular verb be

Identifying clauses having an eight-cell paradigm are typically represented by those with *be*. Since such clauses have been examined in detail in §4.3.3.1 above, I am not going to repeat here.

However, not all identifying clauses with *be* has an eight-cell paradigm, some of them, such as those used to make a definition, exemplify and pin down a certain point, are not characterized by an eight-cell paradigm because of the two participants in the clause. In the clauses of definition and exemplification, the term and the example can only be the Token, and the gloss and the exemplified can only be the Value (the reasons have been given in §4.3.3.1). Consequently, they have a four-cell paradigm since they are semantically irreversible in the first sense. The clauses of pinning down a certain point are semantically irreversible in the first and second senses. The point to be pinned down is always the Token, and the participant, realized by *problem, issue, question, point, reason, result,* etc., is experientially light and cannot be the Identifier. These two factors together reduce the number of the interpretations of the identifying clauses of pinning down a certain point from eight to two. The possible interpretations of these three types of *be*-identifying clauses are presented in the three authentic

examples from textbooks and COCA as follows:

(43) *linguistics is the study of language* (Subp [Ia], Subp [Ib], Subp [Ic], Subp [Id]) [definition]

(44) an example of the acyl group is the acetyl group (Subp [IIa], Subp [IIb], Subp [IIc], Subp [IId])

[exemplification]

(45) the point is that he is not native (Subp [IIa], Subp [IIb])

[pinning down a certain point]

ii. Identifying processes realized by transitive verbs

Identifying clauses whose process is realized by transitive verbs have a four-cell paradigm because such clauses are grammatically reversible but semantically irreversible in the first sense. Take *equal* and *symbolize* for example, they convey equation and symbolization respectively. The identifying clause with the process realized by *equal* is examined first. (38) in §4.3.3.5, re-presented here as (46), is an illustration.

(46) [Tk:] one plus two equals [Vl:] threea. three is equaled by one plus twob. ?[Tk:] three equals [Vl:] one plus two

Although (46) is grammatically reversible (as in (46, a)), it is semantically irreversible in the first sense. The relation between one plus two and three is one between expression and content. Consequently, in an equation, the result, like *three* in the clause, is always the Value, and the way to get it, like *one plus two*, is always the Token. The four interpretations of the equation are Subp [Ia], Subp [Ib], Subp [Ic] and Subp [Id]. This is also the case with the identifying clauses whose process is realized by *represent*. As an illustration, (33) in §4.3.3.4 is re-presented as (47).

## (47) *the operation of insertion is symbolized by* '+'(Subp [IIa], Subp [IIb], Subp [IIc], Subp [IId])

The meaning conveyed by (47) is one of symbolization. Symbolization always involves the symbol and the symbolized, and in most cases the symbol is less abstract than the symbolized. In (47), '+' is the symbol symbolizing the operation of insertion. Therefore, '+' is the Token on a lower order of abstraction, whereas *the operation of insertion* is the Value on a higher order of abstraction. If the operation is the Token and the symbol the Value, the consequent interpretations are illogical since people rarely use the meaning to **symbolize a symbol**<sup>19</sup>.

iii. Identifying processes realized by intransitive verbs

The intransitive verbs refer to the assignation verbs and role-playing phrasal verbs. Identifying clauses with these two types of verbs are neither grammatically reversible nor semantically reversible in the first sense. However, identifying clauses with the role-playing phrasal verbs are different from those with the assignation verbs in respect of the grammatical irreversibility: While the former do not have any passive counterpart, the latter do not occur in the active form unless they are projected.

<sup>&</sup>lt;sup>19</sup> However, in some specific domains, especially in logic and mathematics, we can find instances using symbols to symbolize the entities that typically occur as symbols in unmarked cases. For example,

Attribute blocks are blocks that have several characteristics or attributes and can be sorted according to color, size, shape, thickness, or any combination of those characteristics. For example, colors can be red, blue, and yellow; sizes can be large or small; shapes can be triangles, squares, rectangles, circles, or hexagons; and blocks can be thick or thin. (Note: For the task illustrations in this, <u>blue is represented by black, red is represented by green and yellow is represented by white.</u>)

In this example, the clauses of symbolization, which occur in the generic sense, are underlined. In order to show unambiguously the relationship between the two participants, I present a long passage because seen the two participants on the same order of abstraction in isolation will cause a problem in identifying the Token and Value in each clause. Located in the context, *blue* in the first process, *red* in the second and *yellow* in the third are the Identified and Value. Accordingly, *black*, *green* and *white* are the Identifier and Token. The three clauses construe the content of the attribute blocks by reference to the different colors in the world.

To show the influence of the two kinds of reversibility on the interpretations of an identifying clause, I re-present (28) in §4.3.3.3 as (48) and (18) in §4.3.3.2 as (49). Let us consider (48) first.

#### (48) kidneys and lungs function as the most important physiological buffer systems

This type of identifying clauses typically construes a relationship between form and function, holder and status, or occupant and role. One may get some hints from the verbs themselves. In (48), being the most important physiological buffer systems is the function of kidneys and lungs, in other words, the organs that realize the function of neutralizing substances that could alter the PH levels in the body are kidneys and lungs. It does not make sense to say that the function of the most important physiological buffer systems is kidneys and lungs.

# (48) a. \*[Tk:] the most important physiological buffer systems function as [Vl:] kidneys and lungs

The S-C switch structure of (48) (i.e. (48, a)), within which the Subject is the Token, is intended to show that an interpretation from a different perspective is unacceptable since no one would understand that the function of the most important physiological buffer systems is kidneys and lungs. In this respect, the possible interpretations of the clause are reduced to four. Secondly, the role-playing phrasal verbs have no grammatical passive counterpart.

# (48) b. \*the most important physiological buffer systems are functioned as by kidneys and lungs

Influenced by these two factors, the possible interpretations of the identifying clause are further reduced to two – Subp [Ia] and Subp [Id].

Now let us move to (49).

(49) [V1:] the resulting sounds are described as [Tk:] the 'stops'

a. \*[V1:] the 'stops' are described as [Tk:] the resulting sounds

b. \*the 'stops' describe as the resulting sounds

The first variant of (49), within which the Value is realized by the Subject *the stops*, demonstrates that the clause is semantically irreversible in the first sense. The second variant of (49) shows that the corresponding active form is grammatically unacceptable unless it occurs in a projection like *the scholar describes the resulting sounds as the stops*. From the two variants of (49) it is clear that the clause is both semantically and grammatically irreversible, and consequently has only two interpretations – Subp [IIa] and Subp [IId].

What has been discussed above is based on the premise that no context is specified for the identifying clause in question. If the context in question is provided, the identifying clause has only one interpretation, as shown in (48, c). However, in some cases, the identifying clause in question may nevertheless be ambiguous even in a specified context (see more in §7.5.2).

#### (48) c. (during an interview)

Interviewer: What organs function as the most important physiological buffer systems?

Interviewee: Buffer systems function mainly to regulate the acid or base balance in the body. There are three principal classes of buffers in the body proteins, phosphate buffer system and the bicarbonate buffer system. However, you are asking the organs involved, my answer is: kidneys and lungs function are the most important physiological buffer systems. From the question posed by the interviewer one can see that the Value, *the most important physiological buffer systems*, is the information already known, i.e. the Identified. Hence the allocation of the structural functions in the clause is Subp [Id]. If, in a different situation, the interviewer poses a question like 'what do kidneys and lungs function as', the Token, *kidneys and lungs*, is the Identified, and the clause has a different interpretation Subp [Ia].

Although the semantic reversibility and grammatical reversibility can explain the four-cell and two-cell paradigms in most cases, they are not omnipotent. It is difficult to determine whether a *be*-identifying clause is active or passive due to the neutral nature of the copula be. The interpretations of an identifying clause with the process realized by be rely more on the realization and the meaning of the participants and the context, but the interpretations of an identifying clause with the process realized by specific verbs rely more on the realization of the process on the ground that specific verbs narrow down the semantic space and rely less on the context. Take the be-identifying clauses of pinning down a certain point for instance. They are characterized as a two-cell identifying paradigm for two reasons. One is that they can only be interpreted from one perspective since the participant like the point, the issue, the problem, etc. can only be Value, and another is that due to the experiential lightness, the participant like the point, the issue, the problem, etc. can only be Identified. As for the identifying clauses whose process is realized by specific verbs, such as those with the role-playing phrasal verbs, they have a two-cell paradigm because they can only be interpreted from one perspective and do not have any acceptable passive counterpart under the influence of the realization and the use of the clause.

#### 4.3.5 Identifying processes in special constructions

The examinations above, from the beginning of the chapter to the preceding section, concern the ordinary constructions of identifying clauses. The identifying processes in

the special constructions of thematic equatives and identity statements are investigated in §4.3.5.1 and §4.3.5.2 respectively.

4.3.5.1 Identifying processes in thematic equatives

According to Halliday (1994: 41), a thematic equative structure, which typically involves a nominalization, is composed of two constituents, and these two are related by 'a relationship of identity'.

Thematic equatives have long been examined in the name of pseudocleft sentences outside SFL, with the focus on the various issues reviewed in §2.3. In my account, I discuss thematic equatives from a systemic functional perspective to explore their identifying nature and to incorporate them in the system of identifying processes.

Higgins (1979) and Declerck (1988) indicate that pseudoclefts may be either specificational or predicational. One can identify the nature of the pseudoclefts by converting them into a cleft since clefts are always identifying clauses<sup>20</sup>. To illustrate this point, I borrow the following two examples from Declerck (1988: 132), and re-present them as (50) and (51) respectively.

- (50) a. what I am looking for is a book
- b. it is a book that I am looking for
- (51) a. what I am looking for is small
- → b. \*it is small that I am looking for

Declerck (ibid.) indicates the reason why (50, a) is specificational and (51, a) predicational as that there is a corresponding cleft (50, b) for (50, a) but none for (51, a)

<sup>&</sup>lt;sup>20</sup> Clefts, i.e. predicative themes in SFL, have only one interpretation due to three factors. Take *it is a book that* I'm looking for for example. The first participant in the predicative theme is always *it*. It is a place holder rather than a referential pronoun. Therefore, the clause cannot be reversed into a book that I'm looking for is *it*. In addition, in predicative themes it is always the NG (such as a book in the example) that functions as the Identifier. Furthermore, Halliday (1967b) points out that the element being predicted, i.e. a book in the example, serves asthe Token. As a consequence, there is only one possible interpretation for a predicative theme in any case.

In my view, a clause like (51, a) is not an identifying clause not because of the invalidity of the corresponding cleft (51, b) but because of the use of the clause in question and the relationship between the two participants. It is an attributive clause with a clausal nominalization. For example, in (51, a), the first participant what I am looking for, the clausal nominalization, is the Carrier, and the second participant small, realized by an adjective, is the Attribute. The clause is interpreted as 'the attribute of the thing that I am looking for is small'. With respect to (50, a), the meaning is ambiguous. It may be interpreted either as 'the thing that I am looking for is classified as one of the members in the class of books' or as 'the thing that I am looking for is identified as a book rather than something else like a computer, video tape, etc.' In the former case the clause construes an attributive process, whereas in the latter case it construes an identifying process. A clause like (50, a) shows some of the characteristics of a typical identifying clause and some of a typical attributive clause: It is reversible; the second participant is realized by an indefinite NG; and it is interpreted in terms of classification in one case and identification in another. As a result, I regard it as an intermediate case between these two types of clauses.

Next, the typical thematic equatives will be investigated, exemplified by (52).

#### (52) what is now at issue is the state of health of the patient

This thematic equative presents all the characteristics a typical identifying clause has. The realization of the second participant, *the state of health of the patient*, is definite; the clause can be reversed as *the state of health of the patient is what is now at issue*; the relationship between the two participants is one of identification rather than classification. Halliday indicates that '...in a thematic equative, the nominalization is always the Value' (1994: 127) because it is always the nominalization that is on a higher order of abstraction. In this example, the nominalization *what is now at issue* is the Value, and *the state of health of the patient* is the Token. Since the structural

function of Value is always realized by the nominalization, there are four possible interpretations for the clause. Furthermore, thematic equatives and predicative themes have special information structure. They are the 'specific sentence types' (Klammer and Schulz 1992) born to predicate a certain element and to draw attention to this specific element. In a thematic equative where the information coded in the wh/that-clausal nominalization is already known and functions as the background and the information coded in the other element is new and is intended to attract attention, the participant functioning as the Identifier will never be the clausal nominalization. Accordingly, the Value can only be mapped onto the Identified. Influenced by these two factors, the possible interpretations of a thematic equative are reduced to two, i.e. Subp [Ia] and Subp [Ib] or Subp [IIa] and Subp [IIb]. In the example, if the Value were realized by the NG rather than the clausal nominalization, that is, the Token were realized by the more abstract concept what is now at issue and the Value by the less abstract entity the state of health of the patient, the resulting interpretations would be unacceptable. If the Identifier were realized by the clausal nominalization, it would be new information and receive the tonic prominence. This contradicts with the nature of the thematic equatives in what is coded in the clausal nominalization being already known.

Influenced by the semantic irreversibility 1 and the special information structure, thematic equatives are characterized by a two-cell paradigm. This is the same as the *be*-identifying clauses of pinning down a certain point. But this conclusion is valid only in the thematic equatives that involve one clausal nominalization. If both of the two participants are realized by clausal nominalizations, the situation is different. Let us consider the following example from a textbook:

#### (53) what is topic is frequently what is thematic.

In this example, both of the two participants are realized by clausal nominalizations – *what is topic* and *what is thematic*. Hence, it is hard to decide which one is the Value

and which one is the Token. In such a case, one needs to consider the context in question. If the clause concerns the meaning of topic, the participant *what is topic* is the Token.

A: *What is topic*? (What's the meaning of topic?)

B: [Id/Tk:] It (what is topic) is (constitutes) frequently [Ir/VI:] what is thematic.

If, on the other hand, the clause aims at explaining the characterization of topic, the participant *what is topic* is the Value.

A: *What is topic?* (What characterizes topic?)

B: [Id/V1:] It (what is topic) is (is realized by) frequently [Ir/Tk:] what is thematic.

By the same token, when thematic comes into focus, the clause can also be interpreted from two perspectives. If the clause answers 'what's the meaning of thematic', *what is thematic* is the Identified and Token; if the clause answers 'what characterizes thematic', *what is thematic* is the Identified and Value. In addition, the clause is reversible, both *what is topic is frequently what is thematic* and *what is thematic is frequently what is topic* are acceptable. Therefore, the clause has an eight-cell paradigm. This is the same as the typical *be*-identifying clauses, which is also characterized by an eight-cell paradigm, but different from the thematic equatives with one clausal nominalization, which has a two-cell paradigm.

In sum, the thematic equatives are divided into two subtypes. If one of the two participants is realized by a NG and the other is realized by a clausal nominalization, the clause in question has a two-cell paradigm because of the semantic irreversibility 1 and the special information structure. If both of the two participants are realized by clausal nominalizations, the clause in question has an eight-cell paradigm.

#### 4.3.5.2 Identifying processes in identity statements

A thematic equative with two clausal nominalizations as in (53) *what is topic is frequently what is thematic* is 'identity statements' (Davidse 1991, Declerck 1988), which refers to a statement of two names or two descriptions with respect to the identity. Apart from the thematic equatives with two clausal nominalizations, clauses such as *the Morning Star is the Evening Star* and *Mr. Irving is doctor Hutt* are typical identity statements. In the preceding section, (53) is treated as a thematic equative and has eight interpretations. However, this is only the tip of the iceberg; the interpretations for such constructions are rather complex.

Inspired by Declerck (1988), I interpret (53) in four ways. In the first case, the clause is interpreted as 'frequently, a topic has the property that a theme has'. It may also be interpreted as 'frequently, a theme has the property that a topic has'. Thirdly, it may be interpreted as 'frequently, the property/properties that a topic has is/are the same as the property/properties that a theme has'. The fourth possible interpretation is 'frequently, being a property of a topic is the same as being a property of a theme'. *Be* in the first two interpretations is a link between the Carrier and the Attribute, where the clause construes an attributive process. In the latter two interpretations, *be* links two participants of equal status, where the clause construes an identifying process characterized by an eight-cell paradigm, as analyzed in the preceding section.

The distinction between the attributive interpretations and the identifying ones is essential in our understanding of the meaning of a topic and theme. If the topic and the theme are seen as two different concepts, i.e. a topic has some property/properties a theme has or a theme has some property/properties a topic has, the clause is interpreted attributively. If, on the other hand, these two are taken as the same concept that can substitute for each other in most contexts, the clause is interpreted in terms of identification. This reflects the different views on the relation between the theme and the topic. Some equate the topic with the theme, while others, such as Halliday and Matthiessen (see 2014, Chapter Three, Footnote 1), consider them as different concepts and indicate that the topic is only a subtype of the theme.

For a better understanding, I present another example as follows:

#### (54) Mary is who I am

In one case, the two participants in the clause refer to the same person when the clause is interpreted as 'I am Mary', and the allocations of the structural functions are Subp[Ic] and Subp[Id].In another situation, the two participants in the clause denote two different people when it is interpreted as 'Mary has some property/properties that I have'. In this case, the clause is attributive.

In (53), both of the two participants are realized by clausal nominalizations, and the identity statement is characterized by an eight-cell paradigm; in (54), one participant is realized by a NG and the other is realized by a clausal nominalization, and the identity statement has a two-cell paradigm. If both of the two participants are realized by NGs, an identity statement such as *the Morning Star is the Evening Star* has eight possible interpretations. Both the Morning star and the Evening star refer to the planet Venus, but occurring at different times and in different places. The Morning star occurs in the east before sunrise, and the Evening star occurs in the west after sunset. Suppose that a couple is waiting for the sunrise at the seaside. The girl is staring at the star in the east and she asks the boy 'what is that star'. The boy will answer her 'that is the Morning star'. Then, the girl continues to ask 'what is the Morning star', and the boy may tell her 'the Morning star is the Evening star'. The reason why the boy uses this seeming tautology may be that he wants to make fun of his girlfriend or that he thinks his girlfriend has already known what the Evening star is.

#### (55) i. [Id/Tk:] the Morning star is [Ir/Vl:] the Evening star

ii. [Ir/VI:] the Evening star is [Id/Tk:] the Morning star

The focus here is not the informativeness of what is said by the boy (the more informative answer should be *the Morning star is the planet Venus*) but the structural functions of the two participants. In this context, the Morning star is the entity seen in the sky, and the Evening star is used to explain it, and consequently, *the Morning star* is the Identified and Token and *the Evening star* the Identifier and Value. If the girl poses a different question 'is the star in the east the same as the Evening star we saw last night', the boy may answer her as follows:

# (55) iii. (yes,) [Ir/Tk:] the Morning star is [Id/Vl:] the Evening star iv. (yes,) [Id/Vl:] the Evening star is [Ir/Tk:] the Morning star

In the second situation, the girl is also seeking the identity of the star in the east before sunrise, but she provides her background knowledge of the Evening star. Therefore, the Token is still realized by *the Morning star*, but the Identified is *the Evening star*.

In the third context, the location and the participants remain the same (i.e. the couple at the seaside), but the time has changed from before sunrise to after sunset. In this context, what the girl can see is the Evening star, which functions as the Token. If the girl asks 'what is the Evening star', the boy may answer:

#### (55) v. [Ir/V1:] the Morning star is [Id/Tk:] the Evening star

vi. [Id/Tk:] the Evening star is [Ir/VI:] the Morning star

Here, the Token *the Evening star* is the participant to be identified; the Value *the Morning star* is the Identifier and identifies the identity of the Evening star. If the girl asks 'is the star in the west the same as the Morning star we saw in the morning', the boy may provide the following answers:

## (55) vii. (yes), [Id/Vl:] the Morning star is [Ir/Tk:] the Evening star viii. (yes), [Ir/Tk:] the Evening star is [Id/Vl:] the Morning star

In this case, the identity of the Morning star is the participant to be identified, and the Evening star is used to identify it.

Therefore, the identity statements whose participants are realized by NGs are interpreted in eight ways. They are different from the identity statements, where one participant is realized by a NG and the other participant is realized by a clausal nominalization, but they are the same as those whose two participants are realized by clausal nominalizations.

#### 4.3.6 Concluding remarks

A typical identifying clause takes the form of 'definite NG + equative V + definite NG' and is reversible. But there are some instances that lack one or two of the characteristics but are nevertheless regarded as identifying clauses. Some of them may have the participants realized by indefinite NGs (especially the second participant), some may have the process realized by the verbs other than the typical equative verbs (such as the verbs of assignation), and others may not be reversible due to semantic or grammatical factors.

In conclusion, what has been discussed above is systemized in Figure 4.13<sup>21</sup>. This system focuses on usability rather than elegance; it is not one avoiding repeating subsystems. As indicated by Fawcett, the repeating subsystems does not mean the loss of generality, instead, such a system is notationally less economical but practically more usable (Fawcett 1987:162).

The system includes typical identifying clauses as well as non-typical ones. The categorization of identifying clauses is organized around typical identifying clauses. Notice that 'typical' refers to both typical realizations and typical uses of identifying clauses. It is in these two respects that an identifying clause is said to be typical.

The typical realization of an identifying clause is 'definite NG + equative V +

<sup>&</sup>lt;sup>21</sup>Following the tradition in SFL, I use the square brackets to indicate a relationship of 'or' and the curly brackets to indicate a relationship of 'and'.

definite NG'. The main focus falls on 'definite' and 'equative'. In atypical identifying clause, the NGs realizing the two participants are definite and the verb realizing the process is one from the equative classes, as in Tom is the leader. The identifying clauses closest to the typical ones are realized by 'indefinite NG + equative V + definite NG', as in 'royal' is the origin. Also, an identifying clause may be realized by 'definite NG + equative V + indefinite NG' as in the cause of the riot is a picture of the wall shown in  $\S4.3.3.1$  and 'indefinite NG + equative V + indefinite NG' as in an office is a place (typically) with chairs, desks, and typewriters located in downtown and (inherently) with doors and windows in a building. The latter two types do not typically realize identifying clauses and are easily misinterpreted as attributive ones. However, if their uses are typically identifying, they are identifying clauses. The typical uses of identifying clauses include exemplification as in *the interdependence* between the figure taxonomy and the element taxonomy is a specific example of what was observed to be a quite general tendency above in Part II, pinning down a certain point as in the cause of the riot is a picture of the wall, making definitions (generically) as in an office is a place (typically) with chairs, desks, and typewriters located in downtown and (inherently) with doors and windows in a building, and symbolization (individually) as in the vertical axis represents process time (The uses of identifying clauses will be examined in detail in Chapter 7). In addition, the verbs realizing the process may be not from the equative classes. They may typically realize a mental process as in the process of change in language can be looked upon as the replacement of one system of 'analogies' and 'anomalies' with another, a verbal process as in the resulting sounds are described as the 'stops', or a material process as in it serves as the sources of processes in their model of the mind.



Figure 4.13 System of intensive identifying clauses

Intensive identifying clauses (including both the typical and non-typical ones) are

organized into the eight-cell paradigm, the four-cell paradigm and the two-cell paradigm around three factors – grammatical reversibility, semantic reversibility 1 and semantic reversibility 2. Since the characteristics of an identifying clause (Halliday 1994: 123) do not enjoy equal status in the different types of identifying clauses, the system is first divided into two subsystems, one being the identifying clauses whose process is realized by *be*, in which case the relationship between the participants is essential, and the other being the clauses whose process is realized by specific verbs, in which case the realization of the process is important. Therefore, in systemizing intensive identifying clauses in Figure 4.13, I show the relationship between the two participants in *be*-identifying clauses (such as [definition: Term  $^$  Gloss]) and the realization of the process in the identifying clauses whose process is realized by specific verbs (such as [symbolization: *symbolize*]).

In the identifying clauses with be, the three factors influencing the interpretations of a clause are semantic reversibility 1 (interpreting perspectives), S-C switchability and semantic reversibility 2 (possible locations for the tonic prominence). In ordinary be-identifying clauses, if the clause in question is semantically reversible 1, S-C switchable, and either of the two participants can receive the tonic prominence, the clause is characterized by an eight-cell paradigm, such as the clauses of role-playing (the relationship between the two participants is Player ^ Role); if the clause in question is semantically irreversible 1, S-C switchable and has two possible locations for the tonic prominence, it is characterized by a four-cell paradigm, such as the clauses of definition (Term ^ Gloss) and exemplification (Exemplified ^ Example); and if the clause in question is semantically irreversible 1, S-C switchable, and the tonic prominence falls always on one participant, it is characterized by a two-cell paradigm, such as the clauses used to pin down a certain point (Issue/point ^ Claim). With respect to the identifying processes in special constructions, i.e. thematic equatives, predicative themes and identity statements, the interpretations of an identifying clause are also influenced by the three factors. For a thematic equative with only one clausal nominalization, it is semantically irreversible 1, S-C switchable

and has only one possible location for the tonic prominence, and is therefore characterized by a two-cell paradigm. But for a thematic equative with two clausal nominalizations, it is semantically reversible 1, S-C switchable and has two possible locations for the tonic prominence, and hence has an eight-cell paradigm. The predicative themes are special cases that have only one interpretation because of a further restriction from the 'fake' participant *it*. Identity statements are similar to the thematic equatives in that if the participants in an identity statement are realized by NGs, it has an eight-cell paradigm, but if one of the participants is realized by a clausal nominalization, it has a two-cell paradigm.

The interpretations of the identifying clauses whose process is realized by specific verbs are influenced mainly by two factors – semantic reversibility 1 and grammatical reversibility. This subsystem is further categorized into the identifying clauses whose process is realized by the verbs from the equative classes ('equative' in the figure) and those whose process is realized by the verbs frequently realizing mental, verbal and material processes ('deviant'). The identifying clauses with the process realized by equative verbs are divided into the identifying clauses with the transitive equative verbs like *symbolize* and those with the intransitive equative ones like *add up to*. The former are semantically irreversible 1 but grammatically reversible, and hence have a four-cell paradigm, while the latter, together with the identifying clauses with the assignation verbs and role-playing phrasal verbs, are neither semantically nor grammatically reversible, and hence have a two-cell paradigm.

#### 4.4 Notes on possessive and circumstantial identifying clauses

In §4.2 and §4.3, the account for identifying clauses is restricted to intensive ones. This section will probe into the other two types of identifying clauses – possessive and circumstantial. As indicated by the names of the two types of identifying clauses, the meaning conveyed by possessive identifying clauses concerns **possession**, and the meaning expressed by circumstantial ones concerns **circumstance**. In respect to the intensive ones, the meaning coded is representation.

In the literature, the intensive type of identifying clauses was widely examined, but little attention was paid to the possessive and circumstantial types. Fawcett (1987), who makes a quite insightful contribution to the description of relational clauses, holds a view on possessive and circumstantial clauses differing from Halliday (1967a, 1967b, 1968, 1985) in several respects.

According to Halliday (1985), circumstantial identifying clauses are composed of two subtypes. In the first subtype 'circumstance as participants' (ibid.), the participants code circumstantial elements and the process is realized by the neutral verb be, such as the best way to get there is by air. In the second subtype 'circumstance as process' (ibid.), it is the process, realized by specific verbs, that codes circumstantial elements, such as the daughter resembles her mother. In terms of possessive identifying clauses, they are likewise classified into two subtypes. In the first subtype 'possession as participants' (ibid.), possession is coded in the participants and the process is realized by be, such as the book is Mary's. In the second subtype 'possession as process' (ibid.), it is the process, realized by specific verbs, that codes possession, such as Mary owns the book. By the same token, the intensive identifying clauses are classified into 'representation as participants', where representation is coded in the participants and the process is realized by be, and 'representation as process', where representation is coded in the process. Therefore, similar to the intensive identifying clauses (see §4.3.3.3 above), the circumstantial and possessive identifying clauses lie on the cline of context-sensitivity. The identifying clauses with be, whose interpretations rely more on context, open up more semantic space (Harvey 1999: 84), while those with specific verbs, whose meaning is largely coded in the process, rely less on the context.



Figure 4.14 Context-sensitivity and semantic space contrast between identifying clauses with *be* and those with specific verbs

The 'relation type (representation, circumstance and possession) as participant or process' throughout the type of relation paradigm is also found in Chinese, as shown in (56, i - iii) as follows. (56, i) is intensive, (56, ii) circumstantial and (56, iii) possessive.

# 4.4.1 Circumstantial and possessive identifying clauses: Addition to the Hallidayan model

#### 4.4.1.1 Circumstantial identifying clauses

The literature review (§2.8) reveals that the circumstantial type of identifying clauses has rarely been discussed compared with the intensive and possessive types of identifying clauses. The two scholars who explore circumstantial clauses in depth are Halliday and Fawcett. They hold different views on circumstantial clauses in the following three aspects. First, while Halliday (1994) shows that all types of circumstances realized by Adjuncts in a clause, i.e. Time, Place, Manner, Cause, Condition, Accompaniment, Role, Matter and Angle, are found in circumstantial identifying clauses, Fawcett (1987) contends that only circumstances of location, time and accompaniment occur in locational relational clauses (in Fawcett's term) and other types of circumstances are attributes in attributive relational clauses. In other words, Fawcett confines the types of circumstances in locational clauses to the circumstance of location (both in time and space). This is the reason why he uses 'location' to substitute for 'circumstance'. Second, while Halliday (1994) classifies circumstantial clauses into 'circumstance as participants' and 'circumstance as process', Fawcett (1987) rejects Halliday's 'circumstance as participants' type and groups it into attributive clauses. In Fawcett's view, a relational clause such as the best way to get there is by air is not a circumstantial identifying clause but an attributive clause. Third, the locational relational clauses proposed by Fawcett include the clauses that are identified as 'Actor + process (material) + circumstance of Location' in IFG, such as Mary went/came/got to China. I follow Halliday in my argument, but further points will be added to his model of circumstantial clauses.

The 'circumstance as participant' clauses are easily confused with the intensive ones because of the neutral verb *be*. *Be* is different from the circumstantial verbs that denote the meaning of circumstance directly, such as *take up* denoting 'time', *cover* 

denoting 'space', *cause* denoting 'reason', etc. In such cases, we need to take proportionality into consideration by reference to the agnation of the clause in question, that is, to what degree a clause is said to be intensive and to what degree it is said to be circumstantial. Take (57) for instance.

(57) i. the role of Mary is Snow White

ii. the vegetation coverage in this area is 70%

For the 'representation as participant' clause (57, i), it is agnate to (57, i, a) and (57, i, b).

(57) i. a. Mary plays Snow White

i. b. Mary is Snow White.

The 'circumstance as participant' clause (57, ii) is agnate to (57, ii, a) but not to (57, ii, b).

(57) ii. a. the vegetation covers 70% of this area.

(57) ii. b. the vegetation in this area is 70%.

It can be seen that in the intensive identifying clause, the meaning of the clause is denoted directly by the participant (as the noun *role* in (57, i)) or the process (as the verb *play* in (57, i, a)), or implicitly by the relation between the two participants (as in (57, i, b)). In the circumstantial identifying clause, the meaning of the clause is denoted by the participant (as the noun *coverage* in (57, ii)) or the process (as the verb *cover* in (57, ii, a)), but the clause is not valid if it occurs without a word denoting the meaning of the clause directly (as in (57, ii, b)). We can see more in (58).

(58) i. the false statement caused the invalidation of the contract : the cause of the

invalidation of the contract was the false statement : \* the invalidation of the contract was the false statement ii. the seminar took up four days : the duration of the seminar is four days : \* the

seminar is four days

Some identifying clauses code the circumstantial meaning only in participants, as in *today is my birthday*, and some code the circumstantial meaning only in process, as in *Mary resembles her mother*. Although in *today is my birthday* no such noun as *time* occurs, both of the two participants denote a circumstantial meaning of time.

Another concern is Fawcett's classification of such clauses as *Mary went to China* in locational relational clauses. Fawcett (1987) identifies the structure of such a clause as below.

#### (59) [Af-Ca:]/[Ag-Ca:] Mary [process: relational] went to [Location:] China

Af-Ca is the abbreviation of Affected-Carrier and Ag-Ca the abbreviation of Agent-Carrier, but I am not going to explain them considering the possible complexity brought about by the introduction of the new terms. Fawcett (1987) regards such a clause as a locational relational clause, differing from Halliday (1967a, 1967b, 1968, 1985) who sees it as a material clause.

(59) a. [Actor:] Mary [process: material] went [circumstance: Place] to China

*China* is a circumstantial role in the clause. On the surface, (59) is similar to (28) *kidneys and lungs function as the most important physiological buffer systems* in §4.3.3.3 (re-presented as (60) below) because both of them are realized by 'NP + V (material) + Prep. + NG'. But'V + Prep.' in (28) is a phrasal verb and construes an intensive relation between the two participants, while 'V + Prep.' in (59) extends the action of Mary and relates it to a destination. The difference is shown by the probe

questions of (59) and (60).

(59) Mary went to China
 Where did Mary go?
 Not What did Mary go to?

(60) kidneys and lungs function as the most important physiological buffer systems
 What do kidneys and lungs function as?
 Not How do kidneys and lungs function?

Hence, such clauses are material rather than relational.

4.4.1.2 Possessive identifying clauses

Possessive identifying clauses construe a relation of possession of either ownership or belonging-to, and they are likewise classified into two subtypes (1985, 1994, 2004) – 'possession as participant' and 'possession as process'. Similar to the circumstantial identifying clauses but different to the intensive ones (see §4.4.1.1), the meaning of the possessive identifying clauses can be denoted either by the participant (genitive) or by the process (the commonest ones are *own* and *belong to*<sup>22</sup>), as the clauses in (61) show.

(61) i. Mary's is the book /?Mary's belonging is the book : Mary owns the bookii. the book is Mary's /the owner of the book is Mary : the book belongs to Mary

Fawcett (1987), taking advantage of the concept of causation, argues that the clauses whose process is realized by the verbs such as *give*, *send*, *bring*, *receive*, etc.,

<sup>&</sup>lt;sup>22</sup>Belong to in Halliday and Matthiessen (1994, 2004, 2014) is classified as denoting an attributive meaning, but in my view, it also denotes an identifying meaning as long as the relation between two participants is exhaustive (see Chapter Five). This is seen from the contrast between *andrewsiana belongs to the clitonia* and *andrewsiana, borealis, udensis, umbellulata and uniflora belong to the clintonia.* 

are relational clauses. For example, in (62) below, the implied Agent (which does not appear in the clause but can be inferred as *Mary got/received the book from Mike*) caused Mary to have the book; in (63), Mike (appearing in the clause as Agent) caused Mary to have the book.

(62) [Af-Ca:]/[Ag-Ca:] Mary [process: relational] got/received [Possessed:] the book

(63) [Agent:] *Mike* [process: relational] *gave/sent/brought* [Possessed:] *the book to* [Af-Ca:] *Marry* 

Analyzed in Halliday's framework, the two clauses are interpreted in a different way.

- (62) a. [Actor:] Mary [process: material] got/received [Scope:] the book
- (63) a. [Actor:] *Mike* [process: material] *gave/sent/brought* [Scope:] *the book to* [Beneficiary:] *Mary*

The reason why Fawcett (1987) treats such clauses as relational is related to the consequence of the action of giving, receiving and sending. For example, in (63), the result of Mike's action of giving, sending and bringing is that at present Mary is the owner of the book.

In a similar way, Davidse (1996b), influenced by Fawcett (1987), Green (1974), Gropen et al. (1989) and Wierzbicka (1988), considers that 'distranstive constructions encode a general concept of causation by the Agent of a "have", or "possessive", relation between Dative and Patient' (1996b: 94). The difference between Fawcett's research and Davidse's is that Fawcett eliminates the distinction between attributive and identifying and takes all the distransitive constructions as caused attributive possession, but Davidse's analysis focuses on the identifying relation between Dative and Patient.

In addition to *get* and *receive*, verbs that function in a similar way are *acquire*, *obtain*, *take*, and the like. According to Halliday, they convey the meaning 'come to

have' and construe material rather than relational processes (1994: 134). Here, I restrict the analysis to the verbs of receiving, like *get*, *receive*, *acquire* and *obtain*, and leave the verbs of giving aside. I call the verbs denoting receiving 'receiving' verbs for convenience's sake. In my opinion, the clauses with the 'receiving' verbs share some of the features of each of the two types. Semantically, they involve a meaning of possession, but grammatically, they are perfectly acceptable in the present in present tense (the unmarked tense of material processes). As a consequence, such clauses are intermediate cases lying in between typical identifying clauses and typical material ones.

Seen from the semantic perspective, in the clauses whose process is realized by the 'receiving'verbs like *get*, *obtain*, *take* and *receive*, the establishment of the relation of possession accompanies the action of getting, obtaining, taking and receiving of the present possessor. The meaning conveyed is **owning-via-action**. In this sense, the clauses with the 'receiving' verbs construe a relation of possession as a result of a certain action. According to Halliday and Matthiessen (1999), a large domain of material clauses can be interpreted as construing a change have an outcome that is interpretable in relational terms – intensive /elaborating, possessive /extending and circumstantial /enhancing.

The possessive relation construed in the clauses with the 'receiving' verbs is different from that construed in a typical possessive identifying clause. The clauses with the 'receiving' verbs indicate a state of possession resulting from a certain action, while those whose process is realized by the typical possessive verbs such as *own* denote a continuous state, such as (64).

#### (64) Mary owns the book

Because of the changing state (a state of possession as a result of a certain action), the clauses with the 'receiving' verbs have different interpretations in different contexts according to where the focus falls. The focus may fall on the state of possession or on

the action of receiving. One will see more clearly the differences by reference to the probe questions of (62). If the speaker is seeking the state of the book and asking 'where is the book', the clause construes an identifying process, in which case *Mary got/received the book* means 'now the book is with Mary', that is, 'now the book belongs to Mary'. If, on the other hand, the speaker is seeking the action of Mary and asking 'what did Mary do', the clause construes a material process, whose meaning is 'what did Mary do was she got/received the book'.

Seen from the grammatical perspective, it is rare to hear *Mary is owning the house* or *Mary gets/receives the book* unless in a highly conditioned context. In other words, the unmarked tense of the clauses with the 'receiving' verbs is present in present, which is divergent from the unmarked tense of typical identifying clauses (the simple present). In this respect, the identifying clauses with the 'receiving' verbs lean towards material processes.

Although Halliday, Fawcett and Davidse differ in the way they treat the clauses with the 'receiving' verbs, they all emphasize that the relation of possession should not be confined to the usual sense of ownership. It includes other senses such as containment (as in (65)) and involvement (as in (66)), as well as 'negative possession', frequently denoted by the verbs like *lack*, *exclude*, etc.

#### (65) this book is made up of three parts

(66) this projection of field onto the ideation base involves both the particular domain and the general types under which this domain is classified

Just like 'negative possession' in contrast with 'possession', there is 'come to not have' in contrast with 'come to have'. For example, *the criminal is deprived of his politic rights*.

In conclusion, possessive identifying processes are classified into continuous-owning and owning-via-action. The former are realized by typical possessive verbs, while the latter are realized by the 'receiving' verbs. The interpretations of the latter depend largely on contexts. If the focus is on the result of an action, the clause is more like an identifying one, and if the focus is on the action, it is more like a material clause.

#### 4.4.2 Summary of the three types of identifying clauses

The intensive, circumstantial and possessive identifying clauses code different meanings repectively. In intensive identifying clauses, the meaning conveyed is representation; it is coded either in the participants, where the process is realized by be, or in the process, where the process is realized by specific verbs denoting symbolization, equalization, role-playing, etc. In circumstantial identifying clauses, the meaning conveyed is circumstance; it is coded either in the participants or in the process containing a circumstantial element of time, place, cause, accompaniment and manner. In possessive identifying clauses, the meaning conveyed is possession; it is coded either in the participants or in the process denoting possession. The possessive identifying clauses are divided into the continuous-owning type and the owning-via-action type. The feature distinguishing the two subtypes from each other is that the owning-via-action clauses implicitly involve an Agent, who initiates the action and brings the consequent relation of possession between the possessor and the possessed. In summary, if the meaning of the clause in question is coded as participant, the process is realized by the neutral verb be and the relation between the two participants is essential, and if the meaning of the clause in question is coded as process, the process is realized by specific verbs. These are demonstrated in Figure 4.15.



Figure 4.15 Three types of identifying clauses

### 4.5 Clines in identifying clauses

The discussions of the identifying clauses above, which are on the lexicogrammatical stratum, indicate that there are a large number of intermediate cases lying in between the typical identifying clauses and other clause types. Now I will set them out along

on different clines.

#### 4.5.1 Non-typical identifying clauses

An identifying clause is typical when it has the following four characteristics: The NG realizing the second participant is definite; the verb realizing the process is one from the equative classes; the clause is probed by *which?*, *who?*, *which/who ... as?*; the clause is reversible. However, a large body of identifying clauses does not present all these characteristics. Some of them may have the second participant realized by an indefinite NG, some may have the process realized by the verbs other than those from the equative classes, and others may not be reversible. These are non-typical identifying clauses. In this section, the focus falls on the clauses whose second participant is realized by an indefinite NG.

The first type of non-typical identifying clauses is illustrated by (67), collected from textbooks and COCA.

- (67) a. a high score indicated low tolerance of attitudes and interactions related to sexual harassment, whereas a low score indicated high tolerance of the attitude and interactions...
  - b. an increase in number indicates a devaluation
  - c. asterisks indicate correct responses
  - d. silence indicated consent
  - e. ..., with a rating of 1 indicating dissatisfaction, and 4 indicating extreme satisfaction

Compared with typical identifying clauses, the participants in these examples are realized by the NGs containing an indefinite article or no article. Nevertheless, they are taken as identifying clauses in my account. This is justified in terms of form and use. By form I mean the typical realizations of the elements in the clauses. Such non-typical identifying clauses is usually realized by 'indefinite NG + equative V + indefinite NG', sometimes by 'definite NG + equative V + indefinite NG', but never by 'indefinite NG + equative V + definite NG'. The second is the typical realization of an attributive clause, and the last is the typical realization of a typical identifying clause. When the indefinite article *a* or *an* precedes a noun, the noun refers to any member of the class or the class of objects denoted by the noun. As a consequence, both the two participants are usually indefinite for they show an equation in a generic sense<sup>23</sup>. Such clauses construe a process of generic equation. Generic equations are usually found in making contrasts as in (67, a), showing a causal relationship as in (67, a)b), symbolizing as in (67, c-d), and doing a survey as in (67, e). Apart from the four uses, generic equations may also indicate the circumstantial meanings of Time (e.g. transformation, change and destruction followed by renewal) and Place (e.g. a question mark followed a question word such as 'what' or 'how'). Also, they are sometimes used in giving examples like trees exemplify both strength and fragility. Furthermore, they are used in making comparisons as in *in Paul, the court held that a* religious leader's free exercise rights always outweigh a plaintiff's right to compensation.

The equative verbs realizing the generic equation type of non-typical identifying processes are usually those of indication, symbolization, circumstance and comparison.

The second type of non-typical identifying clauses also takes a distinctive form – 'definite/indefinite NG + equative V + indefinite NG 1 + indefinite NG 2 +  $\dots$  + indefinite NG N'.

(68) a. MDI involves computers, electronic instruments, and software for intercommunication
b. the treatment team may involve a medical doctor, a nutritionist, and a mental health professional (i.e. psychologist)

<sup>&</sup>lt;sup>23</sup> 'Indefinite NG + equative V + indefinite NG' is the typical form of the non-typical identifying clauses in the generic sense. The generic equation can also be realized by 'definite NG + equative V + indefinite NG' (e.g. *the solid line represents a covalent bond*) as long as both of the two NGs denote a class rather than an individual.
c. ...the standardized four-part research article containing Introduction, Methods, Results, and Discussion

d. this is followed by snack time, time outside, and a circle time for singing songs

e. ...this strong insecticide can cause anemia, neurotoxicity, nausea, vomiting, and diarrhea

f. they also lack a nose, ears, and tongue

g. ...that deserves honor, respect, understanding, and promotion

All these examples have one feature in common: They express the meaning of makinga list. The first clause in (68) lists the components of MDI, the second lists the components of the treatment team, the third lists the components of the research article, the fourth lists the activities that follow an event, the fifth lists the phenomena caused by the strong insecticide, the sixth lists the things 'they' lack, and the final clause lists the things that certain thing or person deserves. In a word, the list can be a list of things, persons, events, activities, results, etc. The clauses are rewritten as 'the list of ... involves/contains...'

(68) a. i. the list of the components of MDI involves...

b. i. the list of the components of the treatment team may involve...

c. i. ...the list of the components of the standardized four-part research article containing...

d. i. the list of the activities that followed involves...

e. i. ...the list of the phenomena that are caused by this strong insecticide involves...

f. i. the list of what they also lack involves...

g. i. ... the list of what that deserves involves...

I call this type of non-typical identifying clauses list presentation. The equative verbs

realizing the list presentation processes are mainly those of constitution, circumstance and possession.

The third type of non-typical identifying clauses tends to occur in making a definition<sup>24</sup> or doing a translation. They typically take the form 'definite/indefinite NG + equative V + indefinite NG'. At the first glance, the form of the **definition/translation** type of identifying clauses is the same as that of the generic equation type, but the first participant in the definition/translation type of identifying clauses has to be a term. In most cases, it can be preceded by nouns like *term*, *word*, etc. In the following three examples, the first two are translations, and the last is a definition.

- (69) a. ... guey (roughly meaning 'dude' in English)
  - ...the word guey (roughly meaning 'dude' in English)
    - b. ... jiaolv means anxiety
  - → ...the word jiaolv means anxiety
    - c. happiness refers to a state of well-being and contentment
  - the word happiness refers to a state of well-being and contentment

The equative verbs realizing this type of identifying processes are usually those of indication and definition.

The final type is **chart/rank description**. Clauses of this type typically take the form of 'indefinite/definite NG + equative V + indefinite NG'. But different from the indefinite NGs denoting a class in the first and third types of non-typical identifying clauses, the indefinite NGs in the last can denote an individual. (70) is presented as an

<sup>&</sup>lt;sup>24</sup> Declerck (1988: 113) regards definition as differing both from predicational sentences and specificational ones. He (ibid.) gives four reasons to explain why definitions are not specificational. First, they do not carry the contrastive accent that is typical of specificational sentences. Second, they are not reversible, not in terms of grammatical acceptability but in terms of pragmatic functions. Third, they do not convey an exhaustive implication. Finally, there is no corresponding *it*-cleft. However, I think definition (in this section, referring to the clauses whose participants are realized by indefinite NGs) is a subtype of identifying clauses that shares some features of identifying clauses and some of attributive ones. Take *an ostrich is a fast-running African flightless bird with two-toed feet* for instance. The clause is similar to a typical identifying clause in two respects: The process is realized by a verb from the equative classes and the clause can be reversed as *a fast-running African flightless bird with two-toed feet is an ostrich*. Furthermore, it denotes a relation of equation between the two participants. On the other hand, it is partly like attributive clauses in that the second participant in the clause is realized by an indefinite NG. But on the whole it is an identifying clause since the two participants are of equal status.

illustration.

(70) a. ...as chart 1: a substantial rise, a gradual drop, followed by a rise...

b. as Chart 1 shows: a plummet during the second decade followed a steady rise in the first decade, which was in turn followed by a continuous drop in the next five years

Such clauses enable us to visualize what is described by the clauses. Take (70, a) for instance. One can draw the chart as below according to the description of the identifying clause, although it is only one of several possibilities.



Clauses of this type typically contain a circumstantial verb. Apart from chart description, rank description also takes this form.

In sum, I have presented four types of non-typical identifying clauses – generic equation, list presentation, definition /translation and chart/rank description. They typically take the form 'definite/indefinite NG (generic) + equative V (indication, symbolization, circumstance, comparison) + indefinite NG (generic)', 'definite/indefinite NG + equative V (constitution, circumstance, possession) + indefinite NG 1 + indefinite NG 2 + ... + indefinite NG N', 'definite/indefinite (term) + equative V (indication, definition) + indefinite NG (generic)', 'definite/indefinite NG (individual) + equative V (circumstance) + indefinite NG (individual)' respectively.

The focus in this section falls on the definiteness of the second participant that distinguishes identifying clauses from attributive ones, and the analysis in the next

section shows that it is the realization of the first participant that is essential in distinguishing identifying clauses from other types of clauses like verbal, mental, etc.

#### 4.5.2 Further illustrations of non-typical identifying clauses

The preceding section demonstrates the four types of intermediate cases between typical identifying clauses and attributive clauses – generic equation, list presentation, definition /translation and chart/rank description. There are other cases lying between typical identifying clauses and verbal ones, material ones, mental ones and existential ones. In §4.4, I have discussed the cases (e.g. *Mary got the book*) that share some features of a typical identifying clause and some of a material one by referring to the verbs realizing the process in a clause. This section will show the intermediate cases influenced by the realizations of the first participant.

In distinguishing identifying clauses from attributive ones, the definiteness of the second participant is influential. But in distinguishing identifying clauses from some other clauses types, the realization of the first participant plays an important role. First, the contrast between identifying clauses and verbal ones are presented in (71).

(71) a. the discrepancy between the profiles indicates /suggests /implies /shows the theoretically possible gain to obtain from surgery
b. the doctor indicates /suggests /implies /shows the theoretically possible gain to obtain from surgery

The only difference between the two clauses in (71) is the first participant. In (71, a) the first participant is unconscious, but the one in (71, b) is conscious. The difference in the first participant leads to the recognition of (71, a) as an identifying clause and (71, b) as a verbal one. The verbs used in such clauses are those of indication, which function differently in identifying clauses and verbal ones. In an identifying clause, the verbs relate two participants on the different orders of abstraction, but in a verbal

clause, they present the content (i.e. Verbiage) conveyed by the Sayer.

The change in the first participant may also convert an identifying clause into a material one. The clauses with the verbs of equation, inclusion and signification serve as better examples.

(72) a. one plus two equals three

b. see if you can equal that

(73) a. other light-and-sound machines useful for dreamers include the highly portable D.A.V.I.D

b. Hanson even included the business in a full-page ad she ran in the Wall Street

(74) a. this equation and a  $3 \times 3$  matrix transformation form the basis for a color-space conversion often used for CRTs

b. we formed our company on the premise that we would be demand driven...

These three sets of clauses are similar in two aspects. First, there is only one change in '(a)' examples: The first NGs in (a) examples denote an unconscious participant, but those in (b) examples denote a conscious participant. Second, the verbs in '(b)' examples no longer link two participants of equal status in an identifying clause but extend the action of an Actor to a Goal in a material clause.

The third type of clauses an identifying clause may easily slide into in case of the change of the realization of the first participant is the mental clauses. This is especially true of those whose process is realized by the verbs of symbolization, such as *realize* and *express*.

## (75) a. the verb realizes the process in each clauseb. she suddenly realized the importance of this event

In the mental clause, *realize* is followed by the Phenomenon realized by the Senser. Halliday and Matthiessen (2004) point out that the classification of the six types of processes in modeling human experience is not clear-cut; there may be overlapping, blending and ambiguities. They (ibid.) introduce first the three major process types – material processes, mental processes and relational processes, and then show us the three minor types, among which behavioural processes share some features of material processes and some of mental processes, verbal processes share some features of mental processes and some of relational processes, and existential processes share some features of material processes of material processes and some of relational processes, and existential processes share some features of material processes from material processes from material and mental ones, verbal processes from mental and relational ones, and existential processes from material and relational ones. Consequently, relational processes relate closely to verbal processes and existential processes. But this is not the whole picture of identifying processes. Apart from verbal processes, identifying processes may also overlap with material, mental and attributive processes. With respect to their relation to existential processes, (76) is shown as an illustration.

(76) a. it is the cat that Tom has always been looking forb. there is the cat that Tom has always been looking for

(76, a) and (76, b) differ in the realization of the first participant. In the first instance the first participant is realized by the pronoun *it*, and in the second it is realized by the locative adverb *there*.

The identification of the factors that distinguish identifying clauses from other clause types lays a foundation for the later description of the clines in identifying clauses.

### 4.5.3 Possible realizations of the different types of identifying clauses

In §4.3.1, the possible realizations of identifying clauses have been discussed. In this section, this will be re-examined, with the aim of indicating the relations between

identifying clauses and other clause types.

Theoretically and experientially, the two participants in an identifying clause can be a thing, act and fact. Let us consider the following examples (suppose that the process is realized by *be*).

```
(77) a. thing + thing
```

```
Beijing is the capital of China
b. thing + act
the plan is to win all these prizes
c. thing + fact
the question is who is going to be the leader of the team
d. act + thing
to win the first prize is the dream of all the participants
e. act + act
keeping silence is to compromise
f. act + fact
 --
g. fact + thing
how to play the violin is the topic of this lecture
h. fact + act
 ___
i. fact + fact
 --
```

It has been argued in §4.3, §4.4 and §4.5 that different types of identifying clauses overlap with different types of clauses, including verbal, material, mental, attributive and existential clauses. The relation between identifying clauses and verbal ones, material ones, mental ones, attributive ones and existential ones can be also seen from the possible realizations of the different types of clauses. I will leave attributive

clauses aside because attributive and identifying are the two modes of relational clauses and it is no surprise that they share a number of common features. My focus falls on the relation between identifying clauses and the first three clause types.

In order to have a better understanding of the relation between identifying clauses and verbal clauses, I present the characteristics of the verbal clauses first. The first participant Sayer in a verbal clause is either endowed with consciousness or not, and the second participant Verbiage is realized by a NG denoting a thing or a projection denoting a fact. For the convenience of analysis, I re-present (71, a) and (71, b) as (78, a) and (78, b) respectively, with two more examples of (78, c) and (78, d).

(78) a. thing (unconscious) + thing (NG)

the discrepancy between the profiles indicates /suggests /implies /shows the theoretically possible gain to obtain from surgery

b. thing (conscious) + thing (NG)

the doctor indicates /suggests /implies /shows the theoretically possible gain to obtain from surgery

c. thing (unconscious) + fact (*that*-clause)

the discrepancy between the profiles indicates /suggests /implies /shows that theoretically they may gain profit from surgery

d. thing (conscious) + locution (*that*-clause)

the doctor indicates /suggests /implies /shows that theoretically they may gain profit from surgery

Similar to the verbal clauses in (78, b) and (78, d), the second participant in the identifying clauses (78, a) and (78, c) can be a thing or fact /locution. But unlike the verbal clauses, the first participant in the identifying clauses is unconscious. The process in such identifying clauses is usually realized by the verbs of indication.

Now I move to the relation between identifying clauses and material ones. In a

material clause, both participants are realized by a NG denoting a thing; they would not be realized by a *that*-clause denoting a fact. The Actor does not have to be conscious. Here (74, a) and (74, b) are re-presented as (79, a) and (79, b) respectively, with one more example of (79, c).

(79) a. thing (unconscious) + thing (NG)

this equation and a 3 x 3 matrix transformation form the basis for a color-space conversion often used for CRTs
b. thing (conscious) + thing (NG)
we formed our company on the premise that we would be demand driven...
c. thing (conscious) + thing (NG)
its descendants still form the basis for today's Chevys

The examples demonstrate that the two identifying clauses (79, a) and (79, c) are similar to the material clause (79, b). First, the second participant cannot be a fact, in other words, it cannot be projected. Furthermore, the first participant is either conscious or unconscious. The difference is that the first participant may also be realized by a *that*-clause denoting a fact, such as *that he is not native forms the biggest problem in the election*. Identifying clauses having these characteristics are usually those whose process is realized by the verbs of signification.

The third is the relation between identifying clauses and mental ones. In a typical mental clause, the participant Senser is realized by a NG denoting a being endowed with consciousness, and the other participant Phenomenon is realized either by a NG denoting a thing or by a *that*-clause denoting a fact. The examples in §4.5.1, (75, a) and (75, b), are re-presented here as (80, a) and (80, b) respectively. Together with the two examples of (80, c) and (80, d), they illustrate the relation between identifying clauses and mental clauses.

(80) a. thing (unconscious) + thing (NG)

the verb realizes the Process in each clause
b. thing (conscious) + thing (NG)
she suddenly realized the importance of this event
c. thing (conscious) + idea (that-clause)
she suddenly realized that this event is very important
d. thing (conscious) + thing (NG)
the house realizes our dream to have a home

The verb *realize* is categorized by Halliday (1994) as symbolization. In (80, d), *the house* is endowed with consciousness, indicating that the first participant in such clauses can be conscious or unconscious.

The discussions in §4.5.1 and §4.5.2 indicate that the realizations of the participants show divergent features in different types of clauses. Taking the intermediate cases shown in §4.3 to §4.5 into consideration, I present the following findings:

- ① The three elements in a clause, the two participants realized by NGs and the process realized by verbs, affect the interpretations of a clause.
- ② Although all the three elements should be considered in the examination, they do not enjoy equal status. In distinguishing identifying clauses from attributive ones, the DEFINITENESS of the second participant is important. But in distinguishing identifying clauses from other clause types like material, mental and verbal clauses, the type of process and the CONSCIOUSNESS of the first participant are essential.
- ③ Halliday's (1994: 123) classification of the equative verbs sheds light on the classification of the experiential uses of identifying clauses (which will be explored in detail in Chapter Seven). Unlike the intermediate cases between identifying clauses and attributive ones that can occur with all types of equative verbs, the intermediate cases between identifying clauses and other clause types

like material, mental and verbal ones are confined to some certain types of equative verbs. For example, the intermediate cases between identifying clauses and verbal ones are typically found in the clauses whose process is realized by the verbs of indication (e.g. indicate, suggest, imply, show, mean, etc.), those between identifying clauses and material ones are frequently found in the clauses whose process is realized by the verbs of equation (e.g. equal, make, etc.), inclusion (e.g. include, feature, etc.), signification (e.g. form, constitute, etc.) and exemplification (e.g. exemplify, illustrate, etc.), and those between identifying clauses and mental ones are usually found in the clauses whose process is realized by the verbs of symbolization (e.g. realize, mean, express, etc.). In the literature, some linguists (Halliday 2007, Christie and Derewianka 2008) have already shown that the uses of identifying clauses are largely confined in certain registers. Halliday (2007) makes a description of the evolution of scientific English, with the gradual proliferation of verbs beginning to be used in identifying clauses - show, indicate; argue, prove, and so on. From the ontogenetic perspective, Christie and Derewianka (2008) find that the identifying clauses of proof are developmentally fairly late in high school, appearing in some more 'advanced' registers.

#### 4.5.4 Clines in identifying clauses

On the basis of the investigation of the intermediate cases, I will introduce three clines in identifying clauses. One of the two poles is the typical identifying clause and the other pole is the attributive clause, verbal clause or material clause.

The first cline ranges between typical identifying clauses and attributive ones. Apart from the four types of non-typical identifying clauses examined in §4.5.1, the 'is an example of' type investigated in §4.3.3.1 is also on the cline. The cline that has typical identifying clauses and attributive clauses as the two poles is presented in Figure 4.16.



Figure 4.16 Cline ranging between typical identifying clauses and attributive clauses

The relation between typical identifying clauses and verbal ones has been demonstrated in §4.5.2, with (71) as an illustration. Between the two types of clauses lies another type of clauses sharing some features of typical identifying clauses and some of verbal ones, like (81).

(81) a. but both charts show the growth of an identical investment over the same time period

b. recent findings indicate the dunes formed within the past 7,000 years...

It is better to review briefly the relation between typical identifying clauses and verbal ones here. These two types of clauses are similar first in that the second participant in both of them can be realized by a NG denoting a thing, a *that*-clause denoting a fact, or an idea/locution. In addition, some of the verbs used in verbal clauses can also

realize identifying processes. But in a verbal clause the first participant is conscious, whereas the one in an identifying clause is unconscious. Accordingly, it is not difficult to distinguish the discrepancy between the profiles indicates /suggests /implies /shows the theoretically possible gain to obtain from surgery from the doctor indicates /suggests /implies /shows the theoretically possible gain to obtain from surgery. However, in examining (81, a) and (81, b), one may get two results depending on how the first participant in the clauses is interpreted. If charts and findings are taken as unconscious participants, just like the discrepancy between the profiles, they are more like identifying clauses. In this case, the two clauses construe an identifying relation between the two participants in terms of demonstration: The second participant in each clause is the content on a higher order of abstraction demonstrated by the first participant on a lower order of abstraction. If, on the other hand, charts and findings are endowed with consciousness, in other words, if they are personified, the two clauses are more like verbal clauses. In this case, the second participant in each clause is the Verbiage conveyed by the Sayer. Similar cases are found in the clauses whose first participant is realized by *study*, *research*, *investigation*, *table*, *graph*, *chart*, *figure*, statistics, data, findings, results, and the like.

The cline ranging between typical identifying clauses and verbal ones is shown in Figure 4.17 by reference to the ambiguities such clauses as (81, a) and (81, b).



Figure 4.17Cline ranging between typical identifying clauses and verbal clauses

The final cline ranges between typical identifying clauses and material ones. The following two examples illustrate the intermediate cases on the cline.

## (82) a. Mary got the bookb. Mary lost the book

I hold a view different from both Halliday (1985) and Fawcett (1987) in analyzing the clauses whose process is realized by the verbs such as *get*, *lose*, *obtain*, etc. Halliday (ibid.) considers that verbs like *exclude* ([negative] + have), *deserve* (ought to have), *lack* (do not have), etc., realize possessive relational processes, but those like *get*, *lose* and *obtain*, which are interpreted as 'come to have' or 'come to not have', realize material processes. In contrast, Fawcett (ibid.) argues that verbs of 'come to have' and 'come to not have' realize possessive relational processes. In my account, I take the clauses with these verbs as the intermediate cases between typical identifying clauses and material ones. This has been justified in §4.4.1.2. The cline ranging between typical identifying clauses and material ones (in terms of the possessive type) is shown in Figure 4.18.



Figure 4.18 Cline ranging between typical identifying clauses and material clauses

By comparing the intermediate instance with the typical material clause, one will find that the difference between them lies in the result brought by the action. In the intermediate instance, the action leads to a relation of possession, to be specific, the action of getting the book leads to Mary's possession of the book. However, in the typical material clause, Mary's action of reading may take place in a library where the book is not for circulation, hence in no case can Mary possess the book.

Three clines have been presented in this section – the cline between typical identifying clauses and attributive ones, the cline between typical identifying clauses and verbal ones, and the cline between typical identifying clauses and material ones, respectively.

In collecting the data, I take the intermediate cases as identifying clauses.

### 4.6 The semantics: Representation, possession and circumstance

The examinations of the identifying clauses from §4.3 to §4.5 are on the lexicogrammatical stratum. Now I shift my focus to the semantic stratum and its relations to the lexicogrammatical stratum.

Davidse (1996b: 107) advances two fundamental vectors for the intensive and possessive types of identifying clauses (see §4.3.4.1). In §4.3.4.2, I divide the eight possible interpretations of an identifying clause (A to H) into two vectors by supposing one participant as Token in one case (A to D) and as Value in a different case (E to H). This is based on the formal allocation of the structural functions in a clause, and the meaning encoded is mentioned only occasionally.

In intensive identifying clauses, the two vectors result from the interactions between the identifying dimension concerning the distribution of Identified and Identifier and the representation dimension concerning the assignment of Token and Value (§4.6.1). The two vectors in possessive identifying clauses result from the interactions between the identifying dimension and the possession dimension (§4.6.2). In the circumstantial identifying clauses, the two vectors result from the interactions

between the identifying dimension and the circumstance dimension (§4.6.3).

Differing from Halliday, who uses Token and Value in all the three types of identifying clauses, Davidse (1996b) proposes Implicans and Implicatum specific to possessive identifying clauses and meanwhile restricts Token and Value to intensive ones. In my account, I follow Halliday's practice for three reasons. First, Token and Value are not biased towards the intensive type; they are general enough to be used in the other two types of identifying clauses as well. Furthermore, too many terms will make people confused. If Token and Value were restricted to the intensive type, we would have to invent another set of new terms for the circumstantial type, which is, in my opinion, not necessary. Last, additional terms would obscure proportionality and contrast with Carrier ^ Attribute in attributive clauses.

In spite of the unnecessary invention of new terms for the possessive and circumstantial identifying clauses, it is vital to point out the different meanings coded in them and their relationships to the lexicogrammatical realizations.

# 4.6.1 Intensive identifying clauses – representation: 'Role playing' and 'role assigning'

In the intensive type of identifying clauses, the meaning coded is **representation**. The clauses can be interpreted from role-playing and role-assigning. These two interpreting perspectives are inspired by Davidse's (1991: 234) example *Alec Guinness is Smiley*. The social background of this clause is a TV mini-series. When talking about a TV mini-series, one usually pays attention to the roles in the mini-series and the actors who play the roles. In this social context there exist a number of different situational contexts leading to four possible interpretations of the clause. Suppose that two friends (A and B) are looking at a poster of the mini-series with a picture of Alec Guinness on. One may seek the role played by the actor Alec Guinness by asking 'which role is played by Alec Guinness' or 'who is Alec Guinness'. In such a situation, the distribution of the two sets of structural functions

of Identified–Identifier and Token–Value are shown as follows:

#### (83) i. [Id/Tk:] Alec Guinness is [Ir/VI:] Smiley

ii. [Ir/VI:] Smiley is [Id/Tk:] Alec Guinness

(83, i) is a decoding process that identifies Alec Guinness by decoding the Token Alec Guinness into a more abstract Value Smiley. The clause means 'Alec Guinness is identified by representing Smiley'. (83, ii) is the reversed form of (83, i), which means 'Smiley identifies by being represented by Alec Guinness'. (The interpretations of the clause are based on the understanding of the two dimensions in an identifying clause introduced in §4.3.2 above – the identifying dimension and the coding dimension)

If A and B are reading a review of the role Smiley in the TV mini-series, A may seek the actor who plays this role by asking 'who plays Smiley' or 'who is Smiley'.

# (83) iii. [Id/VI:] Smiley is [Ir/Tk:] Alec Guinnessiv. [Ir/Tk:] Alec Guinness is [Id/VI:] Smiley

In contrast with (83, i) and (83, ii), these two clauses are encoding processes that identify Smiley by encoding the Value Smiley into a less abstract Token Alec Guinness. The meaning conveyed by (83, iii) is 'Smiley is identified by being represented by Alec Guinness', and the meaning conveyed by (83, iv) is 'Alec Guinness identifies by representing Smiley'.

From (83, i) to (83, iv), the actor Alec Guinness is the Token that is less abstract than the Value Smiley, the role played by the actor. In a different context of situation, Smiley is the Token less abstract than the Value Alec Guinness. No one will deny such a case where a playwright who appreciates the talent of Alec Guinness customized the role Smiley for Alec Guinness. In one situation, one may pose the question 'for whom did you customize the role'. In other words, what he wants to know is 'to whom is the role assigned', i.e. which actor /who is Smiley.

# (83) v. [Id/Tk:] Smiley is [Ir/VI:] Alec Guinnessvi. [Ir/VI:] Alec Guinness is [Id/Tk:] Smiley

Like (83, i) and (83, ii), (83, v) and (83, vi) are decoding processes. But unlike (83, i) and (83, ii), *Alec Guinness* in (83, v) and (83, vi) is the Token. In this case, they identify Smiley by decoding the Token Smiley into a more abstract Value Alec Guinness. The meaning conveyed by (83, v) is 'Smiley is identified by representing Alec Guinness', and the meaning of (83, vi) is 'Alec Guinness identifies by being represented by Smiley'.

Also, one may hear about the playwright's customization of a role for Alec Guinness but he does not know which role is. He may seek the information by asking 'which role is customized for Alec Guinness', i.e. 'which role is assigned to Alec Guinness'.

## (83) vii. [Id/V1:] Alec Guinness is [Ir/Tk:] Smileyviii. [Ir/Tk:] Smiley is [Id/V1:] Alec Guinness

Like (83, iii) and (83, iv), (83, vii) and (83, viii) are encoding processes. But unlike (83, iii) and (83, iv), these two interpretations have *Alec Guinness* as Value and *Smiley* as Token. That is to say, they identify Alec Guinness by encoding the Value Alec Guinness into a less abstract Token Smiley. In this situation, the meaning conveyed by (83, vii) is 'Alec Guinness is identified by being represented by Smiley', and (83, viii) conveys the meaning 'Smiley identifies by representing Alec Guinness'.

Up to this point, the eight interpretations of the intensive identifying clause, whose process is realized by *be*, have found their situations to fit in. However, one may doubt whether the proposed two perspectives of role-playing and role-assigning are applicable to other intensive identifying clauses that do not involve the role

playing factors. Another example illustrating the intensive type of identifying clauses, (84) as below, which has already been presented in §4.3.4.1, is used to argue that role-playing and role-assigning can be applied to all intensive identifying clauses.

#### (84) my brother is the tallest one

The possible contexts for (84) have been shown in previous analysis. In a conversion between two friends, one may pose a question like 'who is your brother' in order to search for the decisive characteristics in identifying the identity of 'my brother'. In this case, the allocations of the structural functions of the clause are Subp [Ia] and Subp [Ib] (see §4.3.4.2 above). They are decoding processes conveying that 'my brother' is identified by representing the tallest one in Subp [Ia] and the tallest one identifies by being represented by 'my brother' in Subp [Ib]. If, on the other hand, one is seeking the identity of the people who has the feature of being the tallest one, my brother is the Identifier and the tallest one the Identified. The possible structural allocations of the clause are Subp [Ic] and Subp [Id]. In this situation they are encoding processes, which identify the tallest one by encoding the Value the tallest one into a less abstract Token 'my brother'. The meaning conveyed by Subp [Ic] is 'the tallest one is identified by being represented by my brother', and the meaning conveyed by Subp [Id] is 'my brother identifies by representing the tallest one'. The four interpretations, Subp [I, a –d], are the interpretations in metaphorical role-playing, by which I mean the role of the tallest one is played by a metaphorical actor 'my brother'.

In a different situation, the allocations of the structural functions in the clause are different. Suppose that someone is looking at a picture. He may seek the identity of the tallest one in the picture by posing the question 'who is the tallest one'. Or the one who is looking at the picture may identify the identity of 'my brother' by referring to his feature of being the tallest one in the picture. In these two picture-related situations, the four interpretations of Subp [II, a - d] are interpreted from the

perspective of role-assigning. In order to identify the identity of the tallest one that has a concrete form in the picture, 'my brother' functions as the one to which the role is assigned, and of course, in a metaphorical sense. Consequently, it is tempting to conclude that the two perspectives of role-playing and role-assigning of the intensive identifying clause are metaphorical and in this way can be applied to all intensive identifying clauses.

It has been shown in §4.3.3.4 above that in the identifying clauses whose process is realized by the verbs of signification, symbolization and indication, the relation between the participants cannot be interpreted from two perspectives. In other words, the relation between the two participants is interpreted either from role-playing or from role-assigning but not from both. For example, (33) the operation of insertion is symbolized by '+' in §4.3.3.4, a clause having a four-cell paradigm, is interpreted only from role-playing. Suppose that in a presentation, someone is introducing an operational procedure. People who attend the lecture may pose the question 'which operation is symbolized by "+". In this case, the structure of the clause is Subp [Ia] or Subp [Ib]. If, on the other hand, they want to know 'which symbol symbolizes the operation of insertion', Subp [Ic] and Subp [Id] would be obtained. The four interpretations of the clause of symbolization are based on the assumption that the symbol '+' is the Token and the operation of insertion the Value. If one assumes the symbol '+' as Value, the meanings conveyed by the structural configurations of Subp [II, a - d] are illogical, for example, *\*the operation of insertion is identified by* representing '+'. It is hard to find a 'normal' (unmarked) context where the symbol '+' is represented by the operation of insertion, because it is rare to hear 'the operation represents the symbol' or 'the symbol is represented by the operation'. In addition to the semantic factor, the formal criterion to identify Token - Value in a clause also provides evidence to invalidate the assumption of symbol being Value. This conclusion is in accord with the finding in §4.3.3.4. Hence, the formal criterion that Token is the Subject in an active clause and Value the Subject in a passive clause has its semantic origin.

Having examined the identifying clauses with the process realized by the verbs of signification, symbolization and indication, I shift the focus to another type of identifying clauses whose process is realized by the verbs of equation. They are also characterized by a four-cell paradigm. To illustrate, I re-examine (38) *one plus two equals three* in §4.3.3.5. In the equation (1 + 2 = 3), expressed linguistically as *one plus two equals three*, 1 + 2 is the expression of the Value 3. In other words, one plus two shows the way to get three. In one situation, what one wants to know may be the result of one plus two. The possible allocations of the structural functions of the clause are Subp [Ia] and Subp [Ib]. In a different situation, the focus falls not on the result of one plus two but on the way to get three, then *three* is the Identified and *one plus two* the Identifier, and the allocations of the structural functions of the clause are Subp [Ic] and Subp [Id]. However, *one plus two* would not be Value and *three* would not be Token since the way to get something is always less abstract than that thing. Therefore, the interpretations of Subp [II, a–d] are hard to accept.

The unacceptability of some of the interpretations of the two examples above (indicated by asterisks) is relevant to the verbs realizing the process. The former instance illustrates the identifying clauses of symbolization, and the interpretation with the asterisk is meaningless. It is a decoding process, where the less abstract entity Token is identified by decoding it into a more abstract entity the symbol '+'. In almost all situations this interpretation does not make sense because it is a common sense that symbols are usually more straightforward. They are on a lower order of abstraction if we locate these two participants, the symbolized and the symbol, in the linguistic system. But the interpretation with the asterisk takes the opposite perspective, viewing the symbol '+' as more abstract than the entity symbolized, and is therefore meaningless. With respect to the interpretation with the asterisk in the latter instance, the distinction between the abstract participant and the concrete one is not as explicit as that in the former example. Although 'the symbol is less abstract than the symbolized' is frequently heard, it does not make sense to say '1 + 2 on the left of the equation is less abstract than 3 on the right of the equation'. However, 1 + 2

is more straightforward than 3 because 1 + 2 shows clearly the constitution of 3. To further illustrate this, I present another example. 'Air', which people cannot live without, is very abstract. However, if 'air' is explained in terms of its constitution as '20.93% oxygen, 78.03% nitrogen, 0.98% rare gas, 0.03% carbon dioxide and 0.03% other gas' (Net. 5.), one will know better what 'air' is. This explains why we say one plus two is less abstract than three in the equation.

The analyses demonstrate that the essential concept involved in the interpretation of the meaning of an identifying clause is the **directionality** of the interpreting perspective. Perspectival directionality (hereafter PD) is different from the coding direction of encoding and decoding. PD is embodied both in meaning and in grammatical structures. In meaning, PD refers to role-playing and role-assigning in intensive identifying clauses (PD in possessive identifying clauses (ownership and belonging-to) and circumstantial identifying clauses (occupation and controlling) will be explained in §4.6.2 and §4.6.3 respectively); in grammatical structure, PD indicates the starting point of a clause. The identifying clauses with the process realized by be (except definition, exemplification and pinning down a certain point) are perspectivally bidirectional in meaning and grammatical structure, and hence they can be interpreted from both of the two perspectives of role-playing and role-assigning and can take either of the two participants as the point of departure of a conversation. With respect to the identifying clauses with the process realized by the transitive equative verbs such as symbolize, represent, etc., they are perspectivally non-bidirectional in meaning but bidirectional in grammatical structure. In other words, they are interpreted only from role-playing or only from role-assigning, but can take either of the two participants as the starting point of a conversation. If the identifying process is realized by the intransitive equative verbs such as *add up to*, serve as, etc., they are perspectivally non-bidirectional in both meaning and grammatical structure. That is to say, the clauses can only be interpreted from one perspective and take only one of the two participants as the point of departure of a conversation. PD in meaning is understood in terms of the relationship between the

two participants. It is EXTERNAL, which means 'not restricted by the structure of the clause'. PD in grammatical structure is INTERNAL, which means 'restricted by the realization of the clause'. Some identifying clauses are influenced only by the external factor, some by the internal factor, and others by both.

The interpretations of the third type of intensive identifying clauses, the two-cell paradigm, are restricted by the two types of PD. (28) in §4.3.3.3, re-presented as (85) below, is an illustration. (85, ii) and (85, iii) are unacceptable because of the passive constructions; (85, vi) and (85, vii) are unacceptable because of the restrictions from the meanings; and (85, v) and (85, viii) are influenced by both of the two factors. In one situation, one may seek the role of the kidneys and lungs in human body by posing the question 'what do kidneys and lungs function as'.

#### (85) decoding: kidneys and lungs (Identified) =?

i. [Id/Tk:] kidneys and lungs function as [Ir/Vl:] the most important physiological buffer systems

Kidneys and lungs are identified by representing the most important physiological buffer systems.

\*ii. [Ir/V1:] *the most important physiological buffer systems* are functioned as by [Id/Tk:] *kidneys and lungs* 

The most important physiological buffer systems identifies by being represented by kidneys and lungs.

In a different situation, he may ask 'what function as the most important physiological buffer systems' to seek the organs that are the most important physiological buffer systems in human body.

(85) encoding: the most important physiological buffer systems (Identified) =?
\*iii. [Id/V1:] the most important physiological buffer systems are functioned as by [Ir/Tk:] kidneys and lungs

The most important physiological buffer systems are identified by being represented by kidneys and lungs.

iv. [Ir/Tk:] *kidneys and lungs* function as [Id/Vl:] the most important physiological buffer systems

Kidneys and lungs identifies by representing the most important physiological buffer systems.

If we analyze the clause from a different perspective and take *the most important physiological buffer systems* as Token and *kidneys and lungs* as Value, the interpretations are as follows:

- (85) decoding: the most important physiological buffer systems (Identified) =?
- \*v. [Id/Tk:] the most important physiological buffer systems are functioned as by [Ir/V1:] kidneys and lungs

The most important physiological buffer systems are identified by representing kidneys and lungs.

\*vi. [Ir/V1:] *kidneys and lungs* function as [Id/Tk:] the most important physiological buffer systems

Kidneys and lungs identifies by being represented by the most important physiological buffer systems.

encoding: kidneys and lungs (Identified) =?

 \*vii. [Id/V1:] kidneys and lungs function as [Ir/Tk:] the most important physiological buffer systems

Kidneys and lungs are identified by being represented by the most important buffer systems.

\*viii. [Ir/Tk:] *the most important physiological buffer systems* are functioned as by [Id/VI:] *kidneys and lungs* 

The most important physiological buffer systems identifies by representing kidneys and lungs.

Therefore, the two-cell identifying clauses are both internally and externally perspectivally non-bidirectional.

There is a close relationship between the internal/external PD and the grammatical/semantic reversibility discussed in §4.3.4.2. The identifying clauses with *be* (in an ordinary sense except definition, exemplification and pinning down a certain point), which are both internally and externally perspectivally bidirectional, are both grammatically and semantically reversible; those with transitive equative verbs, which are internally perspectivally bidirectional but externally perspectivally non-directional, are grammatically reversible but semantically irreversible; and those with intransitive equative verbs, which are both internally and externally and externally perspectivally non-directional, are grammatically reversible but semantically irreversible; and those with intransitive equative verbs, which are both internally and externally perspectivally non-bidirectional, are both grammatically and semantically irreversible. The difference is that the external /internal PDis on the semantic stratum, while the semantic /grammatical reversibility is on the lexicogrammatical stratum.

# 4.6.2 Possessive identifying clauses – possession: 'Ownership' and 'belonging to'

In possessive identifying clauses, the meaning coded is **possession**. The two participants in a possessive identifying clause are related by a relation of possession. Davidse (1996b) undertakes a thorough examination of the possessive type of identifying clauses. Her findings are shown in Table 4.4 (i.e. Figure 4 in Davidse 1996b: 113). In Davidse's figure, she uses Implicants (Is) – Implicatum (Im) to indicate the coding dimension in possessive identifying clauses, but I follow Halliday by using Token (Tk) – Value (VI) in all types of identifying clauses. The reasons have been given in the introduction part of §4.6.

Table 4.4 Possessive identifying clauses (according to Davidse 1996b: 113)

active	passive
Subparadigm I:	
owned = ?	
I: 1 Peter owns <b>the piano</b>	I: 2 the piano is owned by Peter
Tk/Id Vl/Ir	Vl/Ir Tk/Id
owner = ?	
I: 3 the piano is owned by <b>Peter</b>	I: 4 <b>Peter</b> owns the piano
Vl/Id Tk/Ir	Tk/Ir Vl/Id
Subparadigm II:	
belonged to = ?	
II: 1 the piano is <b>Peter's</b>	II: 2 <b>Peter's</b> is the piano
Tk/Id Vl/Ir	Vl/Ir Tk/Id
belonging = ?	
II: 3 Peter's is <b>the piano</b>	II: 4 <b>the piano</b> is Peter's
Vl/Id Tk/Ir	Tk/Ir Vl/Id

According to Davidse (ibid.), possessive identifying clauses have an eight-cell paradigm because of the two interpreting perspectives of ownership and belonging-to. It is ostensibly like the eight-cell paradigm introduced in §4.3.4.2 above. However, the significant difference between Davidse's eight-cell paradigm and the one demonstrated here is that whereas Davidse's model is established on semantics, mine is established on lexicogrammar. In Davidse's model, there are eight possibilities (Subp [I, 1 - 4] and Subp [II, 1 - 4] in Table 4-4) in realizing the meaning of possession. The meaning of possession is realized in two configurations (Peter owns the piano and the piano is Peter's) on the stratum of lexicogrammar, and each of the two configurations has four possible interpretations. But the eight-cell paradigm in my account refers to the eight interpretations of the identifying clause in question, and there also exist the four-cell paradigm and the two-cell paradigm due to the influence from the choices of the lexis and the grammar of the clause. Since I take a different perspective from Davidse, the findings of the possessive identifying clauses will be accordingly different (see the discussion as follows). In addition, the owning-via-action type of possessive identifying clauses is included. To begin with, I will discuss the possessive identifying clauses where the possessive relation is coded as participant. For instance, the piano is Peter's. This clause has an eight-cell

paradigm that can be interpreted from the two perspectives of role-playing and role-assigning. In terms of role-playing, it has four possible interpretations.

- (86) decoding: the piano (Identified) =?
- i. [Id/Tk:] *the piano is* [Ir/Vl:] *Peter's*

The piano is identified by representing Peter's (possession: piano).

- ii. [Ir/VI:] *Peter's is* [Id/Tk:] *the piano* Peter's (possession: piano) identifies by being represented by the piano.
   encoding: Peter's (Identified) =?
- iii. [Id/VI:] *Peter's is* [Ir/Tk:] *the piano*Peter's (possession: piano) is identified by being represented by the piano.
- iv. [Ir/Tk:] the piano is [Id/Vl:] Peter's

The piano identifies by representing Peter's (possession: piano).

Metaphorically, the piano plays the role of Peter's possession (i.e. Peter's piano). In this case, *the piano* is the Token, and *Peter's* is the Value.

In terms of role-assigning, it has another four interpretations.

- (86) decoding: Peter's (Identified) =?
- v. [Id/Tk:] Peter's is [Ir/V1:] the piano

Peter's (possession: piano) is identified by representing the piano.

- vi. [Ir/VI:] *the piano is* [Id/Tk:] *Peter's*The piano identifies by being represented by Peter's (possession: piano).
  encoding: the piano (Identified) =?
- vii. [Id/VI:] the piano is [Ir/Tk:] Peter's

The piano is identified by being represented by Peter's (possession: piano).

viii. [Ir/Tk:] *Peter's is* [Id/Vl:] *the piano*Peter's (possession: piano) identifies by representing the piano.

The cases where *Peter's* is the Token and *the piano* the Value convey the meaning that the role of Peter's possession is assigned to the piano. From the interpretations of the possessive identifying clause with *be* (86, i - viii), one can see that the relation of possession is coded as participant, e.g., *Peter's possession ^ piano*, and such a clause share some features with intensive identifying clauses in that both of them are interpreted in terms of role-playing and role-assigning and their process is realized by the neutral verb *be*.

The possessive identifying clauses where the relation type is coded as process differ from those where the relation type is coded as participant: The former are interpreted neither from role-playing nor from role-assigning but from either ownership or belonging-to. Ownership coded as process is usually realized by *own* (continuous-owning) as in *Peter owns the piano*, and *win* (owning-via-action) as in *Peter won the piano*.

Let us consider *Peter owns the piano* first. Suppose that at an auction Peter won the bid for the piano that had been used by Beethoven, people who were late for the auction wanted to know what Peter had won by asking 'what did Peter win in the auction'. They were concerned about the thing won by Peter, or, by whom was the piano owned after the bid, i.e. 'who is the owner of the piano now'. In this situation, one could provide the following answers:

- (87) decoding: Peter (Identified) =?
- i. [Id/Tk:] *Peter owns* [Ir/VI:] *the piano*Peter is identified by owning the piano.
- ii. [Ir/VI:] *the piano is owned by* [Id/Tk:] *Peter*The piano identifies by being owned by Peter.

If people wanted to know who had won the bid for the piano used by Beethoven, they might ask 'who owns the piano now'. In this case, they were concerned about the owner.

- (87) encoding: the piano (Identified) =?
- iii. [Id/VI:] *the piano is owned by* [Ir/Tk:] *Peter*The piano is identified by being owned by Peter.
- iv. [Ir/Tk:] *Peter owns* [Id/VI:] *the piano*Peter identifies by owning the piano.

The four meanings are interpreted from the perspective of ownership: Peter is the owner of the piano and the piano is the owned. This relation is coded as process, realized by the verb *own*. In this case, *Peter* is the Token, and *the piano* is the Value. But it is an illusion that in a possessive identifying clause the possessor is always Token and the possessed always Value. In some cases, the possessor functions as Value and the possessed Token. This typically occurs in the clauses whose process is realized by *belong to*. We assume that Peter is a famous pianist who has his own style in the local town. Differing from other pianists, those 'normal' ones who typically wear suit, Peter has long hair and wears ripped jeans and flannel shirts. Suppose that in a musical instrument shop two friends noticed a special piano with a pattern of skulls. They would make an assumption that this piano was especially designed for Peter. The probe question is 'to whom does the piano belong'.

- (88) decoding: the piano (Identified) =?
- i. [Id/Tk:] *the piano belongs to* [Ir/VI:] *Peter*The piano is identified by belonging to Peter.
- \*ii. [Ir/VI:] Peter is belonged to by [Id/Tk:] the piano

In a different situation, if one wanted to know the thing possessed by Peter, he might ask 'what belongs to Peter'. The acceptable interpretation is (88, iv).

(88) encoding: Peter (Identified) =?

- \*iii. [Id/VI:] Peter is belonged to by [Ir/Tk:] the piano
- iv. [Ir/Tk:] *the piano* belongs to [Id/VI:] *Peter*The piano identifies by belonging to Peter.

(88) illustrates the clauses that is interpreted only from the perspective of belonging-to. Because the clauses with *belong to* do not have corresponding passive structures, there left only two interpretations. The analyses above indicate that Davidse's proposition of the two perspectives of ownership and belonging-to applies to the possessive identifying clauses of the continuous-owning type, though they cannot be applied simultaneously to one clause. This incompatibility of the two interpreting perspectives for one clause is the result of the factor explained at the beginning of this section – the different choices of the linguistic stratum on which the research is undertaken.

Next, the possessive identifying clauses of the owning-via-action type come into focus. The clause, *Mary received the book*, is presented as an illustration of ownership.

When answering the question 'what did Mary receive', the clause is interpreted as (89, i) and (89, ii).

- (89) decoding: Mary (Identified) =?
- i. [Id/Tk:] *Mary received* [Ir/VI:] *the book*Mary is identified by owning the book (as a consequence of receiving).
- ii. [Ir/VI:] *the book was received by* [Id/Tk:] *Mary*The book identifies by being owned by Mary (as a consequence of receiving).

If, on the other hand, the question is 'who received the book', the possible interpretations are (89, iii) and (89, iv).

(89) encoding: the book (Identified) =?

iii. [Id/VI:] the book was received by [Ir/Tk:] Mary

The book is identified by being owned by Mary (as a consequence of receiving).

iv. [Ir/Tk:] *Mary* received [Id/V1:] the book

Mary identifies by owning the book (as a consequence of receiving).

In respect of ownership, *Mary*, the owner, functions as the Token, and *the book*, the owned, functions as the Value. Just like (88), which forms the complementary perspective of ownership of (87) in the continuous possessive relation, (90) *the first prize went to Mary* illustrates the complementary perspective of ownership of (89) in the possessive relation as a result of a certain action. In other words, owning-via-action possessive identifying clauses show proportionality and contrast with typical possessive identifying clauses as *own* : *belong to* : *lack* (negative owning) vs. *receive* : *go to* : *lose* (negative owning-via-receiving).

Suppose that after the International Olympic Math Competition, one was interested in the winner of the competition, he might ask 'who won the first prize'.

- (90) decoding: the first prize (Identified) =?
- i. [Id/Tk:] the first prize went to [Ir/VI:] Mary

The first prize is identified by belonging to Mary (as a consequence of awarding).

\*ii. [Ir/VI:] Mary was gone to by [Id/Tk:] the first prize

If he was interested in Mary's performance in the competition, he might ask 'where did Mary come in in the competition'.

- (90) encoding: Mary (Identified) =?
- \*iii. [Id/VI:] Mary was gone to by [Ir/Tk:] the first prize
- iv. [Ir/Tk:] *the first prize went to* [Id/VI:] *Mary*The first prize identifies by belonging to Mary (as a consequence of awarding).

(90) is interpreted from belonging-to, the complementary perspective of ownership of (89). *Go to* in (90) requires further explanation. It is different from *go to* in *he went to Paris* ((91)). Halliday (1985) considers that the clause construes a material process, but Fawcett (1987) argues that it is a directional relational clause. In my account, *go to* realizes a possessive identifying process of the owning-via-action type, but not in the sense of *go to* in (91). By replacing *go to* with *belong to* in the two clauses, one will see the difference more clearly.

- (90) the first prize went to Mary
- *the first prize belonged to Mary* (Mary owned the first prize)

(91) he went to Paris

*\*he belonged to Paris* (\* Paris owned him)

In the interpretations of the possessive identifying clauses with be where the relation type is coded as participant, the key words are 'identify' in the identification dimension and 'represent' in the possession dimension, but in the interpretations of the possessive identifying clauses with specific verbs where the relation type is coded as process, the key words are 'identify' in the identification dimension and 'own/belong to' in the possession dimension. For example, the interpretation of (86, iv) [Ir/Tk:] the piano is [Id/VI:] Peter's is 'the piano identifies by representing Peter's (possession: piano)'. If one replace 'representing' with 'owning', the result '\*the piano identifies by owning Peter's (possession: piano)' is unacceptable. If one replace 'belonging to' in the interpretation of (88, iv) [Ir/Tk:] the piano belongs to [Id/VI:] Peter (the piano identifies by belonging to Peter) with 'representing', the result '\*the piano identifies by representing Peter' is unacceptable either. On this semantic basis, I conclude that possessive identifying clauses with be lie between intensive identifying clauses and possessive identifying clauses with specific verbs. The two types of possessive identifying clauses with specific verbs - the continuous-owning type and the owning-via-action type - can only be interpreted from one perspective. In other

words, they can only be interpreted from ownership or belonging-to, but not from both simultaneously. In this regard, the possessive identifying clauses are like the intensive ones whose process is realized by transitive equative verbs in that they are externally perspectivally non-bidirectional. The difference between the two types of possessive identifying clauses is also embodied in the interpretations. For the owning-via-action type, the interpretation, like the one in (89, i) [Id/Tk:] *Mary received* [Ir/VI:] *the book* (Mary is identified by owning the book (as a consequence of receiving)), indicates that the relation of possession results from a certain action or event. This also provides a semantic support for the conclusion that owning-via-action possessive identifying clauses lie between typical identifying clauses and material ones.

# 4.6.3 Circumstantial identifying clauses – circumstance: 'Occupation' and 'controlling'

In circumstantial identifying clauses, the meaning coded is **circumstance**. The two participants in a clause are related to each other circumstantially. They may be related by time, place, cause, accompaniment and manner.

Just like the possessive identifying clauses with *be*, the circumstantial identifying clauses with *be* where the relation type is coded as participant share some features with the intensive identifying clauses and are interpreted from the two perspectives of role-playing and role-assigning, such as *today is the twelfth*.

- (92) decoding: today (Identified) =?
- Id/Tk:] *today is* [Ir/Vl:] *the twelfth* Today is identified by representing the twelfth.
- ii. [Ir/V1:] *the twelfth* is [Id/Tk:] *today*The twelfth identifies by being represented by today.
  encoding: the twelfth (Identified) =?

- iii. [Id/Vl:] *the twelfth is* [Ir/Tk:] *today*The twelfth is identified by being represented by today.
- iv. [Ir/Tk:] *today is* [Id/VI:] *the twelfth*Today identifies by representing the twelfth.
  decoding: the twelfth (Identified) =?
- v. [Id/Tk:] *the twelfth is* [Ir/V1:] *today*The twelfth is identified by representing today.
- vi. [Ir/VI:] *today is* [Id/Tk:] *the twelfth*Today identifies by being represented by the twelfth.
  encoding: today (Identified) =?
- vii. [Id/Vl:] today is [Ir/Tk:] the twelfth

Today is identified by being represented by the twelfth.

viii. [Ir/Tk:] the twelfth is [Id/V1:] today

The twelfth identifies by representing today.

The first four are interpreted from role-playing, conveying the meaning that today metaphorically plays the role of representing the twelfth. The other four, interpreted from role-assigning, indicate that today is assigned the role of representing the twelfth.

The next concern is the circumstantial identifying clauses where the circumstantial relation is coded as process.

The two perspectives in circumstantial identifying clauses with the process realized by specific verbs are occupation and controlling. What is meant by 'occupation' is occupation in terms of the circumstantial elements, such as time, place, cause, accompaniment and manner. To be specific, one participant occupies or is occupied by a period of time, a place, a metaphorical place, etc. The meaning of 'controlling' is relevant to circumstance as well. One participant controls or is controlled by the other during a period of time or in a certain place. Two examples are presented as illustrations.

For the first example *the fair takes up the whole day*, I suppose that there is a small chat between neighbors. If one wants to know how long the fair lasts, the interpretations of the clause are shown in (93, i) and (93, ii).

- (93) decoding: the fair (Identified) =?
- i. [Id/Tk:] *the fair takes up* [Ir/VI:] *the whole day*The fair is identified by occupying the whole day.
- ii. [Ir/VI:] *the whole day* is taken up by [Id/Tk:] *the fair*The whole day identifies by being occupied by the fair.

If one wants to know the event that takes up the whole day, the possible interpretations of the clause are (93, iii) and (93, iv).

- (93) encoding: the whole day (Identified) =?
- iii. [Id/VI:] *the whole day is taken up by* [Ir/Tk:] *the fair*The whole day is identified by being occupied by the fair.
- iv. [Ir/Tk:] *the fair takes up* [Id/VI:] *the whole day*The fair identifies by occupying the whole day.

The clause above can only be interpreted fromoccupation: The whole day is occupied by the fair or the fair occupies the whole day. Another example, *a false statement caused the invalidation of the contract*, illustrates controlling. In this example, the controlling factor of the invalidation of the contract is a false statement. Accordingly, *a false statement* is the controller functioning as the Token, and *the invalidation of the contract* is the controlled functioning as the Value. In one situation, one may want to know the factor that leads to the invalidation of the contract ((94, i) and (94, ii)). In a different situation, he may want to know the consequence brought by a false statement ((94, iii) and (94, iv)).

- (94) decoding: a false statement (Identified) =?
- Id/Tk:] *a false statement caused* [Ir/Vl:] *the invalidation of the contract* A false statement is identified by controlling the invalidation of the contract.
- ii. [Ir/VI:] *the invalidation of the contract* was caused by [Id/Tk:] a false statement
   The invalidation of the contract identifies by being controlled by a false statement.

encoding: the invalidation of the contract (Identified) =?

- iii. [Id/V1:] *the invalidation of the contract was caused by* [Ir/Tk:] *a false statement*The invalidation of the contract is identified by being controlled by a false statement.
- iv. [Ir/Tk:] *a false statement caused* [Id/Vl:] *the invalidation of the contract*A false statement identifies by controlling the invalidation of the contract.

Just like the possessive and intensive identifying clauses, the circumstantial ones are also influenced by the internal and external PD. Although only two examples are presented, this conclusion is valid in all circumstantial identifying clauses.

The wording used in the interpretation of the coding dimension of a circumstantial identifying clause with specific verbs is different from that of an intensive identifying clause and that of a possessive identifying clause because the meaning coded in the circumstantial type is CIRCUMSTANCE.

### 4.7 Summary

By exploring the grammatical characteristics of identifying clauses, in this chapter I have answered the first two questions posed in §1.3 and solved the first five problems presented in §2.8. I would show how I solve the problems before moving to the questions answered.

The non-typical identifying clauses are identified and set out along three clines in §4.5. Some of the non-typical identifying clauses are indeterminate cases lying
between typical identifying clauses and other clause types like attributive clauses, verbal clauses and material clauses. Even in typical identifying clauses, there are indeterminate cases lying between intensive identifying clauses and 'relation type as participant' possessive and circumstantial identifying clauses, as argued in §4.6.2 and §4.6.3. The indeterminate cases are demonstrated as the overlapping parts in the figure below (IIC is short for intensive identifying clauses, PIC for possessive identifying clauses, CIC for circumstantial identifying clauses, AC for attributive clauses, MC for material clauses and VC for verbal clauses).



Figure 4.19 Indeterminate cases within identifying clauses and between identifying clauses and other clauses types

In Figure 4.19, the different sizes of the circles indicate the statuses of these clause types: The two largest circles, MC and VC, are two of the six clause types in Halliday's (1994) classification, the attributive clauses (AC) represented by the medium-sized circle is one of the two modes of relational clauses, and the three smallest circles (IIC, PIC and CIC) represent the three types of identifying clauses. Some of the non-typical intensive identifying clauses overlap with verbal clauses and attributive clauses, shown by 1 and 2 respectively. The identifying clauses sharing some characteristics of intensive clauses and those of circumstantial and possessive clauses are 'relation type as participant' circumstantial identifying clauses, shown by 4. The

clauses sharing some characteristics of possessive identifying clauses and those of material clauses are owning-via-action possessive identifying clauses, shown by 5.

Second, a systematic examination of possessive and circumstantial identifying clauses is carried out both on the lexicogrammatical stratum (§4.4.1.2 for the possessive type and §4.4.1.1 for the circumstantial type) and on the semantic stratum (§4.6.2 for the possessive type and §4.6.3 for the circumstantial type). The fifth problem is solved mainly in §4.3.4.2, shown in Figure 4.13. The third and fourth problems are closely related to the second question, which is hard to summarize but can be explained in terms of the identifying relationship between the semantic system and the lexicogrammatical system in the next section (§4.7.1).

With respect to the first question posed in §1.3, I have answered it in §4.2 and §4.3.3.4. There are two points to be emphasized. One is that the extra-stratal identifying relationship is foregrounded in the identifying clauses whose process is realized by the verbs of indication and symbolization. The other is that the semantic system is essential in the extra-stratal identifying relationship because it bridges the gap between the extralinguistic systems and the lexicogrammatical system in language and enables the realization relationship to extend beyond language.

# 4.7.1 The identifying relationship between the semantic system and the lexicogrammatical system

Matthiessen (1985) had already examined the representation relationship between the semantic system and the lexicogrammatical system. He states explicitly that 'the lexicogrammar of a language represents the semantics of that language' (1985: 7). In the light of Matthiessen's research, the present investigation shows how choices made on the semantic stratum influence choices made on the lexicogrammatical stratum, and conversely, how choices made on the lexicogrammatical stratum are influenced by choices made on the semantic stratum in identifying clauses.

Halliday and Matthiessen (1999) regard language as a semiotic system composed

of four strata: two expression strata (the phonological/graphological stratum and the phonetic stratum) and two content strata (the lexicogrammatical stratum and the semantic stratum). There is a realization relationship between the semantic system and the lexicogrammatical system. To put it explicitly and simply, choices made on the semantic stratum are realized by choices made on the lexicogrammatical stratum. The realization relationship is invertible: Choices made on the lexicogrammatical stratum realize choices made on the semantic stratum. Halliday explains such a relationship in terms of motivation.

The organizing concept at each stratum is the paradigmatic *system*: A system is a set of options with an entry condition, (...). Options are realized as syntagmatic constructs or *structures*; a structure is a configuration of functional elements – functions or function bundles. The functions are motivated (non-arbitrary) with respect to the options they realize; the grammar as a whole is motivated with respect to the semantics. (Halliday 1985: 262, emphasis as in the original)

The central idea is that a structural configuration on the stratum of lexicogrammar is not arbitrary but motivated by the meaning it intends to express. This is exactly the idea that runs through the thesis.

In exploring the grammatical characteristics of identifying clauses, I began the discussion with the realizations of identifying clauses on the stratum of lexicogrammar. Taking the typical verbs realizing the process as the point of departure, I discovered a variety of intensive identifying clauses, as systemized in Figure 4.13. They fall into three types of models of structural configurations – the eight-cell paradigm, the four-cell paradigm and the two-cell paradigm. The possessive and circumstantial types are left aside here because the conclusions drawn from the intensive type are also valid for the other two types of identifying clauses.

The intensive identifying clauses whose process is realized by *be* (role-playing and identity statement) have an eight-cell paradigm, conveying a meaning of

representation. The eight-cell intensive identifying clauses can be interpreted from the perspectives of role-playing ( $\bigcirc - \bigcirc$  in the eight-cell paradigm below) and role-assigning  $(\mathfrak{S}-\mathfrak{B})$ . In terms of role-playing, two questions arise – 'which/what role is played by X'  $(\bigcirc$  and  $\bigcirc$ ) and 'by whom is the role Y played'  $(\bigcirc$  and  $\bigcirc$ ). In terms of role-assigning, the two questions are 'which /what role is assigned to X' (③ and (0) and 'to whom is the role Y assigned' (0) and (0). These are realized by the eight structural configurations in different contexts presented as follows (X =participant 1; Y = participant 2;  $P_1$ =intensive identifying processes realized by be (like role-playing and identity statement)). For example, *Tom is the leader* is interpreted from role-playing and role-assigning. In terms of role-playing, if one wants to know the role played by Tom, he may get [Id/Tk:] Tom is [Ir/V1:] the leader or [Ir/V1:] the *leader is* [Id/Tk:] *Tom.* If one wants to know the one who plays the role, he may get [Id/V1:] the leader is [Ir/Tk:] Tom or [Ir/Tk:] Tom is [Id/V1:] the leader. In terms of role-assigning, if one wants to know the role assigned to Tom, one may get [Id/VI:] Tom is [Ir/Tk:] the leader or [Ir/Tk:] the leader is [Id/VI:] Tom. If one wants to know the one to whom the role is assigned, he may get [Id/Tk:] the leader is [Ir/VI:] Tom or [Ir/V1:] *Tom* is [Id/Tk:] the leader.

- (I) Eight-cell paradigm
- ①  $[Id/Tk:] X + P_1 + [Ir/Vl:] Y$
- ② [Ir/Vl:] **Y** + P<sub>1</sub> + [Id/Tk:] **X**
- ③  $[Id/Vl:]Y + P_1 + [Ir/Tk:]X$
- ④  $[Ir/Tk:] X + P_1 + [Id/Vl:] Y$
- (5)  $[Id/Vl:] X + P_1 + [Ir/Tk:] Y$
- 6 [Ir/Tk:] **Y** + P<sub>1</sub> + [Id/Vl:] **X**
- ⑦  $[Id/Tk:]Y + P_1 + [Ir/Vl:]X$
- [Ir/V1:] **X** + P<sub>1</sub> + [Id/Tk:] Y

Such identifying clauses are characterized by an eight-cell paradigm because they are

both externally and internally perspectivally bidirectional. At this point, the meaning of 'externally perspectivally bidirectional' should be specified further. The 'externally perspectivally bidirectional' in respect of the two interpreting perspectives (shown in the distinction between  $\mathbb{O} - \mathbb{Q}$  and  $\mathbb{O} - \mathbb{S}$ ) is realized in the structure as the distribution of the structural functions of Token and Value. The 'externally perspectivally bidirectional' in the second sense is relevant to the two questions arising (shown in the distinction between  $\mathbb{O}/\mathbb{Q}$  and  $\mathbb{O}/\mathbb{Q}$ , and between  $\mathbb{O}/\mathbb{G}$  and  $\mathbb{O}/\mathbb{S}$ ), realized in the structure as the distribution of the structural functions of Identified and Identifier. The 'internally perspectivally bidirectional' is realized in voice contrast (shown in the distinction between  $\mathbb{O}$  and  $\mathbb{O}$ ,  $\mathbb{O}$  and  $\mathbb{Q}$ ,  $\mathbb{O}$  and  $\mathbb{O}$ , and  $\mathbb{O}$  and  $\mathbb{S}$ ). The realization relationship between the structural configurations and the meanings they convey in the eight-cell identifying clauses is visualized in Figure 4.20 below. In the figure, the meaning conveyed by the *be*-identifying clauses of role-playing and the identity statements is interpreted from both role-playing (I $\mathbb{O}$ , I $\mathbb{Q}$ , I $\mathbb{O}$  and I $\mathbb{Q}$ ) and role-assigning (I $\mathbb{O}$ , I $\mathbb{O}$  and I $\mathbb{S}$ ).



Figure 4.20 Relationship between the structural configurations and the meanings they convey in eight-cell identifying clauses (I)

The intensive identifying processes realized by *be* (definition and exemplification) and transitive equative verbs of symbolization, indicationand equation (e.g. *symbolize*, *indicate*, *equal*, etc.) have a four-cell paradigm. The factor that reduces the number of the possible interpretations from eight to four is a semantic one. Such clauses can only be interpreted from the perspective of role-playing or

role-assigning because of the influence of the 'externally perspectivally bidirectional' in the first sense. Such identifying clauses show four structural configurations ( $P_2$  = intensive identifying processes realized by *be* (definition and exemplification),  $P_3$  = intensive identifying processes realized by transitive equative verbs (symbolization, indication and equation)). For example, the clause of symbolization, '+' *symbolizes the procedure of insertion*, is interpreted only in terms of role-playing. If one is interested in 'what does "+" symbolize', he will get [Id/Tk:] '+' *symbolizes* [Ir/Vl:] *the procedure of insertion* or [Ir/Vl:] *the procedure of insertion is symbolized by* [Id/Tk:] '+'. If one is interested in 'what symbolizes the procedure of insertion', the possible answer is [Id/Vl:] *the procedure of insertion is symbolized by* [Ir/Tk:] '+' or [Ir/Tk:] '+' *symbolizes* [Id/Vl:] *the procedure of insertion*.

- (II) i. Four-cell paradigm
- ①  $[Id/Tk:] X + P_2/P_3 + [Ir/Vl:] Y$
- ② [Ir/Vl:] **Y** + P<sub>2</sub>/P<sub>3</sub> + [Id/Tk:] **X**
- ③  $[Id/Vl:] Y + P_2/P_3 + [Ir/Tk:] X$
- ④  $[Ir/Tk:] X + P_2/P_3 + [Id/Vl:] Y$

The structural configurations in IIi O and IIi O express the meaning 'X plays which/what role', and those in IIiO and IIiO express the meaning 'the role Y is played by whom'. Or from a different perspective, the structural configurations in IIiO and IIiO express the meaning 'which/what role is assigned to X', and those in IIiO and IIiO express the meaning 'the role Y is assigned to whom'. The relationship between the structural configurations and the meanings they express in a four-cell identifying clause is diagrammed in Figure 4.21.



Figure 4.21 Relationship between the structural configurations and the meanings they convey in four-cell identifying clauses (II, i)

Now let us turn to the two-cell paradigm. The identifying clauses having a two-cell paradigm are of two types. One is the identifying clauses whose process is realized by the role-playing phrasal verbs and assigning verbs. Such clauses are neither externally perspectivally bidirectional in the first sense nor internally perspectivally bidirectional. Put specifically, they have only two possible interpretations because they are interpreted only from one perspective and have only one participant as the point of departure. The other is the *be*-identifying clauses used to pin down a certain point. Such clauses are different from the first type in that they are externally perspectivally non-bidirectional in the first and second senses. This means that they are interpreted only from one perspective and the focus falls always on one element. Consequently, there are two types of two-cell paradigm, shown in (III, i) ( $P_4$  = intensive identifying processes realized by role-playing phrasal verbs,  $P_5$  = intensive identifying processes realized by assigning verbs) and (III, ii) ( $P_6$  = intensive identifying processes realized by be (pinning down a certain point)). If the process is realized by a role-playing phrasal verb, the clause can only be interpreted from the role-playing perspective, for example, RalA and RalB function as the critical GTP sensors for GTP-dependent exocytosis. In this clause, the Token is always RalA and *RalB*, and the clause does not have a corresponding passive form. Therefore, it has two possible interpretations – [Id/Tk:] RalA and RalB function as [Ir/VI:] the critical GTP sensors for GTP-dependent exocytosis and [Ir/Tk:] RalA and RalB function as [Id/V1:] the critical GTP sensors for GTP-dependent exocytosis. If the process is realized by an assignation verb, the clause can only be interpreted from the role-assigning perspective, for instance, Denmark is considered as the happiest country. In this clause, the Value is always Denmark, and the clause does not have a corresponding active form unless in a projection. The two possible interpretations for the clause are [Id/V1:] Denmark is considered as [Ir/Tk:] the happiest country and

[Ir/V1:] **Denmark** is considered as [Id/Tk:] the happiest country. The clause illustrating (III, ii) is the point is he is not smart enough. In this clause, the focus never falls on the point. It is interpreted as [Id/Tk:] the point is [Ir/V1:] he is not smart enough or [Ir/V1:] he is not smart enough is [Id/Tk:] the point.

- (III) i. Two-cell paradigm
- ①  $[Id/Tk:] X + P_4 + [Ir/Vl:] Y$
- $(Ir/Tk:] \mathbf{X} + P_4 + [Id/Vl:] \mathbf{Y}$

or

- $(Id/V1:) X + P_5 + [Ir/Tk:] Y$
- $(Ir/V1:] X + P_5 + [Id/Tk:] Y$
- (III) ii. Two-cell paradigm
- ①  $[Id/Tk:] X + P_6 + [Ir/Vl:] Y$
- ② [Ir/Vl:] **Y** + P<sub>6</sub> + [Id/Tk:] **X**

The following two figures illustrate these two types of two-cell intensive identifying clauses.



Figure 4.22 Relationship between the structural configurations and the meanings they convey in two-cell identifying clauses (III, i)



Figure 4.23 Relationship between the structural configurations and the meanings they convey in two-cell identifying clauses (III, ii)

To sum up, different types of identifying clauses have different paradigms because of the realization relationship between the structural configurations and the meanings they express. The meanings on the semantic stratum are realized in and influence the structural configurations on the lexicogrammatical stratum, and the structural configurations realize and are influenced by the meanings. This is reflected in the factors involved in the interpretations of an identifying clause. The three kinds of directionality in meaning are closely related to the three kinds of reversibility in a structural configuration. External PD 1 is related to the allocation of the structural functions of Token and Value: If the meaning is bidirectional in the first sense, the clause in question is semantically reversible 1. External PD 2 is related to the allocation of the structural functions of Identified and Identifier: If the focus falls on either participant, which means either one of the two participants may receive the tonic prominence, the meaning is bidirectional in the second sense. Internal PD is related to voice: If the clause can have either participant as the point of departure of a conversation, it is grammatically reversible. It is, therefore, safe to conclude that the relationship between the structural configurations and the meanings they convey is also one of identifying. The structural configurations realize the meanings, and the meanings are realized in the structural configurations. This kind of identifying relationship explains the axial relationship between system and structure and the relationship between semantics and lexicogrammar, the latter of which had been examined thoroughly and convincingly by Davidse (1996a), who proposes the semantic contrast between expression and motivation in linguistics. In terms of expression, the two perspectives involved are diagnostic and symptomatic, and in terms of motivation, the two perspectives involved are reactive and catalytic. The meanings of the two perspectives in expression are easy to understand. As for the two in motivation, reactive refers to 'the motivation: decoding mode' that 'identifies the

concrete results of, or the reactions to, the determining factors' on the higher stratum (Davidse 1996a: 390). 'Catalytic' is explained as 'the motivation: encoding mode' that identifies the determining factors or, the 'catalytic factors' of the phenomena on a lower stratum (ibid.).

Now let us go back to the relationship between the structural configurations and the meanings they express. Seen downwardly, the identifying relationship is expressed in eight ways from the two perspectives of expression and motivation. From the expression perspective, the relationship between the two participants is coded in the process by *realize*; from the motivation perspective, it is coded in the process by a different verb *motivate*.

#### expression

decoding – diagnostic: the structural configurations =?

- Id/Tk:] *the structural configurations realize* [Ir/Vl:] *the meanings* The structural configurations are identified by representing the meanings.
- [Ir/VI:] *the meanings* are realized by [Id/Tk:] *the structural configurations* The meanings identify by being represented by the structural configurations.
   encoding symptomatic: the meanings =?
- ③ [Id/V1:] *the meanings are realized by* [Ir/Tk:] *the structural configurations* The meanings are identified by being represented by the structural configurations.
- Ir/Tk:] *the structural configurations realize* [Id/Vl:] *the meanings* The structural configurations identify by representing the meanings.

#### motivation

decoding – reactive: the meanings =?

- Id/Tk:] *the meanings motivate* [Ir/Vl:] *the structural configurations* The meanings are identified by motivating the structural configurations.
- [Ir/V1:] *the structural configurations* are motivated by [Id/Tk:] *the meanings* The structural configurations identify by being motivated by the meanings.

encoding – catalytic: the structural configurations =?

- [Id/VI:] *the structural configurations are motivated by* [Ir/Tk:] *the meanings* The structural configurations are identified by being motivated by the meanings.
- ③ [Ir/Tk:] *the meanings motivate* [Id/VI:] *the structural configurations* The meanings identify by motivating the structural configurations.

The analysis above illustrates the relationship between the structural configurations and the meanings. It is carried out in the light of Davidse's method, which takes the meaning to be expressed as the starting point and shows eight possible interpretations of an identifying relationship. However, if I follow the method in my account and take the clause in question as the point of departure, there will be only four interpretations for the clause *the structural configurations realize the meaning* and four for *the meanings motivate the structural configurations*. The former has four possible interpretations (① - ④) from the perspective of role-playing. The latter, interpreted from the perspective of role-assigning, also has four possible interpretations (③ - $\circledast$ ). Therefore, apart from the four paradigms (I), (II, i) (III, i) and (III, ii) shown above in this section, there is a further paradigm (II, ii) presented as below. It is similar to (II, i) but interpreted from the other perspective.

- (II) ii. Four-cell paradigm
- $(Id/V1:] X + P_3 + [Ir/Tk:] Y$
- [Ir/Tk:] **Y** + P<sub>3</sub> + [Id/Vl:] **X**
- ⑦  $[Id/Tk:]Y + P_3 + [Ir/Vl:]X$
- $[Ir/Vl:] X + P_3 + [Id/Tk:] Y$

The identifying clauses of role-assigning are the same as those of role-playing in respect of the factors that lead to the four-cell model. Both of them are externally perspectivally non-bidirectional in the first sense and perspectivally bidirectional externally in the second sense and internally.

By analyzing the realization relationship between the structural configurations and the meanings in the identifying clauses, I have demonstrated the relationship between the lexicogrammatical system and the semantic system.

## 4.7.2 What has been done for the system of identifying clauses? – A conclusion

This section concludes what I have done until now for a complete description and better understanding of identifying clauses in three respects – the expansion of the system of identifying clauses, the typological and topological views in examining identifying clauses, and the key concepts and methods in understanding identifying clauses.

The system of identifying clauses is first expanded by the inclusion of non-typical identifying clauses. Three clines are presented – the cline with the two poles of identifying clauses and attributive clauses, the one with the two poles of identifying clauses and verbal clauses, and the one with the two poles of identifying clauses and material clauses (see §4.5.4). And also, the examination of the relationship between intensive identifying clauses and possessive and circumstantial identifying clauses reveals more intermediate cases between intensive identifying clauses and possessive and circumstantial identifying clauses (see §4.6.2 and §4.6.3). Second, the study of possessive identifying clauses follows Halliday's practice in classifying them into 'relation type as participant' and 'relation type as process' but regards the owning-via-action clauses as, or at least leaning towards, identifying clauses (see §4.4.1.2). Third, the identifying relations are discussed not only within language but also extended extra-stratally to other semiotic systems like figures (see §4.2).

In exploring the relationships (distinctions and similarities) between identifying clauses and other clause types, I take a typological perspective as well as a topological perspective. From a typological perspective, a typical identifying clause has definite

NGs as participants and equative verbs as process and is reversible, which distinguish it from other clause types. However, not all identifying clauses show the characteristics a typical identifying clause tends to present. They may have indefinite NGs realizing participants and verbs typically realizing the processes other than identification or be irreversible. Some of them share the characteristics of identifying clauses and other clause types and are seen as the intermediate cases lying in between. This is investigated from a topological perspective. By reference to the directionality of identifying clauses that is influenced by the realizations of the participants and process, I divide identifying clauses into three types – the eight-cell paradigm, the four-cell paradigm and the two-cell paradigm (see §4.3.4). Since verb is the central element in a clause (Halliday and Matthiessen 2004: 175-6), a great attention is paid to the verbs in identifying clauses and the detailed classification of them. Apart from the typical equative verbs summarized by Halliday (1994: 123), there are two more types, one being the assigning verbs (see §4.3.3.2) and the other being the owning-via-action verbs (see §4.4.1.2). Furthermore, a variety of verbs realizing possessive and circumstantial identifying processes are illustrated by the corpus (COCA) studies (see Figure 4.15). For different types of identifying relationships, they have their preference for the choices of verbs. For example, the extra-stratal identifying relationship between language and images are usually realized by the verbs of symbolization and indication. In addition, the verbs realizing the process are divergent for the intermediate cases on different clines. Take the intermediate cases on the cline with the poles of identifying clauses and material ones and those on the cline with the poles of identifying clauses and verbal ones for instance. On the former cline the typical verbs are those of the owning-via-action type, and on the latter cline the typical verbs are those of the indication type.

In order to have a better understanding of identifying clauses, I make clear the meaning of 'reversible' since it is one of the most important characteristics of identifying clauses but received little attention. As a key factor in the understanding of identifying clauses, it is rarely expounded in detail. In my account, 'reversible' is

explained both on the lexicogrammatical stratum and on the semantic stratum. In the former context 'reversible' is divided into semantic reversibility 1, semantic reversibility 2 and grammatical reversibility, and in the latter context it is classified into external PD 1, external PD 2 and internal PD. Grammatical reversibility, semantic reversibility 1 and semantic reversibility 2 on the lexicogrammatical stratum are closely related to internal PD, external PD1 and external PD 2 on the semantic stratum respectively. An analysis on both lexicogrammatical stratum and semantic stratum is critical for a complete and better understanding of identifying clauses. The meanings expressed by a clause help understand the structural configurations of the clause, and conversely, the structural configurations are influenced by the meanings. I present the realization relationship between the factors influencing the interpretations of an identifying clause on the semantic stratum and those on the lexicogrammatical stratum in Figure 4.24.



Figure 4.24 Relationships between PD and the allocation of the structural functions of identifying clauses

The interpretations of the identifying clauses not only determine the allocations of the two sets of structural functions of Token – Value and Identified – Identifier but also provide evidence for the distinctions among intensive identifying clauses, possessive identifying clauses and circumstantial identifying clauses, those between continuous-owning identifying clauses and owning-via-action identifying clauses, and

those between 'relation type as participant' possessive/circumstantial identifying clauses with *be* and 'relation type as process' possessive/circumstantial identifying clauses with specific verbs (see §4.6). *Be* is neutral and opens up more semantic space, and the interpretations of an identifying clause with *be* rely more on context. On the contrary, specific verbs narrow down the semantic space; the identifying clauses with specific verbs are more semiotic sensitive, whose interpretations rely less on context.

### **Chapter Five Implications of Identifying Clauses:**

#### **Exhaustiveness and Contrastiveness**

#### 5.1 Introduction

In the preceding chapter, I have explored the grammatical characteristics of identifying clauses. The findings lay a foundation for this chapter, such as the two semiotic processes in an identifying clause (extra-stratal and inter/intra-stratal), the non-typical identifying clauses, and the classification of the identifying clauses into the eight-cell paradigm, the four-cell paradigm and the two-cell paradigm.

This chapter is concerned mainly with the semantic implications conveyed by identifying clauses – exhaustiveness and contrastiveness, with the focus falling on the former. §5.2 explores the implication of exhaustiveness and the relevant factors in the interpretation of the implication. § 5.3 investigates the functions of *only* in identifying clauses. And § 5.4 presents the contrastive meaning conveyed by identifying clauses.

#### 5.2 Exhaustiveness

In the literature, exhaustiveness and contrastiveness are largely examined in clefts, pseudoclefts and specificational sentences, especially in *it*-clefts (e.g. Declerck 1984, 1988, Delin and Oberlander 1995, Halvorsen 1978, Hedberg 2000, Horn 1981, Paul 2001, Reeve 2011), and the exhaustive meaning conveyed by *only* in sentences are always investigated in association with the corresponding clefts (e.g. Atlas and Levinson 1981, Drenhaus et al. 2011).

It is generally acknowledged (Declerck 1988, É. Kiss 1998, Reeve 2011) that clefts necessarily convey exhaustiveness and are incompatible with additive particles like *even* and *also*. Therefore, whether the clause in question has a corresponding cleft

or whether it is compatible with additive particles are the two popular tests for the classification of clauses into predicational and specificational. Another consensus among the scholars (e.g. Declerck 1984, Higgins 1979) is the relation between exhaustiveness and definiteness. The definiteness of the realization of a participant greatly influences the exhaustive meaning, but it is not decisive. If the realization is definite, it conveys exhaustiveness; if it is indefinite, there are two further possibilities. On the one hand, if the realization denotes a specific participant, it conveys the exhaustive meaning despite the indefinite realization. On the other hand, if the realization is nonspecific-indefinite, no exhaustive meaning is conveyed (see more in Higgins 1979: 138).

Two issues over exhaustiveness remain contested. One is the meaning of exhaustiveness. 'Exhaustivity' is explained by Reeve as a presuppositional effect, where 'the individual denoted by the clefted XP is the only (or maximal) contextually relevant individual of which the property denoted by the cleft holds' (2011: 149). In this sense, exhaustiveness equals maximality. Similar view is held by Delin and Oberlander (1995), Percus (1997) and von Fintel and Matthewson (2008). For Higgins (1979) and Declerck (1984), exhaustiveness is related to exclusiveness, which means 'if the variable has a specific entity or set as referent, only one entity or set can be assigned as value to it' and 'all other potential candidates are then automatically excluded (exhaustiveness implicature)' (Declerck 1984: 134). But according to Atlas and Levinson (1981) and É. Kiss (1998, 1999), exhaustiveness is a truth-functional effect. The other dispute is the nature of exhaustiveness in specificational sentences. As noted by Collins (1991), exhaustiveness can be regarded as a presupposition (e.g. Chomsky 1971, Frascarelli 2010), an entailment (e.g. Delahunty 1982, Español 1999) or an implication defeasible in a specified context (e.g. Declerck 1988, Horn 1981, Paul 2008).

Although exhaustiveness in specificational sentences has been widely examined in the semantic literature, in SFL, exhaustiveness in identifying clauses receives little attention. One exception is Davidse (1991: 252), who asserts that in identifying clauses the exhaustive meaning is conveyed by encoding processes but not by decoding ones. In this section, I will probe into exhaustiveness in identifying clauses. In testing whether the clause in question conveys an exhaustive meaning, I follow the popular way by inserting the additive particle also into the clause to test its compatibility with the clause. But my study of exhaustiveness is different from those in the literature in the following aspects. First, the account for exhaustiveness is not restricted to predicative Themes but extended to identifying clauses. Second, exhaustiveness conveyed by identifying clauses is explored at two levels because of the special characteristics of identifying clauses, i.e. the two semiotic processes involved in a clause and the inherent ambiguities. Exhaustiveness in identifying clauses is categorized into referential exhaustiveness and realizational exhaustiveness; the latter is influenced by the coding direction of the information in different contexts. Third, different from the traditional individual concept of exhaustiveness, a relational view is taken in the examination of the exhaustiveness conveyed by identifying clauses. Referentially, exhaustiveness is embodied in the relation between the signified and the signifier, and realizationally, it is embodied in the relation between the two participants. Last but not the least, by taking both typical and non-typical identifying clauses into account, I redefine the relationship between definiteness and exhaustiveness in identifying clauses.

#### 5.2.1 Meanings of uniqueness, exclusiveness and exhaustiveness

Exhaustiveness is usually accompanied by uniqueness and definiteness. Uniqueness is related to definiteness; it is a property of noun. The meaning of uniqueness is that the denotation of a noun has a certain specific property that distinguishes it from the other members of the same kind. This specific property excludes the other possibilities and makes the entity in question exhaustive in the relevant context. Hence, there is a close relationship among uniqueness, exclusiveness and exhaustiveness. But in identifying clauses, the relationship is rather complex. In identifying clauses, the fact that the

second participant is typically realized by a definite NG means that the entity is unique in the relevant context. That is to say, it is the only one contextually relevant and the other possibilities are unacceptable, or at least inappropriate. However, this inference is only tenable in the referential relation between the signified and the signifier in terms of the denotation of the two participants. With respect to the inter/intra-stratal realization relationship between the two participants, such a transitive relationship among definiteness, uniqueness and exhaustiveness is not valid (see § 5.2.3).

#### 5.2.2 Exhaustiveness in identifying clauses

Reeve (2011) indicates that exhaustiveness is obligatory in specificational sentences and cleft constructions, and incompatible with adverbs like *also* and *even* and universal quantifiers like *everything* and *all*. This is illustrated by a typical identifying clause as below.

#### (1) Tom is the leader of the team

Based on the examination in Chapter Four, (1) is interpreted in eight ways. But since four of them are the results of S-C switch, only four possibilities are shown here. If one is interested in the relation between Tom and the role played by him in the team, *Tom* is the Token and *the leaderof the team* the Value. In answering a question like 'who /which one is Tom', the speaker identifies the identity of Tom by indicating the feature that distinguishes Tom from the other members in the team. In this situation, (1) is a decoding process, with *Tom* being the Identified and Token and *the leader of the team* the Identifier and Value. In answering a question like 'who /which one is the leader of the team', the speaker identifies the identity of the leader of the team by specifying the one who plays the role. In this case, (1) is an encoding process, with *Tom* being the Identifier and Token and *the leader of the team* the Identified and Value. If, on the other hand, the focus falls on the relation between the role and the one for whom the role is customized, *Tom* is the Value and *the leader of the team* the Token. In answering the question 'which role is assigned to (customized for) Tom, the leader of the team, the executive or the supervisor', the speaker identifies the identity of Tom by assigning him the tailor-made role. As a consequence, (1) is an encoding process, with *Tom* being the Identified and Value and *the leader of the team* the Identifier and Token. In answering the question 'to (for) whom is the role of the leader of the team by assigning it to the one who is born to play the role. Accordingly, (1) is a decoding process, with *Tom* being the Identifier and Value and *the leader of the team* the Identified process, with *Tom* being the Identifier and Value and *the leader of the team* the team by assigning it to the one who is born to play the role. Accordingly, (1) is a decoding process, with *Tom* being the Identifier and Value and *the leader of the team* the Identified and Token.

After having specified the different contexts and the possible interpretations of the identifying clause, I will present how uniqueness and exhaustiveness are conveyed by the clause in these four situations. First, there is no room for arguing the uniqueness of the two participants in all the situations because both of them are realized by definite NGs (one is a NG containing the DA *the* and a CN, the other is a PN). To be specific, *the leader of the team* denotes that in all the four situations the leader of the team is unique, and so does *Tom*. However, being unique does not necessarily lead to exhaustiveness since uniqueness is the individual CONCEPT of identity of each participant but exhaustiveness is more a RELATION of identity between the two participants.

In the first situation where *Tom* is the Identified and Token and *the leader of the team* the Identifier and Value, the decoding process does not necessarily convey an exhaustive meaning. This is seen from the variant of the clause contrived in (1, a), which is compatible with *also*.

(1) a. A: Tom is super busy these days.

B: Why?

A: Our company is going to host a forum. Tom is the organizer and the publicity

plan assistant. He needs to deal with a lot of things. Oh, I almost forgot, <u>he is</u> also the leader of the team (of the project).

The interpretation of the clause in such a context is presented as follows:

(1) a. decoding: Who is Tom (Which/what role is played by Tom)?
[Id/Tk:] *Tom is* [Ir/V1:] *the leader of the team Tom is also the leader of the team*

The two participants *Tom* and *the leader of the team* are unique in (1, a), indicated in the definiteness of the NGs. There is only one person named Tom in the relevant situation, and the role of the leader of the team is unique as well. In this decoding process, Tom is identified by decoding it into a more abstract Value the leader of the team, which is stated in other words as 'Tom is identified by representing the leader of the team'. Unique as this Value is, it does not convey exhaustiveness because the Value does not exhaust all the possibilities for the Token. As the context of (1, a) shows, the Token Tom can have a number of Values, such as the organizer of the activity, the publicity plan assistant and the leader of the team, among which the leader of the team is just one of the roles that Tom plays in his daily life. This is demonstrated grammatically by the compatibility of the clause with the additive adverb *also*.

The situation will be different if the clause is used to answer 'who /which one is the leader of the team'. In this case, *Tom* is the Identifier and Token and *the leader of the team* the Identified and Value, constituting an encoding process that identifies the leader of the team by encoding it into a less abstract Token Tom. It means 'the leader of the team is identified by being represented by Tom'. The Token Tom in this context is both unique and exhaustive, he is the only one that serves as the leader of the team, and there is no one else. The exhaustive meaning conveyed by the encoding process (1, b) is illustrated by the incompatibility of the clause with *also*. (1) b. encoding: Who /which one is the leader (Who plays the role of the leader)?[Id/V1:] *the leader of the team is* [Ir/Tk:] *Tom* 

\*the leader of the team is also Tom

Next I will probe into the cases whose Token is realized by *the leader of the team* and Value by *Tom*. When the clause answers the question 'which role is customized for Tom', *Tom* is the Identified and Value and *the leader of the team* the Identifier and Token. This process identifies the Value Tom by encoding it into a less abstract Token the leader of the team. In this case, the leader of the team is both unique and exhaustive, that is, in the relevant situation only one role (the leader of the team) is customized for Tom. If there were other possible roles, the leader of the team would not be said to be 'customized' for him. Hence, the variant in (1, c) is less acceptable than (1, a).

- (1) encoding: Which one is Tom (Which role is customized for Tom)?
- c. [Id/VI:] Tom is [Ir/Tk:] the leader of the team

*Tom is also the leader of the team* 

(1, c) is different from (1, a) in spite of *the leader of the team* being the Identifier and *Tom* being the Identified in both of them. While (1, c) is an encoding process, (1, a) is a decoding one. We can see the difference from the probe questions. (1, a) identifies the role of Tom, and any role that Tom plays can be on the list. However, (1, c) identifies the role customized for Tom, in other words, the role that Tom is born to play. It is a common sense that customization involves a meaning of 'specific', and hence only one role is on the list.

If, on the other hand, the clause answers the question 'for whom is the role of the leader of the team customized' or 'who is born to be the leader of the team', *the leader of the team* is the Identified and *Tom* is the Identifier. The mapping of the

Identified onto the Token and the Identifier onto the Value constitutes a decoding process, which means that the leader of the team is identified by decoding it into a more abstract Value Tom. But this decoding process is different from (1, a); it is just like the two encoding processes in conveying uniqueness and exhaustiveness, and is incompatible with *also*.

(1) d. decoding: Who is the leader of the team (Who is born to be the leader of the team)?

[Id/Tk:] *the leader of the team is* [Ir/VI:] *Tom \* the leader of the team is also Tom* 

From the analysis above it is seen that all the possible interpretations of the identifying clause convey uniqueness, but only the encoding processes necessarily convey exhaustiveness. The decoding processes may but not invariably convey exhaustiveness. This tentative conclusion is drawn on a typical eight-cell identifying clause; it will be further justified in the four-cell and two-cell identifying clauses. Examples in Chapter Four are re-presented as illustrations.

- (2) the operation of insertion is symbolized by '+'
- (3) kidneys and lungs function as the most important physiological buffer systems

The two clauses are characterized by a four-cell paradigm and two-cell paradigm respectively. The former has four possible interpretations because it is semantically irreversible in the first sense; the latter has two possible interpretations because it is both semantically and grammatically irreversible.

Let us consider (2) first. Only two possibilities are accounted for because the other two are the results of passivization. If the clause answers the question 'what /which symbol symbolizes the operation of insertion', it is an encoding process within which the Value *the operation of insertion* is also the Identified and the Token '+'is

also the Identifier. The meaning is 'the operation of insertion is identified by encoding it into a less abstract Token "+", in other words, 'the operation of insertion is identified by being represented by "+". In this encoding process, the implication of exhaustiveness is seen from the unacceptability of the variant contrived as (2, a).

(2) a. encoding: Which symbol symbolizes the operation of insertion?
[Id/VI:] the operation of insertion is symbolized by [Ir/Tk:] '+'
>>?the operation of insertion is symbolized by '<', it is also symbolized by '+'</li>

Although the variant is grammatically acceptable, there exists a pragmatic problem. When one operation is symbolized by more than one symbol, people may get confused since there is no need to use two different symbols to symbolize one operation in a relevant context.

If, on the other hand, the clause is used to answer the question 'what does the symbol "+" symbolize', it is a decoding process conveying that the symbol "+" is identified by decoding it into a more abstract Value the operation of insertion. This is similar to (1, a), where no exhaustive meaning is conveyed by the decoding process. One will see this in the acceptability of the variant in (2, b).

(2) b. decoding: What does the symbol '+' symbolize

[Id/Tk:] '+' symbolizes [Ir/VI:] the operation of insertion

+' symbolizes the operation of extension, it also symbolizes the operation of insertion

One may pose the question: Why are the variant in (2, a) involving 'one symbolized + two symbols' less acceptable, but the one in (2, b) involving 'one symbol + two symbolized' acceptable? Although in our daily life it is common to use one symbol to symbolize more than one entity or event, symbolizing one entity or event with more than one symbol in a specified context is more constrained. For example, in China,

the dragon represents power, dignity and authority. In Chinese Feudal society, the dragon is the patent of the imperial power. The ceremonial dresses of the emperor are called 'dragon robes', the throne is called 'dragon seat', the beds the emperor sleeps on are called 'dragon beds', etc. (Net. 6.) In addition, the dragon in China also represents luck and success. Therefore, in Chinese culture the dragon symbolizes not only authority but also luck. But the imperial power is symbolized by nothing but the dragon. Now, let us go back to (2, a). It is undeniable that there may be cases of one operation having come to be represented by different symbols by different people or in different cultural contexts. In one context, the operation of insertion is represented by '+', but in a different context, it may be represented by '-' even though it is negation in logic. However, what I emphasize here is that the process of identifying a symbol for the symbolized is confined to a specified context of situation. In a specified context, it does not make sense to use more than one symbol to symbolize one entity, but it is possible to use one symbol to symbolize more than one entity in order to be notationally economical. Another example in §4.3.3.4, a tick represents acceptance, illustrates the same point. In China, acceptance is symbolized by a tick, but in Brazil it is symbolized by a dot. In a survey in a specified context, there is always an instruction like 'indicate acceptance by a tick ( $\sqrt{}$ ) and objection by a cross (×)', or 'indicate acceptance and no idea by a tick ( $\sqrt{}$ ) and objection by a cross (×)', however, it is impossible to see 'indicate acceptance by a tick ( $\sqrt{}$ ) and dot ( $\cdot$ )'.

Following the investigation of the four-cell identifying clauses is the exploration of uniqueness and exhaustiveness in the two-cell identifying clauses. It will be argued that the identifying clauses having a two-cell paradigm show the same tendency as those having an eight-cell paradigm and four-cell paradigm. To illustrate, I analyze (3) *Kidneys and Lungs function as the most important physiological buffer systems* as below.

There are two possible interpretations for (3). It is different from (2) which should have four interpretations but is presented only two. In the first situation where the concern is 'what do kidneys and lungs function as', *kidneys and lungs* is the

Identified and Token and *the most important physiological buffer systems* is the Identifier and Value. It is a decoding process identifying kidneys and lungs by decoding them into a more abstract Value the most important physiological buffer systems, which is paraphrased as 'kidneys and lungs are identified by representing the most important physiological buffer systems'. Like (1, a) and (2, b), the Value is unique but does not exhaust all the possibilities of the Token. This is seen from the variant in (3, a).

(3) a. decoding: What do kidneys and lungs function as?

[Id/Tk:] kidneys and lungs function as [Ir/VI:] the most important physiological buffer systems

*kidneys and lungs function as the filters for noxious substance, they also function as the most important physiological buffer systems* 

If the clause is used to answer the question 'what /which organs function as the most important physiological buffer systems', it is an encoding process, with *kidneys and lungs* being the Identifier and Token and *the most important physiological buffer systems* the Identified and Value. This process identifies the most important physiological buffer systems by encoding them into a more abstract Value kidneys and lungs and conveys that kidneys and lungs identify by representing the most important physiological buffer systems. In this case, the participants in this clause are unique and exhaustive, as the variant in (3, b) shows.

(3) b. encoding: What/Which organs function as the most important physiological buffer system?

[Ir/Tk:] *kidneys and lungs* function as [Id/V1:] the most important physiological buffer systems

→ \*the liver functions as the most important physiological buffer systems, and kidneys and lungs also function as the most important physiological buffer systems

From the discussion of (1), (2) and (3), it is tempting to conclude that uniqueness is directly associated with the definiteness of NGs. As for exhaustiveness, it is coded in the relation between the participants rather than the definiteness of their grammatical realizations, necessarily conveyed by encoding identifying processes but optionally by decoding ones. In this respect, encoding processes are more typical than decoding processes in coding a relation of identifying. This conclusion is in accord, by and large, with the claim of Davidse, who points out that 'decoding clauses do not have this exhaustiveness implicature ... encoding identification, in contrast, is expected to provide an exhaustive list of all the items that represent the Token and the Value' (1991: 252). However, there are two differences between Davidse's conclusion and mine. According to the present analysis, exhaustiveness may also be conveyed by decoding identifying clauses, as (1, d) shows. Another concern is the meaning of exhaustiveness. Davidse's interpretation of exhaustiveness is internal to NGs. She considers exhaustiveness in terms of the realizations of the Token and Value. But exhaustiveness is embodied more in the relation between the two participants than in the concept of the identities and realizations of the participants because of the special feature of the identifying clauses – the semiotic realization relationship between the two participants. In other words, it shows an exhaustive relation BETWEEN the Token and the Value, by which I mean the Token is the only choice for the Value and the Value is the only choice for the Token.

Exhaustiveness is also one of the main factors distinguishing attributive clauses from identifying ones. In attributive clauses, the second participant is typically indefinite. That is to say, it is not unique. (4) is presented as an illustration.

#### (4) [Ca:] her daughter is [Attri:] beautiful

In this instance, the Carrier is realized by a definite NG *her daughter* and is exhaustive in the relevant context; the Attribute is realized by an adjective that does

not convey exhaustiveness in any case. In terms of the relation between these two participants, there is no exhaustiveness conveyed. The meaning of the clause is that her daughter is one of those girls who are beautiful or beautiful is one of the characteristics that her daughter possesses. In the former case, the focus falls on *her daughter* (as in (4, a)), while in the latter, the focus falls on *beautiful* (as in (4, b)). The non-exhaustiveness is seen by the compatibility of the clause with the additive adverbs *too* and *also*.

(4) a. -Mary is a beauty.

- No wonder her daughter is beautiful too.

b. - Her daughter is intelligent. She stands first in the class.
- Yeah, she is also beautiful.

Now, a short summary of uniqueness and exhaustiveness in identifying clauses is presented. Uniqueness does not necessarily lead to exhaustiveness. Being unique does not mean being exhaustive, like exhaustiveness in terms of the inter/intra realization relationship between two participants. It is conveyed optionally in decoding identifying clauses and inevitably in encoding ones. Exhaustiveness in an identifying clause is realized in two respects. One is the relation in terms of denotation, i.e. the relation between the signified and the signifier, which means that there is only one specific entity of our experience construed by the linguistic realization and there is only one linguistic realization construing the specific entity of our experience. This is the REFERENTIAL EXHAUSTIVENESS mentioned in §4.3. The other is the relation between the two participants in the clause, i.e. the relation between the Token for the Value and the Value is the only Value for the Token. This is the REALIZATIONAL EXHAUSTIVENESS mentioned in §4.3. Exhaustiveness frequently discussed in semantics has its realization in lexicogrammar, shown by the

incompatibility of the clauses with the additive adverbs such as *also*, *too*, *even*, and the like.

#### 5.2.3 A semiotic view on exhaustiveness in identifying clauses

In this section, I will discuss first the identifying clauses that always convey exhaustiveness – the predicative Theme. (5) below explains exhaustiveness in predicative Themes in detail.

(5) *it is a book that I am looking for* 

As mentioned by Horn (1981: 132), the generalized conversational implications in predicative Themes are EXISTENCE, IDENTIFICATION and EXHAUSTIVENESS. Take (5) for example.

(5) *it is a book that I am looking for*Existence: I am looking for something.
Identification: That something is a book.
Exhaustiveness: I am looking for nothing else but a book.

It is not compatible with additive adverbs such as *also*, *too*, etc.

(5) a. \*it is also a book that I am looking forb. \*it is, too, a book that I am looking for

The generalized conversational implication in the predicative Theme above is analyzed from the semantic and pragmatic perspectives. Declerck (1988) shows a preference for analyzing the 'specificational sentences' from a semantic or pragmatic perspective, even though he claims an atheoretical methodology. He defines the 'exhaustiveness understanding' as that 'they imply that the focus represents an exhaustive list of the values satisfying the variable' (1988: 28) and states that exhaustiveness is 'nothing else than "exhaustive listing" (1988: 30). He rejects Chomsky's (1971) view of exhaustiveness as a logical presupposition and Delahunty's (1982) view of exhaustiveness as an entailment, and argues that the 'exhaustiveness understanding' should be an implication, either a conventional or conversational one.

The present investigation, taking a systemic functional semiotic point of view, explains exhaustiveness in terms of denotation and realization relationship. To explain this, I present *Tom is the leader of the team* again. But since it is the encoding identifying processes that inevitably convey the exhaustive meaning, for now only the encoding processes ((6, a) and (6, b)) are analyzed.

## (6) a. [Id/V1:] *the leader of the team is* [Ir/Tk:] *Tom*b. [Id/V1:] *Tom is* [Ir/Tk:] *the leader of the team*

The semiotic explanations for the exhaustive meaning conveyed by the example are stated as:

## REFERENTIAL EXHAUSTIVENESS in denotation between the signified and the signifier

In (6, a), the definite NG *the leader of the team* functioning as the Value in the linguistic system construes nobody but the specific entity of our experience of the leader of the team relevant in the context in question; the PN *Tom* functioning as the Token in the linguistic system construes nobody but the specific entity of our experience of Tom relevant in the context in question. In (6, b), the PN *Tom* functioning as the Value in the linguistic system construes nobody but the specific entity of our experience of Tom relevant in the context in question. In (6, b), the PN *Tom* functioning as the Value in the linguistic system construes nobody but the specific entity of our experience of Tom relevant in the context in question; the definite NG *the leader of the team* functioning as the Token in the linguistic system construes

nobody but the specific entity of our experience of the leader of the team relevant in the context in question.

## ② REALIZATIONAL EXHAUSTIVENESS in the realization relationship between the Token and the Value

In (6, a), the Value *the leader of the team* on a higher order of abstraction is realized by nothing but the Token *Tom* on a lower order of abstraction in the relevant context. In (6, b), the Value *Tom* on a higher order of abstraction is realized by nothing but the Token *the leader of the team* on a lower order of abstraction in the relevant context.

The semiotic view on exhaustiveness in the encoding identifying processes is visualized in Figure 5.1.



Figure 5.1 Semiotic analysis of exhaustiveness in the encoding identifying clauses

In the concluding remarks in §5.2.1, I have demonstrated the two different views on exhaustiveness – concept and relation. The semiotic analysis of (6) shows that in order to have a comprehensive understanding of the exhaustive meaning conveyed by identifying clauses, one has to refer to denotation, which involves a relation between the signifier and the signified, and the realization relationship, which involves a relation between the two participants, the Token and the Value, in the clause in question.

Next I will show the difference between decoding identifying clauses and encoding ones by examining (6) further. (6, c) is a decoding process.

#### (6) c. [Id/Tk:] *Tom is* [Ir/Vl:] *the leader of the team*

Exhaustiveness conveyed by (6, c) is presented as follows:

Referential exhaustiveness in denotation – The PN *Tom* functioning as the Token in the linguistic system construes nobody but the specific entity of our experience of Tom relevant in the context in question; the definite NG *the leader of the team* functioning as the Value in the linguistic system construes nobody but the specific entity of our experience of the leader of the team relevant in the context in question. Realizational NON-exhaustiveness in realization relationship – The Token *Tom* on a lower order of abstraction can realize the Value *the leader of the team* on a higher order of abstraction, and *the leader of the team* is just one of the several Values that the Token can realize.

In conclusion, interpreted from a semiotic perspective, exhaustiveness is embodied in two relations. One is the referential exhaustiveness between the signified and signifier, and the other is the realizational exhaustiveness between the two participants on the different orders of abstraction in language. The two examples (6, a – b) and (6, c) present respectively the different interpretations of exhaustiveness in encoding identifying clauses and decoding ones.

#### 5.2.4 Exhaustiveness in non-typical identifying clauses

The examinations in the preceding sections take the typical identifying clauses whose two participants are realized by definite NGs as examples. In this section, I am going to argue that the conclusions drawn in respect of the exhaustive meaning conveyed by typical identifying clauses are also valid in non-typical ones.

§4.5 has demonstrated the non-typical identifying clauses and the intermediate cases lying between typical identifying clauses and other clause types and discovered

the three factors essential in identifying the nature of a clause, viz. the definiteness of the NG realizing the second participant, the consciousness of the first participant and the equativeness of the verb realizing the process. Now the focus falls on the non-typical identifying clauses with the second participant realized by an indefinite NG, which share some of the features of typical identifying clauses and some of those of attributive ones. In §4.5.1, such clauses are divided into four types – generic equation, list presentation, definition /translation and chart/rank description. For the convenience of analysis, I re-present (69, b) in Chapter Four as (7).

#### (7) *jiaolv means anxiety*

- i. [Id/Tk:] jiaolv means [Ir/Vl:] anxiety
- *jiaolv means misgivings and worriment, and it also means anxiety*
- ii. [Ir/Tk:] jiaolv means [Id/V1:] anxiety

*Anxin and kewang mean anxiety, and jiaolv also means anxiety* 

(7, i) is a decoding process, and (7, ii) is an encoding process. The reasons why the variant in (7, i) is acceptable but the one in (7, ii) is unacceptable have been accounted for in §5.2.1 (see the analysis of (2)).

In Chapter Four, I have indicated definition /translation as a subtype of generic equation. In such clauses, since the two participants denote a class rather than an individual, they are unique even though they are realized by indefinite NGs. In (7), the two participants, *jiaolv* and *anxiety*, are the two words expressing a similar meaning in two languages. They convey exhaustiveness in terms of denotation: *Jiaolv* conveys the special meaning of *anxiety* in Chinese and *anxiety* conveys the special meaning of *jiaolv* in English. With respect to the realization relationship, it has been shown in the variant in (7) that only the encoding process conveys the exhaustive meaning. The relation between the two participants is 'the Token "jiaolv" on a lower order of abstraction realizes no meaning but the Value "anxiety" on a higher order of abstraction'.

Therefore, the non-typical identifying clauses with the participants realized by indefinite NGs but denoting a class convey the exhaustive meaning both referentially and realizationally in the encoding interpretation and only referentially in the decoding interpretation.

If the second participant in a non-typical identifying clause denotes an individual rather than a class, how is the meaning conveyed by the clause interpreted? An authentic example from COCA presented as (8) below is an instance.

- (8) the treatment team may involve a medical doctor, a nutritionist, and a mental health professional (i.e. psychologist)
- i. [Id/Tk:] the treatment team may involve [Ir/VI:] a medical doctor, a nutritionist, and a mental health professional (i.e. psychologist)
- *the treatment team involves a nurse and a pharmacist, and it may also involve a medical doctor, a nutritionist, and a mental health professional (i.e. psychologist)*
- ii. [Ir/Tk:] *the treatment team* may involve [Id/VI:] a medical doctor, a nutritionist, and a mental health professional (i.e. psychologist)
- ?the therapy team and the medical team may involve a medical doctor, a nutritionist, and a mental health professional (i.e. psychologist), and the treatment team may also involve a medical doctor, a nutritionist, and a mental health professional

Again, the unacceptability of the variant in (8, ii) is a pragmatic one. Since the constitution of the treatment team is the same as that of the therapy team and the medical team, there is no need to differentiate it from the other types of teams.

Although the second participant in the possessive identifying clause is realized by an indefinite NG denoting an individual, the clause conveys the exhaustive meaning in terms of constitution. It is different from the attributive clause like *the treatment team may involve a psychologist*, in which case the second participant does not exhaust all the components of the treatment team. The difference between them is shown by Figure 5.2.





Figure 5.2 Comparison between the identifying clause of constitution and the attributive clause in respect of exhaustiveness

Pie A in Figure 5.2 shows that the treatment team is composed of three components – a medical doctor, a nutritionist and a psychologist. These three exhaust all the components of the treatment team, represented by red (33.3%), green (33.3%) and blue (33.3%) respectively. But Pie B shows that psychologist (represented by blue, 25%) is just one of the several components of the treatment team; it does not exhaust all the possibilities. The other possibilities are represented by red (75%).

Compared with (7) whose participants denote a class, (8), whose second participant denotes an individual, conveys the exhaustive meaning realizationally in

the encoding interpretation – a medical doctor, a nutritionist, and a mental health professional 'realize' (constitutes) the treatment team. But in the decoding interpretation, no exhaustive meaning is conveyed in denotation and realization relationship.

The analysis of the non-typical identifying clauses leads to the re-definition of the relationship among definiteness, uniqueness and exhaustiveness in §5.2.1. In the typical identifying clauses, referentially the uniqueness of a participant is indicated directly by the definiteness of the NG that realizes that participant. If the participant is realized by 'DA + CN' or a PN, the participant is unique and exhaustive. If the participant is realized by a NG with an indefinite article, it may nonetheless be unique and exhaustive in denotation and realization relationship as long as it denotes a class rather than an individual. Furthermore, even if the participant realized by an indefinite NG denotes an individual, the clause may convey an exhaustive meaning in terms of realization relationship.

#### 5.3 Only in identifying clauses

Until now, I have taken advantage of the additive focus particle *also* to test whether an identifying clause conveys the exhaustive meaning or not. In this section, I will investigate the functions of *only* in supplementing and reinforcing the exhaustive meaning in identifying clauses and in reducing ambiguities of an identifying clause.

*Only*, widely examined as an exclusive focus particle, conveys exhaustiveness that forms part of the asserted truth-functional content in a semantic representation. (Atlas and Levinson 1981, É. Kiss 1998, 1999, Drenhaus et al. 2011) Exhaustiveness conveyed by *only* is usually studied in association with clefts. Take Drenhaus et al. (2011) for instance, their research shows that clefts and the corresponding *only*-foci sentences are different and the violation of exhaustiveness in the latter type of sentences is less acceptable.
#### 5.3.1 A brief introduction of only

In the literature, *only* is mostly discussed as a focus particle (e.g. Atlas and Levinson 1981, Jacobs 1988, König 1991, É. Kiss 1998, 1999). As a 'focus inducer' (Jacobs 1988: 95), it is always associated with the focus in a clause. A clause with *only* has a focus-background structure. For example, in the clause *only Tom hit John*, the background is 'someone hit John' and the focus falls on Tom. However, the interpretations of the function of the focus remain controversial, varying from identifying a presupposition or presuppositional set (Jackendoff 1972), expressing highlighting and informativeness (Bolinger 1985), to establishing a relation between the value of a focused expression and a set of alternatives (Jacobs 1983, 1988). Following Halliday and Matthiessen (2004), I regard focus as conveying the new or contrastive information, which receives the tonic prominence. In identifying clauses, it is the Identifier in unmarked cases.

In my account, the status of *only* is interpreted from a textual perspective as well as an interpersonal perspective. The textual status of *only* is investigated in the thematic and information systems and its interpersonal status is examined in the mood system, both of which are related to the positions of *only* in the clause.

# 5.3.2 Positional variability and its relation to the textual and interpersonal statuses of *only*

The positional variability is a prominent feature of *only*. *Only* can occur in different places in a clause, correlating with the different elements where the tonic prominence falls and influencing the interpretations of a clause.

5.3.2.1 Positional variability of only in different types of identifying clauses

There are some constraints on the relation between the position of the focus particle and the constituent it specifies (König 1991). A particle preceding the Subject only focuses on the Subject or some part of it; a particle following one or two auxiliary verbs focuses on either the Subject or any of the following constituents; a particle at the end of the clause focuses on either the Subject or any of the constituents following the verb; a particle following the main verb focuses on the adjacent constituent(s). However, the examination of (9) in the following shows that this conclusion needs to be revised partly: If there is a modal verb in the clause, a particle preceding the Subject focuses on the Subject, some part of it or the Complement. *Only* in an identifying clause tends to occur in three places – preceding the Subject, at the end of the clause and following the auxiliary or modal verb if there is any. (9) below illustrates the different positions of *only* in an identifying clause and the interpretations of the background-focus structures.

(9) a. I. *only Tom can be the leader*Background: someone can be the leaderFocus: Tom

II. *only Tom can be the leader*, *(but many people can be the secretary)* Background: Tom can be some role Focus: the leader

b. I. *Tom can only be the leader* Background: someone can be the leader Focus: Tom

II. *Tom can only be the leader* Background: Tom can be some role Focus: the leader

c. I. *Tom can be the leader only* Background: someone can be the leader Focus: Tom II. *Tom can be the leader only* Background: Tom can be some role Focus: the leader

d. *Tom can be only the leader* Background: Tom can be some role Focus: the leader

Suppose that there is no modal verb (e.g. *Tom is the leader*), the possible positions of *only* in the identifying clause have to be reconsidered.

(10) a. only Tom is the leader
b. I. Tom is the leader only
II. Tom is the leader only
c. Tom is only the leader

Firstly, there is no need to consider the case where *only* follows a modal verb. In addition, *only* preceding the Subject focuses only on the Subject. Thirdly, the meaning of (10, c) should be made clear. While *only* in (10, a - b) means 'single and isolated from the others', in (10, c) it conveys an interpersonal meaning of 'just, nothing but'.

Next I will show the possible positions of *only* in the identifying clauses with *be regarded as, serve as* and *represent*, illustrated in (11), (12) and (13) respectively. The first two examples are four-cell identifying clauses, and the last one is a two-cell identifying clause.

- (11) a. only **Tom** is regarded as the leader
  - b. I. *Tom* is only regarded as the leaderII. *Tom* is only regarded as *theleader*
  - c. I. Tom is regarded as the leader only
    - II. Tom is regarded as the leader only

d. Tom is regarded only as the leader

- (12) a. only Tom serves as the leader
  b. I. Tom serves as the leader only
  II. Tom serves as the leader only
  c. Tom serves only as the leader
- (13)<sup>25</sup>a. only Tom represents the leader
  b. I. Tom represents the leader only
  II. Tom represents the leader only
  c. Tom represents only the leader

The four examples above from (10) to (13) represent the different types of identifying clauses. (11), the representative of the identifying clauses with the assignation verbs, is distinct from the other three types in that *only* in such clauses is likely to occur in four places due to the passive auxiliary *be*. Similar to (10, c), (11, b), (11, d), (12, c) and (13, c) are special because *only* in these cases functions interpersonally.

5.3.2.2 Textual and interpersonal status of only

As shown in (10) - (13), *only* has two meanings, realized in the different positions it occurs in an identifying clause. When *only* expresses the meaning 'single and isolated from others' to show a limitation in the scope, it occurs in two places – preceding the Subject and at the end of the clause. When *only* conveys the meaning 'just, nothing but' to indicate an adjustment of the expectation, it follows the main verb or the auxiliary/modal verb if there is any. As an illustration, (10) in §5.3.2.1 is re-presented as (14).

<sup>&</sup>lt;sup>25</sup> There are two interpretations of this clause. In one situation, it is interpreted as 'Tom speaks for the leader', in which case the leader is someone other than Tom. In another situation, it is interpreted as 'Tom is the leader', in which case the leader is nobody but Tom. In the analysis, I refer to the second interpretation.

(14) a. only **Tom** is the leader

- b. I. *Tom* is the leader only
  - II. Tom is the leader only
- c. Tom is only the leader

*Only* cannot be treated in the same way in the four cases. In (14, a - b), *only* helps the clause convey an exhaustive meaning. But in (14, c), it indicates more an adjustment of the expectation. The textual and interpersonal status of *only* in (14) is shown as follows:

(14) a. only **Tom** is the leader

only	Tom	is	the leader
Interpersonal Theme	Topical Theme	Rheme	
→ New ←			
Adjunct	Subject	Finite	Complement

b. I. *Tom* is the leader only

Tom	is	the leader	only
Theme	Rheme		
New <			
Subject	Finite	Complement	Adjunct

b. II. Tom is the leader only

Тот	is	the leader	only
Theme	Rheme		
Given — New			
Subject	Finite	Complement	Adjunct

c. Tom is only the leader

Тот	is	only	the leader
Theme	Rheme		
Given $\longrightarrow$ New			
Subject	Finite	Mood Adjunct	Complement

Only in the first case functions thematically as an interpersonal Theme, and together with the topical Theme *Tom* it forms the starting point of the clause. In this way, the speaker limits the possible candidates of the leader at the very beginning. Because of only, the focus falls on Tom. It is a marked case since Tom is not the last lexical item in the clause (see more the review of Halliday's account for focus in  $\S5.4.1$ ). The focus is contrastive rather than new, as in only **Tom** is the leader, not John. Therefore, only brings about not only an exhaustive implication but also contrastiveness. On the other hand, the textual status of only in (14, b - c) is rhematic, in which case the speaker indicates his purpose by *only* in the development of the Theme in the Rheme. (14, b, II) is different from (14, a) and (14, b, I) in that the former has an unmarked information structure Given – New but the information structures of the latter two are marked New (contrastive) - Given. As a consequence, only in (14, b, II) conveys mainly exhaustiveness while in (14, a) and (14, b, I) it conveys more contrastiveness. The last case in (14) is special seen from an interpersonal perspective. Only in (14, c) is a mood Adjunct of intensity showing counterexpectancy, whereas in (14, a - b) it is an Adjunct occurring either at the beginning or the end of the clause. In (14, c) only means 'just, nothing but' in expressing an adjustment of the expectation. One can understand the meaning of (14, c) more clearly in the context as below.

A: Heard that they are recruiting an assistant.

- B: Yes, you may get some help from Tom.
- C: Why? Tom is only the leader; he is not the president after all.

Another example from BNC further illustrating the difference is reforming the

*blasphemy law is only the first item on a lengthening Muslim agenda*. Moreover, (14, c) also implies a contrastive meaning, as in *Tom is only the leader, not the president*. In effect, such clauses are not so 'identifying' and in some situations lean towards 'attributive'. The meaning conveyed by *Tom is only the leader* is similar to *Tom is only a leader*. Therefore, in *be*-identifying clauses with no auxiliary or modal verb, *only*, in the sense of 'single and isolated from the others', occurs typically in two places, one being thematic by preceding the Subject (as in (14, a)) and the other being rhematic at the end of the clause (as in (14, b)).

#### 5.3.3 The functions of *only* in identifying clauses

Before the discussion of the functions of *only* in identifying clauses, I would like to make one point clear. In this section, two cases will not be taken into consideration – the identifying clauses with the modal verbs and those where *only* is a mood Adjunct indicating counterexpectancy. Therefore, *only* in the identifying clauses occurs either thematically preceding the Subject or rhematically at the end of the clause. In the former case the focus falls just on the Subject, and in the latter the focus falls on the Subject or the Complement.

Clauses with *only* always convey the exhaustive meaning. Parallel to the investigations of the exhaustive meaning in ordinary clauses are those of the exhaustive meaning in predicative Themes. Drenhaus et al. (2011) make a comparison between the exhaustive meaning in *only*-foci sentences and that in *it*-cleft sentences. These two kinds of clauses are illustrated by (15) and (16) respectively as follows (i.e. (1a) and (1b) in Drenhaus et al. (2011)).

- (15) only **John** stole a cookie
- (16) *it is* John that stole a cookie

Both (15) and (16) convey the exhaustive meaning 'nobody but John stole a cookie'.

Drenhaus et al. (2011) point out that on exhaustiveness in *only*-foci clauses a consensus has been reached, that is, exhaustiveness in clauses such as (15) forms part of the asserted truth-functional content of the utterance (Beaver and Clark 2008, Horn 1969, König 1991, Rooth 1985). As for exhaustiveness in predicative Themes, I agree with Drenhaus et al. on the less acceptability of a violation of exhaustivity with *only* than the violation with *it*-clefts (2011: 320). But the *only*-foci clauses in Drenhaus et al.'s examination are not identifying clauses. The purpose of the present study is to explore the difference between the identifying clauses with *only* and those without it and the functions of *only* in identifying clauses. (12) in §5.3.1, re-presented as (17), is analyzed in detail as follows:

(17) a. *only Tom serves as the leader*Background: someone serves as the leaderFocus: Tom

The Token can only be realized by *Tom* (as argued in Chapter Four). As for the realization of the Identifier, it needs further explanation. Since I follow Halliday and Matthiessen (2004) in regarding the element that receives the tonic prominence as the new information in unmarked cases, *Tom*, and only *Tom* in (17, a), can be the Identifier. That *Tom* is the Identifier and Token and *the leader* the Identified and Value results in the only interpretation of the clause, which conveys the same meaning as the predicative Theme *it is Tom who serves as the leader*. The structural functions of the participants in the clause are shown in (17, a).

#### (17) a. only [Ir/Tk:] Tom serves as [Id/VI:] the leader

The encoding identifying process means 'only Tom identifies by representing the leader'. If there is no *only*, the identifying clause has two interpretations - an encoding one and a decoding one. Therefore, the insertion of *only* reduces the

possible interpretations of an identifying clause with the role-playing phrasal verbs from two to one. The excluded is the decoding one that does not convey exhaustiveness.

Next I will deal with the identifying clause with *only* at the end of the clause, as shown in (17, b). It is different from the immediately above instance in that *only* in (17, a) focuses just on the Subject, but in (17, b) it focuses either on the Subject, as in (17, b, I), or on the Complement, as in (17, b, II).

(17) b. I. *Tom serves as the leader only*Background: someone serves as the leaderFocus: Tom

II. *Tom serves as the leader only* Background: Tom serves as some role Focus: the leader

Like (17, a), (17, b, I) has the focus assigned by *only* fall on the Subject, and hence *Tom* is the Token and Identifier and *the leader* the Value and Identified. The exhaustive meaning conveyed by the encoding process is reinforced by *only*. In (17, b, II), the focus falls on the Complement, and accordingly it is *the leader* that is the Identifier.

(17) b. II. [Id/Tk:] Tom serves as [Ir/VI:] the leader only

The difference between (17, b, I) and (17, b, II) is that (17, b, II) is a decoding process interpreted as 'Tom is identified by representing the leader only'. The insertion of *only* supplements the exhaustive meaning to the decoding process. In this case, the clause conveys a similar meaning as the predicative Theme *it is the leader that Tom serves as.* If (17, b, II) occurs without *only*, the decoding process conveys no exhaustive meaning in terms of realization relationship, as argued in §5.3.1.

#### (17) b. $I_1$ . Tom serves as the leader

*Tom is the organizer of the activity. He also serves as the leader of the team.* 

However, with the insertion of *only* into the decoding process, the exhaustive meaning is supplemented. This is seen from the variant in (17, b, II).

#### (17) b. II. Tom serves as the leader only

\*Tom is the organizer of the activity. He also serves as the leader of the team only.

To sum up, *only* in two-cell identifying clauses functions to reinforce the exhaustive meaning in the encoding processes or to supplement the exhaustive meaning in the decoding processes. The different textual status of *only* in an identifying clause influence the number of the possible interpretations of the clause in question, as illustrated by the analysis of the identifying clauses whose process is realized by the role-playing phrasal verbs. If *only* functions thematically, there is only one interpretation for the identifying clause in question. The reduction in the number of the possible interpretations results from the specifying-the-focus feature of *only*. If *only* functions rhematically, there are still two possible interpretations, both of which convey the exhaustive meaning.

Now the question is: Whether the eight-cell and four-cell identifying clauses are the same as the two-cell identifying clauses? To find out the answer, I re-present (10) and (13) in §5.3.1 as (18) and (19) respectively.

- (18) a. only **Tom** is the leader
  - b. I. *Tom* is the leader only
    - II. Tom is the leader only

First, let us consider (18, a), where *only* functions thematically.

(18) a. i. only [Ir/Tk:] Tom is [Id/VI:] the leader

ii. only [Ir/V1:] Tom is [Id/Tk:] the leader

Background: someone is the leader

Focus: Tom

(18, a, i - ii) present the interpretations of the *be*-identifying clause when *only* functions as the interpresonal Theme. Since the Identifier is invariably realized by the Subject *Tom*, the possible interpretations are reduced from eight to four.

One may have noticed the disappearance of the reversed forms of (18, a, i) and (18, a, ii). Take (18, a, i) for example. In this clause, the Subject is *Tom*, and *the leader* is the Complement. It is the Subject *Tom* that is specified as the focus. If (18, a, i) is reversed, there are two possibilities, shown as (18, a, iii) and (18, a, iv) as follows. In the former instance, the textual status of *only* remains the same, and the Subject *Tom* and the Complement *the leader* are switched. In this case, the focus falls on the leader as *only* precedes *the leader* in the reversed form. In the latter instance, where the focus remains the same, *only* is a mood Adjunct attached to the original Subject *Tom* and precedes the Complement in the reversed form.

# (18) a. iii. Only the leader is Tom

#### iv. the leader is only Tom

Both of them are unacceptable. In (18, a, i) the background is 'someone is the leader', and the focus is Tom. However, in (18, a, iii), both the background and the focus are changed. The background is 'some role is (played by) Tom', and the focus is the leader. In (18, a, iv), the focus is the same as that in (18, a, i), but the background has changed into 'the leader is (played by) someone'. By the same token, the reversed forms of (18, a, ii) are unacceptable because of the constraints from the background

and the focus. Therefore, the clause in question has only two possible interpretations under the influence of the invariable realization of the Identifier and the disappearance of the reversed forms.

Now let us go back to (18, a, i) and (18, a, ii). (18, a, i) is an encoding process that means 'only Tom identifies by representing the leader'. The exhaustive meaning is conveyed by the configuration already and is reinforced by *only*. This is also the case with (18, a, ii), although it is a decoding process.

If *only* functions rhematically in the clause, either the Subject or the Complement is the focus. In other words, either one of them will be the Identifier.

(18) b. I. i. [Ir/Tk:] *Tom is* [Id/VI:] *the leader only*ii. [Ir/VI:] *Tom is* [Id/Tk:] *the leader only*II. i. [Id/Tk:] *Tom is* [Ir/VI:] *the leader only*ii. [Id/VI:] *Tom is* [Ir/Tk:]*the leader only*

For the identifying clause with *only* being part of the Rheme, there are four possible interpretations. The first two interpretations of the clause, whose focuses are on the Subject, are the same as those of the clause with *only* being the interpretational Theme. The last two interpretations of the clause require further analysis. Like (18, b, I), (18, b, II) has two interpretations as well. In (18, b, II, i), *Tom* is the Identified and Token and *the leader* the Identifier and Value, which means 'Tom identifies by representing the leader only'; in (18, b, II, ii), *Tom* is the Identified and Value and *the leader* the Identifier and Token, which means 'Tom is identified by being represented by the leader only'. (18, b, II, ii) is the same as (18, b, I, i) in that both of them are encoding processes with a reinforcement from *only* on the exhaustive meaning. Although both (18, b, II, i) and (18, b, I, ii) are decoding processes, they are different from each other. The former is a decoding process with a reinforcement on the exhaustive meaning. If (18, b, II, i) occurs without *only*, there is no exhaustive

meaning conveyed.

In conclusion, the eight-cell *be*-identifying clauses with the thematic *only* preceding the Subject are interpreted in two ways, and those with the rhematic *only* at the end of the clause have four possible interpretations.

Finally, I will examine *only* in the four-cell identifying clauses, illustrated by (19).

#### (19) a. only **Tom** represents the leader

#### b. I. Tom represents the leader only

II. Tom represents the leader only

In (19, a), *Tom*, and only *Tom*, can be the Token and Identifier. Theoretically, there are two interpretations of the clause. But just like (18), the reversed forms of (19, a) are unacceptable because of the restrictions from the background and the focus. Practically we got only one interpretation – an encoding process with the reinforcement on the exhaustive meaning from *only*.

(19) a. *only* [Ir/Tk:] *Tom represents* [Id/VI:] *the leader*Background: someone represents ('is', rather than 'speaks for') the leaderFocus: Tom

If only functions rhematically, the interpretations are as follows:

# (19) b. I. [Ir/Tk:] *Tom represents* [Id/VI:] *the leader only*II. [Id/Tk:] *Tom represents* [Ir/VI:] *the leader only*

When *only* occurs at the end of the clause, (19, b) has two interpretations, shown in (19, b, I) and (19, b, II) respectively. The former is an encoding process reinforcing the exhaustive meaning by means of *only* and the latter a decoding process with a

supplement of the exhaustive meaning from *only*. Consequently, such clauses have only one interpretation in case of *only* being the interpersonal Theme and two when it functions rhematically. This is the same as the two-cell identifying clauses whose process is realized by the role-playing phrasal verbs.

In conclusion, *only* in an identifying clause specifies the focus on the Subject when it is part of the Theme or the focus on the Subject or the Complement when it is part of the Rheme. If only is inserted into identifying clauses, the four-cell and two-cell identifying clauses are grouped together due to the constraints from the background and focus relevant to the thematic status of the Subject and Complement in question. For the four-cell and two-cell identifying clauses, they have only one interpretation if only functions thematically and two if only functions rhematically. For the eight-cell identifying clauses, they have two possible interpretations when only is the interpersonal Theme and four when only is part of the Rheme. In this way, only helps reduce the ambiguities in identifying clauses. Apart from restricting the possible interpretations of an identifying clause, the other functions of only are reinforcing the exhaustive meaning in an encoding process and supplementing the exhaustive meaning in a decoding process (that does not convey such a meaning in case of no only being inserted). The conclusion is shown in Table 5.1, with a comparison between the identifying clauses with only and those without it (the Arabic numerals indicate the number of the possible interpretations).

		eight-cell	four-cell	two-cell
without <i>only</i>		8	4	2
with only	thematic	2	1	
	rhematic	4	2	

Table 5.1 Influence of *only* on the number of the interpretations of identifying clauses

#### **5.4 Contrastiveness**

As shown in §5.3.2.1, contrastiveness is closely associated with exhaustiveness. In this section, I will focus on the contrastive meaning conveyed by identifying clauses.

#### 5.4.1 A review on contrastiveness

In the literature, contrastiveness comes into notice in the examination of focus. Focus is divided into two types, as summarized in Table 5.2.

focus type 1	focus type 2		representativ	ves
presentational	contrastive		Rochemont	(1986),
			Rochemont	and
			Culicover (1	990)
cumulative	contrastive		Chafe	(1976),
			Halliday (19	967b)
new information focus	contrastive/	exhaustive	Abdoulaye	(2007),
	listing focus		Jaggar (200	1)
irrecoverbility of information	contrastiveness		Geluykens (	1988)
(new information)				

Table 5.2 Binary classification of focus

Apart from the binary classification of focus, there also exists the multi-classification, such as Krifka (2007) and Frascarelli (2010). In their view, focus is categorized into information, contrastive focus, 'verum focus (i.e. focus on the truth value of a sentence), closed focus (a closed set of alternatives) and exhaustive focus (whose denotation can only lead to a true proposition)' (Frascarelli 2010: 2122). Rochemont (1986), Rochemont and Culicover (1990), Geluykens (1988) and Halliday (1967b) hold a similar view in that they identify new information (though in different terms) as one type and contrastive focus as another. As for Jagger (2001) and Abdoulaye (2007), they group contrastive focus and exhaustive focus together in contrast with

new information focus. The more fined classification (Krifka 2007) separates contrastive focus and exhaustive focus apart.

In SFL, as early as in 1967, Halliday has undertaken a thorough study on information focus – a system specifying 'the structure of the tonic group, determining the number and location of the tonic components. Each point of information is realized as a tonic component' (Halliday 1967b: 203). In unmarked cases, the focus falls on the last lexical item, which may or may not convey contrastiveness. But if the tonic prominence falls on any element other than the last lexical item, it necessarily conveys a contrastive meaning. The unmarked information focus in identifying clauses is where the new information is the Identifier, but focus on the Identified is contrastive. Halliday (1967b: 206 /231) pays special attention to anaphoric identifying clauses and points out that if the Identifier is anaphoric, it is given, unless contrastive. Halliday elaborates contrastiveness in detail:

In the unmarked case the focus of information falls on the final element in the information unit other than any that are inherently anaphoric; any preceding elements, which will include the theme, are then non-specific since the domain of the focus may extend over the whole of the information unit. Alternatively some other element, one that is anaphoric or non-final, may carry the information focus, in which case it is contrastively new and the remainder of the information unit has the status of given; the effect is to give to the message the implication of being a response to a specific question. (Halliday 1967b: 243)

Davidse (1991: 253) examines contrastiveness in identifying clauses as well and concludes that contrastiveness tends to relate to encoding identifying clauses. I will show in the next section that the contrastive meaning may also be conveyed by decoding identifying clauses.

#### 5.4.2 Contrastiveness in identifying clauses

To elaborate contrastiveness in identifying clauses, I would like to review Halliday's explanation of the structural functions of Given and New in information structure first.

The constituent specified as new is that which speaker marks out for interpretation as non-derivable information, either cumulative to or contrastive with what has preceded; the given is offered as recoverable anaphorically and situationally. (Halliday 1967b: 211)

Therefore, new information is of two types, one being cumulative (new information) and the other contrastive (contrastive information).

The analyses in the preceding section are based on unmarked cases, where the Identifier is correlated with the new information. In a marked case, the Identifier is mapped onto the contrastive information. *The leader is Tom* is presented as an illustration.

(20) a. - Who /Which one is the leader?encoding:

[given information: Id/VI:] *the leader is* [new information: Ir/Tk:] *Tom* The element where the tonic prominence falls conveys new information.

(20, a) is the unmarked case with the Identified *the leader* mapping onto the given information and the Identifier *Tom* onto the new information. In a different situation, the tonic prominence falls on the leader, indicating a meaning of contrastiveness. The mapping of the Identifier onto the contrastive information is demonstrated in (20, b).

(20) b. – Who /Which one is the leader?

decoding:

- [new information: Id/Tk:] *Tom is* [contrastive information: Ir/VI:] *the leader*. *But John is the one that does the work*.

The element where the tonic prominence falls conveys contrastive information

Declerck (1988: 26) emphasizes that it is not because the participant receives the focus that it conveys a contrastive meaning but because the participant is in contrast with the other possible candidate that it receives the focus. In conveying the contrastive meaning, the focus falls on the leader. In (20, b), the mapping of the Identified *Tom* onto the Token and the Identifier *the leader* onto the Value constitutes a decoding process.

Davidse has examined contrastiveness in identifying clauses and concluded that 'a contrastive meaning *tends* to be associated with encoding identifying clauses' (1991: 253, emphasis as in the original). Since this is only a tendency<sup>26</sup>, there can be some decoding identifying clauses that convey a contrastive meaning, as (20, b) shows.

Suppose that *only* is inserted into an identifying clause like (21).

(21) – Who is in charge here?

- Either Tom or John. But only **Tom** is the leader.

In (21), although *Tom* in *Tom is the leader* has occurred in the previous discourse *either Tom or John*, it carries the focus of the clause because the speaker contrasts Tom with the other person who is also in charge but has no real power. It is an irony, implying that John has no power in reality. In this case, *Tom* is the Identifier and Token, and *the leader* is the Identified and Value. Accordingly, the clause is an encoding process that means 'contrast with John who is also in charge here, Tom, and only Tom identifies by representing the leader (i.e. Tom is the only one who has real

<sup>&</sup>lt;sup>26</sup>The observation of Davidse was not based on extensive evidence from naturally occurring texts. But in future studies, this is a domain worthwhile being probed into.

power)'. *Only* in this instance expresses not only the exhaustive meaning but also the contrastive meaning.

Declerck (1988) emphasizes that 'affirmative specificational sentences' always convey a contrastive meaning and 'there is normally a kind of "exclusiveness understanding" attached to them' (1988: 25). This is especially true of the clauses with *only*, as shown in (20) above. With respect to the identifying clauses without *only*, the contrastive meaning can also be detected. Let us consider (22).

(22) – Who is in charge here?

- Either Tom or John. But [Ir/Tk:] Tom is [Id/VI:] the leader.

In (22), although John is one of the two persons in charge, in reality he is excluded from being the leader.

By bringing together §5.2 and §5.4, we can see that exclusiveness in identifying clauses is related to both exhaustiveness and contrastiveness. To be exhaustive, the process of identifying needs to exclude all the other candidates that may also satisfy the requirements. To be contrastive, the process of identifying needs to exclude all the other possibilities that may also be in contrast with the participant in question.

#### 5.5 Summary

This chapter explores exhaustiveness and contrastiveness conveyed by identifying clauses on the basis of the findings in Chapter Four. Similar to the analysis of the identifying clauses in the preceding chapter, the research in this chapter is undertaken both on the lexicogrammatical stratum and on the semantic stratum, and in this way the third question posed in §1.3 has been answered and the sixth problem presented in §2.8 have been solved. By examining exhaustiveness in identifying clauses at two levels and taking non-typical identifying clauses into consideration, I re-define the relationship between definiteness and exhaustiveness.

Exhaustiveness and contrastiveness are the two implications conveyed by identifying clauses, of which exhaustiveness is the focus. From a semiotic perspective, exhaustiveness in identifying clauses is investigated at two levels. One is referential exhaustiveness in terms of denotation, which is the exhaustive meaning conveyed by the relation between the signifier and the signified. The other is realizational exhaustiveness between the two participants, the Token and the Value, on the different orders of abstraction in the linguistic system. The interpretation of exhaustiveness is influenced by the type of exhaustiveness and the coding direction of an identifying clause. In terms of denotation, exhaustiveness is indicated by the definiteness of the NG realizing the participant provided that the NG denotes an individual. If the NG is definite, it conveys exhaustiveness, like Tom and the leader in Tom is the leader, whose first participant is realized by a PN and second participant by a NG containing a DA and a CN. Otherwise, it conveys a non-exhaustive meaning, as a student in Tom is a student, which is realized by a NG containing an indefinite article and a CN. The exception is the case where "a" denotes a specific entity, e.g. the cause of riot is a picture, in which case it may still conveys exhaustiveness. But if the NG denotes a class, even an indefinite NG can convey the exhaustive meaning, as in a crocodile is a semi-aquatic reptile with a long, tapered nose and hard scales, where both participants are realized by indefinite NGs containing an indefinite article. They construe the class of crocodile of our experience, and are exhaustive. In interpreting referential exhaustiveness, one can express it in this way: Participant 1/2 in the linguistic system construes nobody or nothing but the specific entity of our experience relevant in the context in question. In terms of realizational exhaustiveness, encoding identifying clauses necessarily convey an exhaustive meaning, but for decoding ones it depends on the context specified. In interpreting realizational exhaustiveness, one can express it in this way: Participant 1/2 on a higher order of abstraction is realized by nothing but the participant 2/1 on a lower order of abstraction in the relevant context.

In addition, the functions of only in identifying clauses are presented. Only in

identifying clauses has different textual and interpersonal statuses. It can be thematic to draw the hearer's attention at the very beginning to the exhaustive or contrastive meaning conveyed by the clause, and it can also be rhematic at the end of the clause so as to reinforce exhaustiveness. Apart from exhaustiveness and contrastiveness, in which case *only* occurs as an Adjunct, it is also possible to convey an interpersonal meaning of counterexpectancy, like *Tom is only the leader of the project, so you can't ask him to increase your wages*, in which case *only* is a mood Adjunct. Also, one can detect a contrastive implication in it – *Tom is only the leader of project, not the CEO of the company, so ask someone else.* One of the two most important functions of *only* is reinforcing the exhaustive meaning in encoding identifying processes and supplementing the exhaustive meaning in decoding identifying processes (those do not convey exhaustiveness without it), and the other is restricting the number of the possible interpretations of an identifying clause. In this sense, *only* reduces the ambiguities in identifying clauses to a certain extent.

Declerck (1988) claims a direct relationship between definiteness and exhaustiveness, but I consider the relationship between them in two respects. In referential exhaustiveness, the relationship between exhaustiveness and definiteness is direct. To be specific, if the participant in question is realized by a definite NG, it is unique and exhaustive. But the direct relationship between definiteness and exhaustiveness in terms of denotation is valid only when the NG denotes a nonspecific individual. If it denotes a class, the participant realized by an indefinite NG also conveys exhaustiveness, as in *jiaolv means anxiety* in §5.2.4. In terms of realizational exhaustiveness, the relationship between exhaustiveness and definiteness is indirect. Definiteness does not guarantee exhaustiveness and exhaustiveness does mean definiteness. Even if the NG realizing the participant is not nonspecific-indefinite, it is still possible for the clause to convey realizational exhaustiveness. This is typical with the identifying clauses of constitution, like the treatment team may also involve a medical doctor, a nutritionist, and a mental health professional (i.e. psychologist) in §5.2.4. Realizational exhaustiveness in the

identifying clauses is influenced by several factors, such as the coding direction of the process, the function of the clause, the realization of the participants and the context in question.

### **Chapter Six Findings from COCA**

#### 6.1 Introduction

The examples in Chapter Four and Five are largely authentic from textbooks in different fields (a minority of them are constructed), but the examples in this chapter and the next are not only from the textbooks but also from COCA (Corpus of Contemporary American English). Data in the corpus are categorized into the five genres of spoken, popular magazine, fiction, newspaper and academic, but only those from the academic genre are chosen because relational processes are frequently found in the expounding and exploringtext types (Matthiessen et al. 2010, reviewed in Footnote 2 in §1.3 above). They are collected from the nine fields of education, history, geology /social science, law /political science, humanities, philosophy /religion, science /technology, medicine and miscellanea, as divided by COCA. In this chapter, I will examine first the frequency of occurrence of the identifying tokens of the 37 verbs (see the verbs in §1.3 above) from a vertical perspective, on which basis I group the verbs that show a similar tendency of frequency together (§6.2). Then, I will demonstrate the frequency of occurrence of the identifying tokens of the 37 verbs in each field from a horizontal perspective, and in this way showing the dominant and comparatively marginal fields of identifying processes (§6.3). These two perspectives are demonstrated in Figure 6.1.



Figure 6.1 Two perspectives in the examination of the 37 verbs from COCA

### 6.2 Word frequency and exceptions

In §1.3, I have shown the 37 verbs, to be precise, the 37 lemmas selected from the word list in COCA. In order to have a rather complete idea of each verb, I type [lemma] <sup>27</sup>in searching. Take *indicate* for instance. When investigating the field variation of this verb, I type [indicate] to seek for all the forms, including *indicate*, *indicates*, *indicated* and *indicating*. Each lemma is examined in all the nine fields – education, history, geology /social science, law /political science, humanities, philosophy /religion, science /technology, medicine and miscellanea. One will see more clearly in the following screenshots.

<sup>&</sup>lt;sup>27</sup>In COCA, lemmas are shown in square brackets.

DISPLAY	2
⊙LIST ○CHART ○KWIC ○COMPARE	
SEARCH STRING	2
WORD(S) [indicate]	2
COLLOCATES	2
POS LIST	2
RANDOM SEARCH RESET	2
SECTIONS 🔲 SHOW	3
Image: Second	
SORTING AND LIMITS	
SORTING FREQUENCY	2
MINIMUM FREQUENCY	2

	CONTEXT	тот 🗌
1	INDICATED	4037
2	INDICATE	2029
3	INDICATES	1216
4	INDICATING	751
	TOTAL	8033

DISPLAY		2
⊙LIST OCHART O		
SEARCH STRING		2
WORD(S) [indicate]	]	2
COLLOCATES		2
RANDOM CEARCH		2
		2
ACAD:Education ACAD:History ACAD:Geog/SocSci ACAD:LawPolSci ACAD:Humanities ACAD:Phil/Rel	2 IGNORE SPOKEN FICTION MAGAZINE NEWSPAPER ACADEMIC	
SORTING AND LIMITS	1000	
MINIMUM FREQUENCY		2
PREQUENCY	, j10	
	CONTEXT	
1 🗌 I	INDICATED	
2 🗌 I	INDICATE	
3 🗌 I	INDICATES	
4 🗌 I	INDICATING	
1	TOTAL	

Figure 6.2 Frequency of occurrence of [indicate] in the fields of education and history

The screenshots present [indicate] in the two fields of education and history respectively. In education, [indicate] occurs 8033 times, and in history, it occurs 2300 times. However, not all of them are identifying tokens because of the interference of the verbal and attributive interpretations (see more in §4.5 above). Hence I have to

examine these examples by reference to the characteristics of the identifying clauses one by one ( $\S4.5.3$ ). For example, clauses realized by 'thing (unconscious) + fact' as that terrain indicates that when these dune fields were active... and 'thing (unconscious) + thing (definite)' as markings on the arcs indicate the declination ... are identifying clauses. Other instances, as those realized by 'thing (conscious) + fact' as specifically, Fullan indicates that successful implementation requires knowledge for... and 'thing (unconscious) + thing (indefinite)' as the resolution seemed to indicate a clear and categorical line of action ... are eliminated. This is not the whole picture of *indicate* as an equative verb. Apart from the two realizations of 'thing (unconscious) + fact' and 'thing (unconscious) + thing (definite)', other realizations such as 'fact + fact' and 'thing (indefinite) + thing (indefinite)' are also possible. This is how I deal with the data. After the eliminations, I found 3258 identifying tokens of [indicate] in education and 1089 in history. Following this method, I found 5159 identifying tokens of [indicate] out of 10861 cases in geology /social science, 715 out of 1420 in law /political science, 971 out of 2174 in humanities, 1288 out of 2492 in philosophy /religion, 2315 out of 4925 in science /technology, 1709 out of 3489 in medicine, and 139 out of 345 in miscellanea. They are presented in the chart as below.



Figure 6.3 Frequency of occurrence of the identifying tokens of [indicate] in the nine fields

The counts enable us to know the frequency of occurrence of the identifying tokens of [indicate] in the academic genre:

$$\frac{(3258+1089+5159+715+971+1288+2315+1709+139)}{(8033+2300+10861+1420+2174+2492+4925+3489+345)} = \frac{16643}{36039} = 46.2\%$$

As the equation shows, the frequency of occurrence of the identifying tokens of [indicate] is obtained by dividing the number of the identifying tokens of [indicate] by the total number of [indicate] in the academic genre.

The verbs in Table 6.1 are arranged from those occurring at the highest frequency to those occurring at the lowest.

Table 6.1 Frequency of occurrence of the identifying tokens of the selected verbs in academic genre

rank	lemma	frequency (%)
1	[outweigh]	66.8
2	[equal]	57.9
3	[belong] to	55.2
4	[outlast]	47.4
5	[indicate]	46.2
6	[imply]	44.1
7	[add] up to	42.6
8	[exemplify]	42.2
9	[reflect]	38.1
10	[illustrate]	37.2
11	[suggest]	35.6
12	[cause]	34.2
13	[represent]	32.2
14	[mean]	30.3
15	[constitute]	30.1
16	[involve]	28.6
17	[demonstrate]	27
18	[contain]	25.8
19	[surround]	22.9
20	[include]	22.4
21	[instantiate]	20.7
22	[mark]	20.4

23	[outrun]	20.2
24	[lack]	19.5
25	[serve] as	18.6
26	[show]	17.9
27	[offset]	14.2
28	[deserve]	13.1
29	[become]	10.8
30	[follow]	10.6
31	[function] as	10.2
32	[form]	9.8
33	[act] as	9.3
34	[remain]	6.6
35	[own]	5.8
36	[spell]	5.4
37	[realize]	0.27

By reference to the frequency of occurrence of the identifying tokens of the 37 verbs, I would like to make two points clear. First, many verbs can realize identifying processes, but some of them occur as equative verbs only occasionally, at least in the academic genre, like [remain] (6.6%), [own] (5.8%), [spell] (5.4%), and especially, [realize] (0.27%). Others, such as [outweigh] (66.8%), [equal] (57.9%), [belong to] (55.2%), [indicate] (46.2%), etc., are typical equative verbs. Second, the verbs that have the same function show a similar frequency of occurrence of identifying tokens (see Appendix 1), although exceptions do exist. The verbs are classified into eleven types, namely neutral, indication, constitution, signification, circumstance, symbolization, exemplification, possession, role-playing, equation and comparison. They will be explained in detail in Chapter Seven.

Table 6.2 Frequency of occurrence of the identifying tokens of the verbs of different types

type	percentage range	exceptions
neutral	6% - 10%	
indication	27% - 47%	[show] (17.9%)
constitution	22% - 31%	

signification	5% - 10%	[constitute](30.1%)
circumstance	23% - 34%	[follow] (10.6%)
symbolization	20% - 38%	
exemplification	37% - 42%	[instantiate] (20.7%)
possession	5% - 19%	[belong] to (55.2%)
role-playing	9% - 19%	
equation	43% - 58%	[offset] (14.2%)
comparison	48%-67%	[outrun] (20.2%)

The exceptions are explained from four aspects. They may result from the multi-class nature of the word in question. That is, the word can be identified in more than one word class, such as show. Compared with the other verbs in the type of indication that are typically classified as verbs (e.g. indicate), show can be both verb and noun. The exceptions may also result from the multi-function nature of a verb. It means that the verb can be used in identifying clauses having different experiential uses, such as constitute. One will see in Table 7.2 (to which I will return in the next chapter) that I categorize *constitute* into two types, constitution and signification. The frequency of occurrence of [constitute] as an equative verb is 30.1%, which is within the frequency range of the constitution verbs but falls out of that of the signification verbs. Therefore, as an equative verb, the major function of *constitute* is constitution rather than signification. The third reason is that some verbs realize different process types, like outrun. It realizes identifying processes as well as material ones. Finally, the exceptions may originate from the different interpreting perspectives of an identifying clause. In a relation of possession, the clauses whose process is realized by belong to are interpreted from a different perspective from those whose process is realized by such verbs as own, lack and deserve. One can see the difference from the contrast between (1, a, i - iii) and (1, b).

(1) a. i.

today	he	owns	the largest distributor of U.S. comics in
			the world
circ.:	Id:	Poss.:	Ir:
Time	Possessor	owning	Possessed
	Tk		Vl
	decoding		

ii

the Adler	lacked	the staff to respond to such inquires
Id:	Poss.:	Ir:
Possessor	owning [negative]	Possessed
Tk		Vl
decoding		

iii.

the American people	deserve	the best defense the military
		can provide them
Id:	Poss.:	Ir:
Possessor	owning [ought to have]	Possessed
Tk		Vl
decoding		

b.

this book	belongs to	John
Id: Possessed	Poss.: belonging to	Ir: Possessor
Tk		Vl
decoding		

The four clauses above are divided into two groups. The first three, (1, a, i - iii),

taking the possessor as the starting point, code a meaning of owning; the last one, (1, b), taking the possessed as the starting point, codes a meaning of belonging-to. They are the two interpreting perspectives of the information.

#### 6.3 Dominant and marginal fields of identifying clauses

The analyses in §6.2 take a vertical perspective to examine the frequency of occurrence of the identifying tokens of each verb in all the nine fields of the academic genre - education, history, geology /social science, law /political science, humanities, philosophy /religion, science /technology, medicine and miscellanea. The investigations in this section take a horizontal perspective to show the distribution tendency of the 37 verbs in these fields. What is in concern is no longer the performance of each single verb in the nine fields but the performance of all the 37 verbs in each field. Take the field of education for example. In this field, there are 3258 identifying tokens of [indicate] out of 6967 cases, 412 identifying tokens of [remain] out of 6224 cases, and 1061 identifying tokens of [mean] out of 3483 cases. By means of dividing the number of the identifying tokens (3258 + 412 + 1061) by the total cases (6967 + 6224 + 3482), one can get the average frequency of occurrence of the three verbs in education (28.4%). In this way, I obtained the frequency of occurrence of the identifying tokens of the 37 verbs in this field by dividing the number of the identifying tokens of the verbs by the total number of the occurrence of them, as shown in the following equation:

(412+1635+2206+2249+236+922+119+3258+862+1061+460+874+374+163+603+19+14+6+180+182+306+326+33+15+79+50+309+56+13+86+3+25+14+0+35+2+2) (6224+5666+8831+5499+3385+2324+1726+6967+2817+3483+992+2856+1201+176+2705+245+174+1010+837+539+863+485+251+124+201+211+1511+127+19+158+270+221+59+1+46+2+2)

 $= \frac{17189}{63208}$ = 27.194%

Following this method, I got the frequency of occurrence of the identifying processes in all the nine fields, which are arranged from the most frequent to the least in Table 6.3.

field	frequency
education	27.194%
geology/social science	26.758%
medicine	25.477%
history	22.596%
law /political science	22.182%
philosophy /religion	22.174%
science /technology	22.141%
humanities	21.91%
miscellanea	17.866%

Table 6.3 Frequency of occurrence of the identifying processes in nine fields

Identifying is an influential process type in the academic genre.<sup>28</sup>In the different fields of the academic genre, identifying processes occur at varying frequencies of occurrence. The field which shows the highest frequency of occurrence of identifying processes is education, followed by geology /social science and medicine. Compared with miscellanea, which shows the lowest frequency of occurrence, these three are the dominant fields of identifying processes. Lying in between the three dominant fields and the comparatively marginal field are history, law /political science, philosophy /religion, science /technology and humanities. The difference among these five fields can even be ignored: The largest gap is between history and humanities, which is less

<sup>&</sup>lt;sup>28</sup> Since I have divided relational processes into identifying processes and attributive processes, there are altogether seven process types in my calculation. They are material processes, mental processes, identifying processes, attributive processes, verbal processes, behavioural processes and existential processes. By dividing one hundred by the number of process types, I got the average frequency of occurrence supposed for each process type (i.e. 100/7 = 14.28%). If the frequency of occurrence of a process type is higher than 14.28%, it is one of the influential process types in the academic genre. Since identifying processes in all the nine fields of the academic genre show a no-less-than 17.866% frequency of occurrence, they are a dominant process type in this genre.

than 0.7%.

## 6.4 Summary

This chapter presents a preliminary corpus-based study of identifying clauses. The two issues in concern are the frequencies of occurrence of the identifying tokens of the 37 verbs and the dominant /marginal fields of identifying processes. Some of the findings are relevant to the research in Chapter Seven. First, the equative verbs that show a similar field variation are grouped together (Table 6.2 in §6.2). This justifies the semantic-based classification of the equative verbs made by Halliday (1994: 123) in the next chapter. Second, the counts show that identifying processes are the dominant process type in the academic genre, and hence indicate that identifying processes are frequently found in the expounding and exploring texts. Therefore, Chapter Six functions as a connecting link between what comes before and what goes after.

#### **Chapter Seven Uses of Identifying Clauses**

#### 7.1 Introduction

In Chapter Four and Five, I have discussed the grammatical characteristics and semantic implications of identifying clauses respectively. In this chapter, I focus on the uses of identifying clauses. As will be shown in the following analyses, the uses of identifying clauses are categorized into two types – experiential and textual. Experiential uses refer to the roles of identifying clauses in the construction of the knowledge of the world, and textual uses refer to the roles of identifying clauses in the presentation of the knowledge as text.

This chapter involves three parts. The first part justifies the classification of the equative verbs made by Halliday (1994: 123). The second part probes into the different types of experiential uses of identifying clauses on the basis of the modification of the classification of the equative verbs made by Halliday and the factors affecting the identification of the experiential uses of an identifying clause. The third part examines the textual uses of identifying clauses in organizing a text by reference to the thematic structure and the patterns of thematic progression in a macrostructure.

#### 7.2 Structural features

Since the uses of identifying clauses are largely discussed in the textual domain, the relevant concepts will be introduced first. The textual component is embodied in two features. One is the structural feature, realized in the thematic structure of the clause and (in spoken English) the information structure of the information unit. The other is the cohesive feature, realized in the four cohesive devices of reference, ellipsis

/substitution, conjunction and lexical cohesion. In my analysis here, the focus falls on the structural features.

In unmarked cases, the clause is co-extensive with the information unit, and the Theme is conflated with the Given. For example,

(1) a. - *Who is the leader?* 

The leader	is <b>Tom</b>
Theme	Rheme
Given →	New

However, in a marked case, the Theme is not conflated with the Given.

(1) b. - *Who is the leader*?

Тот	is <b>the leader</b>
Theme	Rheme
	→ New

But John is the one that does the work.

The Themes and the News in (1, a - b) are clausal Theme and clausal New in the clause. However, focusing just on the clause level will hinder our understanding of the text in question. To solve this problem, Martin (1993) advances hyperTheme and hyperNew in each phase of a text and macroTheme and macroNew in a text. The hyperTheme is the topic sentence of a phase; its relation to what follows in the phase is analogous to the relation of the clausal Theme to its Rheme in the clause. The macroTheme is the topic sentence of a text; its relation to what follows in the text is analogous to the relation of the hyperTheme to what follows in the phase and the relation of the clausal Theme to the Rheme in the clause.

Halliday (1994: 336) asserts that the two kinds of prominence – the speaker-oriented prominence realized by the Theme and the hearer-oriented prominence realized by the New – are complementary. Taking the hyperTheme,

hyperNew, macroTheme and macroNew into the picture, Martin and Rose (2002: 199) present the different layers of Theme and New in a text.



Figure 7.1 Layers of Theme and New in text (Martin and Rose 2002: 199)

Only by reference to all these layers of Theme and New can the textual uses of identifying clauses be fully explored.

# 7.3 Field variations of the selected verbs and the relation to the classification of equative verbs

Halliday (1994) presents a classification of the equative verbs that realize the process in identifying clauses, shown in Table 7.1.

meaning	form
role	play, act as, function as, serve as
sign	mean, indicate, suggest, imply, show, betoken, reflect
equation	equal, add up to, make
kind /part	comprise, feature, include
significance	represent, constitute, form

Table 7.1 Halliday's classification of equative verbs (Halliday 1994: 123)
example	exemplify, illustrate
symbol	express, signify, realize, spell, stand for, mean
neutral	be, become, remain

The classification is based on the meaning of the verbs. The field-based study in the preceding chapter provides evidence for a slightly different but more delicate classification of the equative verbs. It is for this reason that the 37 verbs (listed in Table 6.1 in §6.2) are examined in the nine fields of the academic genre – education, history, geology /social science, law /political science, humanities, philosophy /religion, science /technology, medicine and miscellanea. For each selected verb, I counted the number of its identifying tokens in each field and got the distribution tendency of each verb via the following formula (see also Table 6.1 in §6.2).

### number of the occurrence of the identifying tokens of a lemma total number of the occurence of a lemma

Accordingly, the verbs that show a similar tendency are grouped together (see Appendix 1). In the process of grouping, I see '10 percent' of the identifying tokens of a verb as a boundary, only the cases whose frequencies of occurrence of identifying tokens are higher than 10 percent are considered. Two of the nine fields, geology /social science and science /technology, do not serve as indicators because almost all of the 37 verbs frequently ( $\geq 10\%$ ) occur as equative verbs in these two fields. Apart from the fields of geology /social science and science /technology, another two fields, humanities and history, also demonstrate a high frequency of occurrence of equative verbs. However, there are seven verbs in each of the two fields that do not show a no-less-than 10 percent frequency of occurrence of identifying tokens.

humanities:show, suggest, indicate, cause, add up to, equal, offset, outweighhistory:show, suggest, indicate, follow, instantiate, add up to, equal

The other five fields, law /political science, philosophy /religion, education, medicine and miscellanea, are the main indicators of the grouping. In the five fields, the verbs that show a no-less-than 10 percent frequency of occurrence are listed as follows:

law /political science:	become, remain, mean, constitute, cause, exemplify, own,	
	lack, deserve, actas, <u>add up to, equal, offset</u> , realize,	
	outweigh, outlast	
philosophy /religion:	become, <u>imply, mean, form, constitute</u> , instantiate, <u>belong</u>	
	to, deserve, function as, add up to	
education:	show, suggest, indicate, demonstrate, imply, include,	
	<u>involve</u> , reflect, serve as, <u>add up to, equal</u> , realize, outrun	
medicine:	show, suggest, indicate, demonstrate, include, involve,	
	follow. cause	
miscellanea:	deserve, outlast, outrun	

As indicated by the different underlines, there are eight types of equative verbs, namely neutral, indication, constitution, circumstance, signification, possession, equation and comparison (See Table 7.2 below). Still, some verbs are restricted to the four fields of geology /social science, science, humanities and history. The distribution tendencies of these verbs do not vary largely from one to another in these four fields. In other words, they show a similar tendency of field distribution, and it is hard to classify them by the field variation. In this case, I have to resort to the meanings, on which basis the verbs are grouped into the three types of symbolization, exemplification and role-playing.

Consequently, the 37 verbs are grouped into eleven types according to the different tendencies of field distribution and meanings, as shown in Table 7.2. Apart from the 37 verbs, further examples are presented in the brackets. One will see that this classification does not deviate from Halliday's.

meaning	form		
neutral	become, remain (be, turn into)		
indication	show, suggest, indicate, demonstrate, imply, mean (reveal,		
	denote, display, connote)		
constitution	include, involve, contain, constitute (embrace, comprise,		
	encompass)		
signification	form, constitute, spell (amount to, total, equal, comprise,		
	compose)		
circumstance	follow, cause, surround (ensue, encircle, besiege, enclose,		
	encompass, border)		
symbolization	represent, reflect, mark, mean (signify, stand for, embody,		
	symbolize, signal, mirror)		
exemplification	exemplify, illustrate, instantiate (embody, typify, personify)		
possession	own, belong to, lack, deserve (possess, preserve, rate, merit)		
role-playing	act as, function as, serve as (play)		
equation	add up to, equal, offset (amount to, total, equate, match,		
	approximate)		
comparison	outweigh, outlast, outrun (outrank, exceed, surpass, outpace,		
	endure)		
marginal case	realize		

Table 7.2 Field-oriented classification of equative verbs

The field-oriented classification of the equative verbs is in accord with Halliday's meaning-oriented classification to a large extent. But note that the type of marginal cases is based on counts instead of the meaning conveyed, referring to the verbs that occur as equative verbs only occasionally. In my counts, the frequency of occurrence of such verbs is lower than 1 percent, such as *realize*, whose frequency of occurrence is only 0.27%.



The field distributions of the eleven types of equative verbs (excluding the marginal type) are shown in the chart.

Figure 7.2 Field distributions of the eleven types of equative verbs

As shown in the chart, all the eleven types of equative verbs (indicated by 'all') occur in the fields of geology /social science and science /technology, but in other fields, they show different distribution tendencies. In the fields of history and humanities, all the types of equative verbs except signification and equation occur frequently (higher than 10%), shown by '[lack] signification /equation'. In the field of miscellanea, only one type of equative verbs – comparison – occurs at a frequency higher than 10%. Another field the comparison verbs occur frequently is in law /political science, where one also finds verbs of neutral, equation and possession. Apart from law /political science, the equation verbs occur also in the field of education, and the possession verbs occur also in the field of philosophy /religion. In summary, there are fields, geology /social science and science /technology, where all the types of equative verbs (comparison) occurs. In addition, the types of equative verbs vary in the range of fields they cover. Among the eleven types, the three types of equative verbs covering the widest range of fields are comparison (law /political science, humanities, history, geology /social science, science /technology and miscellanea), possession (law /political science, philosophy /religion, humanities, history, geology /social science and science /technology) and constitution (education, medicine, humanities, history, geology /social science and science /technology), followed by neutral (law /political science, humanities, history, geology /social science and science /technology), indication (philosophy, humanities, history, geology /social science and science /technology), signification (philosophy /religion, education, medicine, geology /social science and science /technology) and circumstance (medicine, humanities, history, geology /social science and science /technology). The next is equation occurring in law /political science, education, geology /social science and science/technology. The last three types of equative verbs, symbolization, exemplification and role-playing, occur at a more-than-10% frequency only in two fields – geology /social science and science and science /technology.

### 7.4 Equative verbs: From form to meaning

The conclusions of the different types of equative verbs in §7.3 are based on the performance of the 37 verbs chosen from the word list in COCA, which take meaning as the starting point. In this section, I will take form as the starting point to demonstrate the multi-meaning nature of the equative verbs. This is first illustrated by the following screenshot of *constitute* from COCA.

SYNONYMS (click to see) [?]		
SEE ALSO	D:	
amount	to	
2904	constitute	E
5610	total	
6786	signify	
7250	equal	
compris	e	
887	form	
2904	constitute	
3402	compose	
4431	comprise	

COCA provides us with two sets of synonyms of *constitute*. In terms of 'amount to', it is of the equation type and synonymous to *total*, *signify* and *equal*, while in terms of the dominant meaning'comprise', it is of the constitution type and synonymous to *form*, *compose* and *comprise*. However, COCA ignores another type of meaning, 'signification', in which case *constitute* is synonymous to *form*. Consequently, *constitute* has at least three meanings – equation, constitution and signification, with constitution being the dominant one. To illustrate the multiple senses of the equative verbs, I will focus on four verbs, *follow, mean, involve* and *equal*.

*Follow*, a verb of circumstance, typically indicates the circumstance of time. However, in some fields, especially in medicine, it implies a relation of cause-&-effect.

## (2) a. ...sudden cardiac death following myocardial infarction...b. the improvement in digital symptoms following the treatment of breast cancer with chemotherapy...

(2, a) can be interpreted as 'because /when patients suffer from myocardial infarction, he (may) deceases from sudden cardiac death', and (2, b) can be interpreted as 'because /when patients with breast cancer are treated with chemotherapy, the digital symptoms are improved'. Therefore, *follow* in these two cases conveys a complex meaning of 'time + cause-&-effect'. The first clause presents a relation between disease and symptom, and the second implies a relation between treatment and recovery. Similar cases are also found in political science and geology, to name just a few. (2, c) and (2, d) below are interpreted as 'because of /after the 2009 presidential election, there were massive protests in Tehran' and 'because of /after the flood, disaster came' respectively. In these two cases, *follow* also conveys a complex meaning of 'time + cause-&-effect'.

(2) c. massive protests in Tehran followed the 2009 presidential electiond. disaster followed the flood

Identifying clauses exemplified by (2, a - d) are different from (2, e).

(2) e. ... stressful Monday following happy Sunday ...

Compared with the first four instances in (2), the last one conveys a 'pure' meaning of time. *Follow* in the first four instances codes a complex meaning of time plus cause-&-effect, whereas in the last it should not be interpreted in the same way. One can see the difference between (2, a - d) and (2, e) from the variants of the five clauses as follows:

(2) a. i. ... sudden cardiac death resulting from myocardial infarction ...

b. i. the improvement in digital symptoms resulting from the treatment of breast cancer with chemotherapy ...

- c. i. massive protests in Tehran resulted from the 2009 presidential election
- d. i. disaster resulted from the flood
- e. i. \*... stressful Monday resulting from happy Sunday ...

Although *follow* typically denotes a simple meaning of time, it can convey a complex meaning in the fields like medicine and political science.

The verb *mean* is the next concern. As is shown in Table 7.2, *mean* is grouped in the types of indication (as in (3, a)) and symbolization (as in (3, b)).

(3) a. this means that marriageable partners are relatively limited

### b. smaller P means the big fluctuation

*Mean* also conveys a meaning of definition (as in (3, c)) or cause-&-effect (as in (3, d)). (3, d) can be interpreted as 'because of the advanced medical and clinical technology, people live a longer life today'.

(3) c. anthropology means the study of people
d. advances in medical and clinical technology mean longer life spans for people today

*Involve*, conveying a meaning of signification or constitution, may also be used to make a definition.

(4) adoption involves the legal, permanent transfer of a child from the birth parent or parents to the adoptive parent or parents

The last verb in focus is *equal*, which typically indicates a relation of equation. But it also shows a causal relation (as in (5, a)) or conveys a meaning of symbolization (as in (5, b)).

(5) a. more available medical care does not equal better healthb. 'red' equaled 'hot' in the minds of some observers

Similar to *follow*, which has a complex meaning of 'time [basic] + cause-&-effect [extended]', the other three verbs are analyzed in the same way as 'X component [basic] + Y component [extended]'.

- I. *follow*: time [basic] + cause-&-effect [extended]
- II. *mean*: indication [basic] + definition [extended] /cause-&-effect [extended]

III. *involve*: constitution [basic] + definition [extended]

IV. equal: equation [basic] + cause-&-effect [extended] /symbolization [extended]

Until now, I have investigated the equative verbs and their meanings from two complementary perspectives. In §7.3, for each type of meaning I present the typical equative verbs, while in §7.4, for the equative verbs I show their multi-meaning nature. This can be explained in terms of the coding direction of the process of identifying. In both of the two contexts, 'meaning' is always the Value and 'form' always the Token since the meaning is more abstract than the form. In §7.3, the identifying process identifies the forms of a meaning ('meaning' as Identified), which forms an encoding process, while in §7.4, the identifying process identifies the meanings of a form ('form' as Identified), which forms a decoding process. These two coding directions are shown in Table 7.3.

§7.3: encoding	
meaning	forms (verbs)
Id/V1	Ir/Tk
§7.4: decoding	
form (verb)	meanings
Id/Tk	Ir/Vl

Table 7.3 Analysis of the analyzing perspectives of the relationship between forms and meanings

### 7.5 Experiential and textual uses of identifying clauses

The uses of identifying clauses are investigated in the following two aspects. One is the experiential aspect (§7.5.1), and the other is the textual respect (§7.5.3). Experiential uses refer to the uses of the identifying clauses in conveying information, or, the roles played by the identifying clauses in the construction of knowledge. They are embodied in the coding dimension of the information. Textual uses refer to the 279 uses of the identifying clauses in organizing a text, or, the roles played by the identifying clauses in the presentation of knowledge as text. They are embodied in the thematic structure and the patterns of thematic progression. The conclusion of the experiential uses is tenable in all text types, while that of the textual uses is restricted to the expounding and exploring types.

It has been reviewed (Footnote 2 in §1.3) that Matthiessen et al. (2010: 179-80) classify the socio-semiotic processes within field into the eight types of recreating, reporting, exploring, exploring, enabling, recommending, doing and sharing, among which the expounding type is used mainly in classifying and explaining and the exploring type mainly in arguing and evaluating. Therefore, in these two types of socio-semiotic processes, relational clauses occur frequently. In other words, expounding and exploring are the dominant socio-semiotic processes of relational clauses.

### 7.5.1 Experiential uses of identifying clauses

In the second edition of IFG Halliday (1994) does not present a classification of the identifying clauses, later in the third edition Halliday and Matthiessen (2004: 234-5) classify identifying clauses into the various types of equation, equivalence, role-play, naming, definition, symbolization, exemplification and demonstration. Although this classification is not explicitly indicated as use-oriented, it is use-related. From the examples given in the third edition of IFG (shown in Table 7.4), one will see that this classification of identifying clauses is based largely on the verbs realizing the process.

Table 7.4 Types of identifying clauses (adapted from Halliday and Matthiessen 2004: 234-5)

type of identifying clause	realization of process	
equation	equal	
equivalence	correspond to	
role-play	be	

naming	be
definition	be
symbolization (glossing and translation)	indicate
exemplification	be
demonstration	show, suggest, indicate

The question is: What are the factors involved in the identification of the uses of an identifying clause? This question originates from two facts. Some equative verbs can be used to realize different types of identifying processes, as *be* in *Tom is the leader*, *she is Mary, linguistics is the study of language, red is stop, one plus one is two*, etc. as well as other cases, such as *mean, equal* and *involve*, which have been examined in §7.4. Furthermore, an identifying clause may be grouped into different types on the basis of the places where the tonic prominence falls. For instance, *linguistics is the study of language is linguistics*. Therefore, the essential factors influencing the interpretation of the uses of an identifying clause are the RELATION between the two participants embodied in the coding direction and the context in question.

The classification of the experiential uses of identifying clauses shown in Table 7.5 below is based on the classification made by Halliday and Matthiessen (2004), but is revised to a certain extent as a consequence of the influence of the coding direction of the information and the relevant context.

I begin the discussion with the illustrations of the two types of experiential uses – exemplification (as in (6)) and symbolization(as in (7)).

### (6) snow illuminated by sunlight exemplifies the distinction between radiance and *irradiance*

(7) the BOLD signal is represented by the yellow and red regions

Other types of experiential uses are summarized in Table 7.5.

type	example	
specifying	Jane is the better candidate	
	the point is <b>that he is too young</b>	
defining	adoption refers to the legal, permanent transfer of a child	
	from the birth parent or parents to the adoptive parent or	
	parents	
demonstration	the figures show how to operate the machine	
naming	the participant in the clause is termed "Identifier"	
	I am <b>Mary</b>	
role identification	Beijing is the capital of China	
constitution	this research is made up of six chapters	
possession	she owns the house	
circumstance	her best friends accompanied her on the way home	
equation	one plus two equals <b>three</b>	
counter-expectation	the most important part in this research is the hardest part	
categorization	he is the smart one	

Table 7.5 Experiential uses of identifying clauses

Different from the classification of identifying clauses that takes the equative verbs as indicators (Halliday and Matthiessen 2004), the classification of the experiential uses of identifying clauses does not rely just on these indicators. Some of the labels of the uses are easy to understand, such as 'exemplification', 'defining', 'symbolization' and 'equation', but others require further explanation. 'Specifying' refers to specifying a certain entity /event or pinning down a certain point. The former is exemplified by *Jane is the better candidate*; the latter is instantiated by the clauses whose first participant is realized by such NGs as *the point*, *the case* and *the issue*. 'Demonstration' means demonstrating the findings or content of a report, study, theory, and the like. 'Naming' means giving some certain entity /event a name. The process in such identifying clauses is usually realized by *is named /termed /called* and *is* 

regarded /seen /taken as. 'Role identification' is related to the role or function of an entity /event in a specified domain. 'Constitution' indicates the relation between an entity and its constituents. 'Possession' is a possessive relation between the owner and the owned. It is identified in the two respects of owning and belonging-to. 'Circumstance' is a circumstantial relation of time (before, after and meanwhile), space /place (precede and follow), cause (cause and reason), accompaniment and manner. Identifying clauses of the 'counter-expectation' type are usually found in the clauses with both of the two participants realized by superlatives. They are called 'counter-expectation' because when one is reading a clause whose first participant is realized by a superlative, he tends to interpret it as Value and the coming participant as Token, such as the most important part in this research is Chapter Six. However, if the second participant is realized by a superlative as well, he needs to revise the former expectation and interprets the clause from the beginning again, in which case the first participant may be either Token or Value. In this sense, 'counter-expectation' always involves a process of giving up the former expectation and re-interpreting. The last type of identifying clauses, 'categorization', is in some respect similar to attributive clauses. Such identifying clauses typically take the form 'definite /indefinite NG + equative V + DA + Adj. + one /thing'. They are the intermediate cases between typical identifying clauses and attributive ones. Examples as follows are presented as illustrations.

- (8) a. the smart one is **Tom** 
  - b. Tom is the smart one
  - c. Tom is smart

In the first instance, the unmarked interpretation is that *the smart one* is the Identified and Value, and *Tom* is the Identifier and Token. This constitutes an encoding process that specifies an appropriate person who satisfies the requirement of being the smart one in a specified domain (the specified domain can be a group, a team, a class, etc.).

In the second instance, the unmarked interpretation is that *Tom* is the Identified and Token and *the smart one* the Identifier and Value. It is a decoding process that decodes the property of Tom as being the smart one in a specified domain. In the last example, *Tom* is the Carrier, and *smart* is the Attribute. The meaning conveyed by the attributive clause is 'Tom is one of the members in the class of people who are smart'. One may have noticed that the interpretations of the first two instances are restricted to 'a specified domain', but in the third instance there is no such a restriction. The difference between (8, a - b) and (8, c) is shown by their variants as follows:

- (8) a. the smart one [in the class] is **Tom** 
  - b. Tom is the smart one [in the class]
  - c. ?*Tom is smart in the class*<sup>29</sup>

The realization of the process definitely influences the classification of the uses of identifying clauses. However, it is not the decisive factor; what is essential is the relation between the two participants embodied in the coding direction of the information. Take the examples from COCA for instance. Role-identification can be construed by the identifying clauses with the process realized by the phrasal verbs such as *serve as* and *function as*, as in (9, a). But this is not the only choice; it can be construed by other clauses as well, as in (9, b – d).

(9) a. using its cache, a mobile node may serve as the network medium between disconnected area
b. in a local Year 4 classroom, where music is the basis of the language

program ...

c. at the present day Sala (Sarah) Hina, of Kwahadt ancesity, is regarded as the

<sup>&</sup>lt;sup>29</sup> This clause is acceptable in

<sup>(8)</sup> d. Tom is smart in the class but not at home.

However, in (8, a) and (8, b), the tonic prominence falls on either participant, but in (8, d) the tonic prominence falls on the circumstance. Therefore, although (8, d) is acceptable, the focus of the clause shifts from participants to circumstance.

### most expert Pima potter

d. feedback to the students, and corrections based on that information is seen as the key element in improving student teaching performance

The experiential use of an identifying clause is identified not only directly from the realization of the process as in (9, a) but also implicitly from the realizations of the two participants and the relation between them as in (9, b – d). Therefore, apart from being denoted by the phrasal verb *serve as*, role-identification is also construed by the identifying clauses whose second participant is realized either by the NGs that denote the function or role of an entity, event, institution, place, etc., like *the basis, the capital, the heart, the foundation*, or by the NGs with the Epithet indicating the role of the Thing like *the key element, the main factor* and *the ultimate cause*, or by the NGs of comparatives and superlatives indicating comparison, such as *the greatest, the largest* and *the most important*. The comparison here is distinct from the comparison of the circumstantial type. It shows the status or role of the participant in question in a specified domain, and there is only one entity in the clause. However, the comparison of the circumstantial type indicates a comparison between two participants, and there are two entities in the clause. One can see the difference in the contrast between (10, a) and (10, b).

### (10) a. Jane is the better candidate

### b. the clock has outlasted his owner

In (10, a), the process is realized by the neutral verb *be*. Hence, the use of (10, a) is indicated by the realization of the second participant. It means 'between the two candidates, Jane is the better one (although we do not know the identity of the other candidate because it does not show in the clause). This is the role of Jane on the candidatelist'. It would be seen more clearly and directly by replacing *is* with *serve as* - *Jane serves as the better candidate*. In this case, the participant Jane is the only

entity in the clause; it forms a comparison relationship with the other entity in a wider context rather than in the clause. In (10, b), however, the comparison occurs between the two entities, the clock and his owner, within the clause itself. The meaning is 'compared with the owner, the clock "lives" longer'. In this case, the copular verb cannot be replaced by *serve as*– *\*the clock serves as his owner*.

### 7.5.2 The influence of the coding direction of information

In Table 7.5 in §7.5.1, one may have noticed that *Jane is the better candidate* is used to illustrate both specifying and role-identification. The reason why there are two possibilities is that a piece of information can be interpreted from different coding directions.

### I. Role-identification vs. specifying

Now I take the example from COCA, *Romney is the right person to turn the economy around*, presented as (11, a - b), as the starting point to show the influence of the coding direction of the information.

### (11) a. Romney is the right person to turn the economy aroundb. Romney is the right person to turn the economy around

It has been noted (§5.4.2) that in identifying clauses the Identifier is correlated with the new information that receives the tonic prominence. Accordingly, *the right person to turn the economy around* and *Romney* are Identifier in (11, a) and (11, b) respectively. In (11, a), the unmarked interpretation is the Identified *Romney* being Token and the Identifier *the right person to turn the economy around* the Value. The decoding process decodes the role of Romney as the right person that one can rely on in turning the economy around. On the contrary, in (11, b), the mapping of the Identified *the right person to turn the economy around* onto the Value and the Identifier *Romney* onto the Token constitutes an encoding process, which specifies the one who satisfies the requirement of being the right person to turn the economy around. One can see the difference by situating them in the context provided by the corpus.

(11) The rate of defaults on federal student loans jumped sharply last year. The Education Department reported 8.8 percent of borrowers defaulted in 2010. That's up from 7 percent in 2008. The numbers underscore concerns that high tuition and the tough job market are leaving more students unable to pay their debts. Default can affect credit ratings and possibly job prospects. In the presidential campaign, Republican Mitt Romney picked up the endorsement of a formal rival. The one-time Governor of Minnesota Tim Pawlenty said he believes <u>Romney is the right person to turn the economy around.</u>

The background of the identifying clause concerns economy (whose focus is on the influence of default) and presidential campaign. With the rising rate of default and economic decline, the candidate having the ability to turn the economy around will give him a head start over other candidates in the presidential campaign. In the context, the clause may be interpreted in two ways. On the one hand, one regards Tim's comment on Romney as an evaluation of Romney's role in turning the economy around. In this case, *Romney* is the Identified and Token and *the right person to turn the economy around* the Identifier and Value, which constitutes a decoding process. Supposes that there is another person on the scene (a politician, elector, etc.), it is likely to hear the following conversation:

### (11) a. A: How do you think about Romney?

*Tim:* [Id/Tk:] *He (Romney) is* [Ir/V1:] *the right person to turn the economy around.* 

*B:* Yes, he is (the right/appropriate/suitable person to turn the economy around) //No, he is not (the right/appropriate/suitable person to turn the economy around) //No, he is the less competitive/wrong one.

Here, Tim comments on Romney's role in turning the economy around, and B expresses his opinion either by approving Tim in a different wording or by disapproving Tim by negating what was said by him. On the other hand, if one regards Tim's words as specifying or emphasizing Romney as the right person to turn the economy around, *Romney* is the Identifier and Token and *the right person to turn the economy around* the Identified and Value, which constitutes a process of encoding. It is possible to hear a conversation as follows:

(11) b. A: who is the right person to turn the economy around?
Tim: [It/Tk:] Romney is [Id/V1:] the right person to turn the economy around
B: I'm afraid I can't agree. I think C is the right one.

From the different situations and coding directions, we can see that (11, a) (the decoding process) identifies the role of the participant in question, while (11, b) (the encoding process) specifies the person who satisfies the description. In the former reply to the question posed by A 'how do you think about Romney', the information that functions to decode is negated or verified, while in the latter reply to the question 'who is the right person to turn the economy around', the information functioning to encode is negated or verified. In other words, in the first situation, if B wants to express the idea about Romney, he can say 'Romney is **the appropriate/suitable one**' or 'Romney is **the less competitive one**' in agreement or disagreement with Tim, but it is not usual for him to say 'C is the appropriate one' or 'C is the less competitive one'. In the second situation, if B wants to express the idea about the right person to turn the economy around the right person to turn the economy around is the right person to turn the economy around the right person to turn the economy around the right person to turn the economy around the right person to turn the economy around, he can say 'C is the right person to turn the economy around, he can say 'C is the right person to turn the economy around, he can say 'C is the right person to turn the economy around, he can say 'C is the right person to turn the economy around, he can say 'C is the right person to turn the economy around, he can say 'C is the right person to turn the economy around, he can say 'C is the right person to turn the economy around, he can say 'C is the right person to turn the economy around, he can say 'C is the right person to turn the economy around, he can say 'C is the right person to turn the economy around, he can say 'C is the right person to turn the economy around, he can say 'C is the right person to turn the economy around, he can say 'C is the right person to turn the economy around the right person to turn the economy around the r

around', but it is not usual to hear 'Romney is the less competitive one'<sup>30</sup>.

In order to identify the experiential use of an identifying clause, we need to consider two factors – the coding direction of the information and the context in question. This is seen more clearly in the following illustrations of the different types of experiential uses.

### II. Categorization vs. specifying

The contrast between specifying and role-identification illustrated above shows the influence of the coding direction of the information, and other contrasts are presented one by one as below.

Specifying is special in that it is in contrast with several other types of experiential uses, such as role-identification, categorization and constitution. Since (8) in §7.5.1 has revealed the contrast between specifying and categorization, here I explain it only briefly. Although the two identifying clauses from the corpus as shown in (12) are not exactly the same, they are effective in illustrating the contrast between specifying and categorization.

(12) a. (Voiceover) Who do you think is the smart one? Is it Dong or is it Bart?

Oh,	(the smart one	is)	Bart
	Id/Vl	process	Ir/Tk
encoding			

b. Meg is domestic, Beth sweet and sickly, and Amy is pretty and marries the boy

<sup>&</sup>lt;sup>30</sup>However, the 'unusual' replies are also found in another situation under the influence of tenor. Tenor is one of the three variables of register in SFL, referring to the relationships between the participants and their purposes. Take (11, b) for instance. If B is also a Republican or a voter who supports Romney, he will negate Tim's opinion tactfully like *I'm afraid that Romney needs more experience* when he disagrees with Tim. However, if B is a Democratic or a voter who supports Obama, he would probably negate Tim's opinion directly like *Obama is the right one to turn the economy around, not Romney.* The difference results from the relationship of B to Romney. In the former case, B has a friendly relation with Romney. Therefore, even though he is expressing a different idea, he would say it indirectly. But in the latter case, B is the opponent of Romney, and he will attack Romney directly and speak out what he thinks right.

who loved Jo first.

Jo	is	the smart one
Id/Tk	process	Ir/Vl
decoding		

The encoding process specifies the person who satisfies the requirement of being the smart one, while the decoding process characterizes Jo as the smart one in comparison with domestic Meg, sweet and sickly Beth and pretty Amy.

III. Constitution vs. specifying

The contrast between constitution and specifying is illustrated by the identifying clause with its contexts as in (13, a) and (13, b):

(13)a. A local hospital or mental health facility may be an excellent reference for obtaining the names and phone number of local specialists. Referral for specialized treatment is important because often a treatment team is required to address the multifaceted nature of an eating disorder. <u>The treatment team may involve a medical doctor, a nutritionist, a mental health professional (i.e. psychologist or psychiatrist) who specializes in eating disorders, and/or a family <u>therapist.</u></u>

In this context, *the treatment team* is the Identified and Token, and *a medical doctor, a nutritionist, a mental health professional (i.e. psychologist or psychiatrist) who specializes in eating disorders, and/or a family therapist* is the Identifier and Value. This decoding process informs us of the constitution of the treatment team; it is usually probed by 'what does the treatment team involve'. Due to the specialists in the treatment team is able to address the multifaceted nature of an eating disorder. In a different context, what one is concerned about may be not the

constitution of the treatment team but the kind of team that involves a medical doctor, a nutritionist, a mental health professional, and/or a family therapist simultaneously.

(13) b. A: We are leaving for London in five days.

B: Gosh, so far away. What should I do if my eating disorder returned?

*A:* Easy. *The treatment team* may involve a medical doctor, a nutritionist, a mental health professional (i.e. psychologist or psychiatrist) who specializes in eating disorders, and/or a family therapist, and it will be with us.

In this context, B is worried about his eating disorder when being abroad. His question can be paraphrased as 'what should I do in case I need a medical doctor, a nutritionist, a mental health professional who specializes in eating disorders, or a family therapist'. A comforts him by giving the information that the treatment team will provide all he needs and guarantee his health. Hence, the tonic prominence falls on the first participant that acts as the Identifier and Token. As for the second participant, it is the Identified and Value. This encoding process specifies the team that contains the components described rather than introducing the components of the treatment team.

From the analysis above, one can see that the identifying clauses of the specifying type always realize an encoding process and those of the other three types (role-identification, categorization and constitution) always realize a decoding process.

### IV. Defining vs. naming

The fourth pair is defining vs. naming. The contrast between (14, a) and (14, b) is presented as an illustration.

(14) a. ... 1994 Maier (as cited in Sorby, 1999) proposed that spatial perception,

spatial visualization, mental rotations, spatial relations, and spatial orientation are the components that form spatial skills of a visual nature.

spatial	refers to	the observed magnitude and/or proximity of an object
perception		in relation to an individual
Id/Tk	process	Ir/Vl
decoding		

b. Ecologists have long speculated about the primary sources of nutrients (e.g., endogenous versus exogenous) that mothers provide their developing offspring. At one extreme are species, including some penguins and vipers, whose reproductive strategy dictates that all nutrients used to produce offspring are derived from mothers' own existing nutrient stores (Meijer and Drent 1999, Bonnet et al. 2002);

this strategy	is referred to as	capital breeding
Id/Vl	process	Ir/Tk
encoding		

If (14, a) and (14, b) are identified by means of the realization of the process only, both of them are definition in Halliday and Matthiessen's (2004) interpretation. However, seen from the relationship between the two participants, the first clause makes a definition for the term *spatial perception*, in which case the tonic prominence falls on *the observed magnitude and/or proximity of an object in relation to an individual*; the second clause identifies the term for *the strategy that all nutrients used to produce offspring are derived from Mothers' own existing nutrient stores*, with the tonic prominence falling on *capital breeding*.

V. Possession: owning vs. belonging-to

As noted in §7.5.1 that possession is further divided into owning and belonging-to.

(15) a. What does Jane own?

Jane	owns	the house
Id/Tk process		Ir/Vl
decoding		

b. Who owns the house?

Jane	owns	the house
Ir/Tk	process	Id/Vl
encoding		

The house	is owned by	Jane
Id/Vl	process	Ir/Tk
encoding		

c. To whom does the house belong?

The house	belongs to	Jane
Id/Tk	process	Ir/Vl
decoding		

d. What belongs to Jane?

The house	belongs to	Jane
Ir/Tk	process	Id/Vl
encoding		

The processes in the first two instances in (15) are realized by the same verb *own*, but they are of different types of uses because of the coding direction of the information. In the first instance, the decoding process identifies what Jane owns, emphasizing the owned in the possessive relationship. In the second instance, the encoding process

identifies the owner of the house, emphasizing the owner in the possessive relationship. They form complementary perspectives in a possessive relationship. Although clauses with *belong to* do not have any correspondent passive construction, they can be interpreted in two ways as well. The third instance is a decoding process focusing on the owner, and the fourth one is an encoding process focusing on the owned.

Until now I have presented five pairs of experiential uses (I-V above) influenced by the coding direction of the information and the context in question. They are the contrast between role-identification and specifying, categorization and specifying, constitution and specifying, defining and naming, and owning and belonging-to.

However, some experiential uses may not be influenced by the coding direction of the information. For example, *the number of pups recruited into the non-pup population equals the number of non-pups lost to natural morality*.

(16) a. What does the number of pups recruited into the non-pup population equal?

The number of pups recruited into	equals	the number of non-pups lost
the non-pup population		to natural morality
Id/Tk	process	Ir/Vl
decoding		

b. What does the number of non-pups lost to natural morality equal?

The number of pups recruited	equals	the number of non-pups lost to
into the non-pup population		natural morality.
Ir/Tk	process	Id/V1
encoding		

c. What is the number of non-pups lost to natural morality equaled by?

The	number	of	non-pups	is equaled by	the	number	of	<sup>c</sup> pups	recruited
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lost to natural morality		into the non-pup population.
Id/V1	process	Ir/Tk
encoding		

d. What is the number of pups recruited into the non-pup population equaled by?

The number of non-pups	is equaled	the number of pups recruited into
lost to natural morality	by	the non-pup population
Ir/Vl	process	Id/Tk
decoding		

Although in (16) there are four interpretations resulting from the different conflations of Identified, Identifier, Token and Value, they do not affect the interpretation of the type of use of the clause. In all these four cases, they function to show the equal status of the number of pups recruited into the non-pup population and the number of non-pups lost to natural morality. This originates from the constancy in the relationship between the two participants rather than the same verb used in the clauses.

Even specifying, which is frequently in contrast with other types of uses, may not be affected by the coding direction. This is the case with the clauses of pinning down a certain point. Let us consider the following examples.

# (17) a. the issue is whether it is appropriate to elect him as the leader b. the point is thatdoing a survey of public attitudes before election is very important

In such clauses *point* and *issue* always function as the Identified and never carry the tonic prominence. Furthermore, they are always Token, as argued in (i) in §4.3.4.2. Consequently, in pinning down a certain point, the information can only be coded in one direction – decoding. Here, the former claim concerning the coding direction of

the identifying clauses of specifying (see III in §7.5.2) needs to be modified. Not all identifying clauses of specifying are encoding processes; the identifying clauses of pinning down a certain point are decoding processes.

### 7.5.3 Textual uses of identifying clauses

Having explored the experiential uses of identifying clauses, now I deal with the textual uses by analyzing two texts. One is in the field of zoology (a branch of biology involving the classification and the properties and vital phenomena of animals (Net. 7)) and the other is in the field of linguistics (the study of language and of the way languages work (ibid.)), both of which are the expounding type of texts.

Halliday and Matthiessen point out that 'text is itself organized as a series of elaborating relations (constitution, attribution, etc.)' (1999: 452). In other words, the different parts in a text form a relationship of hyponymy or meronymy with the text itself. This textual organization is foregrounded in certain types of texts, such as those introducing or explaining an entity or phenomenon in the tutorial domain, especially in encyclopedic entries or taxonomic reports in school textbooks. In case of animal introductions organized in a general – specific structure, the different components of a text are analogous to the different parts of the animal introduced. For example, in the following analysis of the introduction of ostriches (see Appendix 2), one will find that the text itself is the realization of the structure of an ostrich in writing (see Figure 7.5 in §7.5.3.2). In this respect, the relation between the introduction and the animal introduced is one of identification.

### 7.5.3.1 Experiential uses of identifying clauses in the ostrich text

Before exploring the textual uses, I will show the roles played by the identifying clauses in construing knowledge by analyzing the ostrich text. In the text, the identifying clauses are underlined, and the colored words are the keys to discern

ostriches (see Appendix 2). The identifying clauses in this text are typically found in the first three paragraphs. The first clause in the first paragraph makes a **DEFINITION** for the species of ostriches and points out the ROLE PLAYED by ostriches in the genus Struthio (The Ostrich or Common Ostrich, (Struthio camelus), is one or two species of *large flightless birds, the only living member(s) of the genus Struthio*). The first clause in the second clause complex in this paragraph presents a dispute with respect to one subspecies of ostriches by means of the **DEMONSTRATION** of some research findings (Some analyses indicate that the Somali Ostrich may be better considered a full species). The second paragraph begins with an identifying clause of **POSSESSION** (ostriches share the order Struthioniformes with the kiwis, emus, rheas, and cassowaries), indicating the relationship between ostriches and kiwis, emus, rheas and cassowaries, all of which belong to the order struthioniformes. It is because ostriches share the same order with kiwis, emus, rheas and cassowaries that readers can learn from the text that ostriches are flightless birds without a keeled breastbone and that they are primarily herbivorous to omnivorous based on some cladistics analyses (Net. 8). In addition, readers also learn that like the other members in the order, ostriches nest on the ground and incubate the eggs mostly or entirely by the mate (ibid.). Sharing the same order not only enables readers to know the common features of these members but also inspires them to explore the distinctive features of ostriches that distinguish them from the other members in the same order (the co-existence of sameness and differences have been reviewed in §3.4.2). Ostriches are distinctive mainly in their appearance. As noted in several places in the text, ostriches hold 'several world records' in the 'bird world': the largest, the heaviest and the tallest. This is the reason why the identifying clauses indicating the roles of ostriches occur frequently in the text, such as the identifying clauses of ROLE-IDENTIFICATION.

(18) a. the Ostrich or the Common Ostrich ... is ... the only living member(s) of the genus Struthio that is in the ratite familyb. the ostrich is the largest living species of bird...

c. (eyes) [is] the largest of any land vertebrate...d. (tarsus) [is] the largest of any living bird...

Many of other clause types in this text explain why ostriches are the largest, heaviest and tallest birds. The attributive clauses in the third paragraph illustrate one of the three features – the heaviest. They deliver the information of the weight of ostriches, which ranges from 63 kg to 145 kg (with an exception of 156.8kg). One can compare the weight of ostriches with the other members in struthioniformes: rheas (around 25 kg), cassowaries (about 55 kg), emus (41 kg) and kiwis (analogous to the weight of a common chicken). These provide evidence for the role of ostriches of being the heaviest birds. Similar cases are found elsewhere in the text, for example, the attributive clause (*the eyes of ostriches are*) 50 mm (2.0 in) in diameter shows that the eyes of ostriches are the largest of any land vertebrate, and the attributive clause (*the tarsus of ostriches*) measuring 39 to 53 cm (15 to 21 in) in length supports the claim that the tarsus of ostriches is the largest of any living bird. All of them justify from different perspectives that ostriches are the largest living species in the 'bird world'.

Therefore, the identifying clauses of role-identification enable readers to know ostriches by conveying relevant information of their distinctive appearance, and in this way distinguishing ostriches from other kinds of birds. When we introduce an entity, we give prominence to the distinctive features because they distinguish the entity in question from other entities that present similar features.

### 7.5.3.2 Textual uses of identifying clauses in the ostrich text

In the analyses above, I have shown the roles played by the identifying clauses in the construction of the knowledge of ostriches, now I come to the roles played by the identifying clauses in the presentation of the knowledge of ostriches as text. The first identifying clause in the first paragraph of the ostrich text is the macroTheme that introduces the topic of the text and makes a general statement of the species. The

identifying clauses in the second paragraph continue the topic, but with a more detailed description. The concern is still relevant to species. They compare ostriches with the other members in the order of struthioniformes, indicating the appearance of ostriches as the distinctive feature and further showing the distinctive feature of ostriches as being the largest birds. The rest of the clauses in the text, which are of different clause types (typically the attributive and identifying clauses), serve to support the general remarks in the first two paragraphs. In this regard, I see the first identifying clause in the first paragraph and the identifying clauses in the second paragraph as macroTheme and hyperTheme respectively. The roles of the identifying clauses in the text are shown in Figure 7.4 below.

### (macroTheme)

## <u>The Ostrich or Common Ostrich, (Struthio camelus)</u>, is one or two species of large flightless birds native to Africa, the only living member(s) of the genus Struthio that is in the ratite family.



Ostriches share the order Struthioniformes with the kiwis, emus, rheas, and cassowaries.



<u>The ostrich</u> is the largest living species of bird...

∧	$\square$
Theme (clausal)	Rheme /
(supporting evidence)	
<u>Ostriches</u>	from 63 to 145 kilograms (140-320 lb)
Their eyes	the largest of any land vertebrate
. <u>The tarsus of the Ostrich</u>	the largest of any living bird
Theme (clausal)	Rheme ///
Ostriches of the East African	115  kg (250  lb) in malas and $100  kg (220  lb)$ in females
The nominate subspecies	115  kg (250  lb) in males and $100  kg (220  lb)$ in jenules
<u>Exceptional male Ostriches</u> (baby) <u>Ostriches</u>	up to 156.8 kg (346 lb) around 45 kilograms (100 lb)
Their eyes	50 mm (2.0 in) in diameter < 🖊
The tarsus of the ostrich 🖉	39 to 53 cm (15 to 21 in) in length $\checkmark$
Theme (clausal)	Rheme

Figure 7.4 Roles of the identifying clauses in organizing the ostrich text

The first identifying clause in the first paragraph introduces the topic of the text by making a definition. It is the topic Theme of the text, i.e. the macroTheme. The first

identifying clause in the second paragraph locates ostriches in the struthioniformes order, from where the introduction of the distinctive features of ostriches continues. The second identifying clause in the second paragraph is one of the two sub-topic Themes, i.e. the hyperTheme. The other hyperTheme is the second identifying clause in the second paragraph that shows the role of ostriches in the 'bird world'. This explains the reasons why ostriches are distinctive in appearance and is realized in several respects in the following text. The Themes of these identifying clauses are the same – the ostrich. With respect to the Rhemes, since they are all related to the order struthioniformes, they can be taken as the same in some sense. However, they differ in generality: From the genus struthio to kiwis, emus, rheas and cassowaries and then to ostriches. The Rhemes are arranged from the most general to the most specific. All of these identifying clauses have one feature in common in organizing such a text – they serve as the introduction of the topic, either of the whole text or of a particular phase. The Themes of the rest of the clauses are related to ostriches as well, they have a meronymic relationship with the Themes of the identifying clauses mentioned above. For example, the weight, the eyes and the tarsus form a meronymic relationship with an ostrich. They together provide evidence for the fact that ostriches are the largest living birds.

The analysis of the ostrich text should not end here. At the beginning of this section I have mentioned Halliday and Matthiessen's statement that a text is itself an organization of a series of elaborating relations, such as constitution. This is especially true of taxonomic reports. The process of introducing an entity is itself an identifying process, which is composed of several sub-identifying processes. To be specific, the whole text identifies the species of ostriches, and the different parts in the text identify the structure of ostriches. Therefore, the relationship between the parts of the text and the text as a whole is analogous to the relationship between the physiological structure of an ostrich and the ostrich as a physical entity. This is shown in Figure 7.5 (the components of an ostrich are indicated by different colors in the text in Appendix 2)



Figure 7.5 Components of ostriches vs. parts of the text

The text introduces the species of ostriches, male as well as female, reflected in the picture of the two ostriches. The left with black feathers represents a male ostrich, and the right with greyish-brown feathers represents a female ostrich. The introduction of ostriches is composed of the descriptions of weight, height, feathers, neck, tarsus, etc. In the picture, one can see these parts of ostriches clearly. Take the description of the neck of ostriches for instance. In the text, the neck of a male ostrich is described as blue grey, and that of a female ostrich is described as pinkish grey. This is realized in the picture by means of a process of representation. By the same token, the descriptions of the other parts of ostriches are re-presented in the picture. This identifying relationship of representation between a text and picture has been expounded in §4.2.

Therefore, in exploring the textual uses of identifying clauses, we need to keep an eye on the macrostructure of the text (e.g. Figure 7.4 above).

The ostrich text enables us to draw a temporary conclusion of the textual uses of identifying clauses. The two types identified here are topic introduction and evidence providing. In the excerpt concerning the concept of Residue (adapted from Halliday (1994: 78-80)) below, one will discover more textual uses of identifying clauses. For

simplicity, only the identifying clauses and the implicit identifying relations in the text are presented.

(19)

4.3.1 Structure of the Residue

[Theme 1] *The Residue* [Rheme 1] *consists of functional elements of three kinds: Predicator, Complement and Adjunct.* ...

(1) Predicator. ... [Theme 3] It [Rheme 3] is realized by a verbal group minus the temporal or modal operator...

The function of the Predicator is fourfold. (i) It specifies time reference other than reference to the time of the speech event, i.e. 'secondary' tense: past, present or future relative to the primary tense (...). (ii) It specifies various other aspects and phases like seeming, trying, hoping (...). (iii) It specifies the voice: active or passive (...). (iv) It specifies the process (action, event, mental process, relation) that is predicated of the Subject (...).

(2) Complement. [Theme 12] A Complement [Rheme 12] is an element within the Residue that has the potential of being Subject but is not.

(3) Adjunct. [Theme 14] An Adjunct [Rheme 14] is an element that has not got the potential of being Subject.

[Theme 15] The typical order of elements in the Residue [Rheme 15] is: Predicator ^ Complement ^ Adjunct(s), as in the duke gave my aunt that teapot last year for her birthday. But, as we have noted, an Adjunct or Complement may occur thematically, either as a WH-element in interrogative or as Marked Theme in a declarative clause. ...

As is the case with the first excerpt, the implicit identifying relations in the second excerpt are taken into account as well. Apart from the five clauses marked out by Theme – Rheme in the original text (i.e. 1, 3, 12, 14 and 15), there are other

identifying relations in clause /group complexes, shown by 'i.e.', ':', or nothing at all (see Harvey 1999: 72, reviewed in §4.3.3). These implicit identifying relations are construed in the form of identifying clauses.

(20)

. . .

(1) [Theme 2] One element in the Residue [Rheme 2] is the Predicator...

The function of the Predicator is fourfold. (i) [Theme 4] The first function [Rheme 4] is that it specifies time reference other than reference to the time of the speech event. [Theme 5] The time reference other than reference to the time of the speech event [Rheme 5] is the secondary tense. [Theme 6] The secondary tense [Rheme 6] refers to past, present or future relative to the primary tense. ... (ii) [Theme 7] The second function [Rheme 7] is that it specifies other aspects and phases. (iii) [Theme 8] The third function [Rheme 8] is that it specifies the voice. [Theme 9] The voice system [Rheme 9] consists of the active voice and the passive voice. ... (iv) [Theme 10] The final function [Rheme 10] is that it specifies the process...

(2) [Theme 11] Another element in the Residue [Rheme 11] is the Complement...

(3) [Theme 13] A third element in the Residue [Rheme 13] is the Adjunct...

• • •

As indicated by the Arabic numerals, there are altogether fifteen identifying clauses in this text. The first identifying clause is one of possession, showing the components of the Residue. It is also a definition of the Residue when interpreted as 'the Residue is an element which consists of three functional elements, namely Predicator, Complement and Adjunct'. It introduces the topic 'the structure of the Residue' and serves as the macroTheme of the text. The elaboration of the structure of the Residue in the text is realized in the splitting of Rheme 1 into Theme 2, 11 and 13. Rheme 2 remains the same in Theme 3, 4, 7, 8 and 10, indicating that the topic in phase (1) is

the Predicator and the topic is started with the first identifying clause in phase (1). On the one hand, this identifying clause functions to introduce the topic not of the text but of phase (1); it is the hyperTheme of phase (1). On the other hand, it demonstrates that the topic has changed to one of the elements of the Residue, the Predicator, rather than the Residue as a whole. This is a topic shift. Within phase (1), there is another topic shift realized by the converting of Rheme 4 in the fourth identifying clause into Theme 5 in the fifth identifying clause. However, it is only temporary because in the immediately next identifying clause the topic is back to the Predicator. The difference between the two types of topic shift is phase vs. non-phase. The 'phase' topic shift is realized by the identifying clause functioning as a hyperTheme, which transfers the topic to another in a different phase, like identifying clause 2 (Rheme 1); the 'non-phase' topic shift is only a temporary shift, which explains an interspersed concept, like identifying clause 5 (Rheme 4 > Theme 5), 6 (Rheme 5 > Theme 6) and 9 (Rheme 8 Theme 9). After having introduced the Predicator, the text changes the topic to another element of the Residue, the Complement. This is embodied in the eleventh identifying clause, the hyperTheme of phase (2). This topic continues in the next identifying clause in phase (2). The thirteenth identifying clause, the hyperTheme of phase (3), elaborates the final topic, the Adjunct. The patterns of the thematic progression in the text are shown as follows:



Figure 7.6 Patterns of thematic progression of the Residue text

If we see the Residue as a living organism, then the Predicator, the Complement and the Adjunct as the constituents of the Residue have a meronymic relationship with the Residue. The whole text is arranged in an elaborating relation of constitution, within which identifying clause 1, 2, 11 and 13 are the introducing part, identifying clause 4, 5 and 8 the transitional part, identifying clause 3, 6, 7, 9, 10, 12 and 14 the explaining part, and identifying clause 15 the summarizing part. Some of the identifying clauses function to introduce a topic as well as to shift a topic, such as identifying clause 2, 11 and 13.

The examination of the two texts demonstrates five textual uses of identifying clauses: introducing a topic, maintaining a topic, shifting a topic (phase /non-phase), providing evidence and summarizing (or evaluating). The two textual uses of
introducing a topic and summarizing/evaluating are related to some certain experiential uses. In introducing the topic of a text (like taxonomic reports), the text is likely to choose to start the introduction with an identifying clause of definition so as to give readers a general idea of the entity being introduced. Take the first clause of the ostrich text for instance - the Ostrich or Common Ostrich, (Struthio camelus), is one or two species of large flightless birds native to Africa, the only living member(s) of the genus Struthio that is in the ratite family. This identifying clause makes a definition of ostriches to leave readers a general impression on ostriches, like large flightless birds, the only living member(s) of genus Struthio and ratite family. These features of ostriches conveyed in the definition are explicated in detail in the following text. In this respect, the identifying clause of definition functions to introduce the topic of the ostrich text. This is also seen from the first clause of the Residue text – the Residue consists of functional elements of three kinds, Predicator, Complement and Adjunct. Although the process is realized by consist of conveying a meaning of constitution, the clause makes a definition of the Residue. The three constituents, the Predicator, the Complement and the Adjunct, are elaborated one by one later. As is the case with the ostrich text, the identifying clause of definition in the Residue text also introduces the topic of the text. If a text tries to summarize or evaluate what has been said, it tends to resort to the identifying clauses of role-identification. Let us consider the following instance from COCA:

(21) It was dicey, but I took it slowly until the slope flattened over the last cornice. The sound was incredible. It was like a vacuum, and I knew there was nothing above or beside me. Sheer openness. People ask me: Why climb if you can't see what's there? I can't see the view, but I can feel it. I use my other senses to take in a mountaintop. I think of tire smells, the wind, the sun on my face. <u>That</u> <u>summit is the most beautiful thing I've ever felt</u>.

In the text, the mountain climber describes a special experience of climbing a

mountain: There was no sight and one could only feel it. In spite of the danger and people's doubt, he concludes (or evaluates) the summit as the most beautiful thing he had ever felt.

I will make clear three points before closing this section. First, the analyses of the textual uses of identifying clauses are text-type-oriented. The findings are valid in the expounding and exploring texts that introduce something and are typically found in encyclopedias, as the examples as follows show. This 'something' can be a concrete entity (either human or nonhuman), an abstract concept, a phenomenon, etc. Second, some textual uses are closely related to certain experiential uses, as argued immediately above. Thirdly, in examining the textual uses of identifying clauses, I take an upward perspective, from the form to the use rather than from the use to the form. In other words, I am not saying that the five types of textual uses are realized only by identifying clauses, instead, I mean when identifying clauses occur in expounding and exploring texts, they may realize one or some of the five types of textual uses. In order to illustrate the three points, I searched for 'crocodile', 'Michael Halliday', 'systemic functional linguistics' and 'greenhouse effect' in the Wikipedia (Net.9). Each of the four entries begins with an identifying clause of definition to introduce the topic (Note that the bold type here does not represent tonic prominence but is the emphasis as in the original).

(22) a. A crocodile is any species belonging to the family Crocodylidae (sometimes classified instead as the subfamily Crocodylinae). The term can also be used more loosely to include all extant members of the order Crocodilia: i.e. the true crocodiles, the alligators and caimans (family Alligatoridae) and the gharials (family Gavialidae), as well as the Crocodylomorpha, which include prehistoric crocodile relatives and ancestors.

b. *Michael Alexander Kirkwood Halliday* (often *M.A.K. Halliday*) (born 13 April 1925) is a British linguist who developed the internationally influential systemic functional linguistic model of language.

c. *Systemic functional linguistics* is an approach to linguistics that considers language as a social semiotic system.

d. The greenhouse effect is a process by which thermal radiation from a planetary surface is absorbed by atmospheric greenhouse gases, and is re-radiated in all directions.

# 7.6 Summary

In this chapter, the fourth question posed in §1.3 has been answered and the eighth problem presented in §2.8 has been solved. The uses of identifying clauses are dealt with in two respects – experiential and textual, as summarized Figure 7.7.



Figure 7.7 Uses of identifying clauses

Figure 7.7 demonstrates the thirteen types of experiential uses and five types of textual uses of identifying clauses. The experiential uses (the roles of identifying clauses in the construction of the knowledge of the world) are embodied not only in the realizations of the process but also in the coding direction of the information. In other words, one clause can realize a variety of experiential uses in different contexts. This is shown in the contrast between role-identification and specifying, categorization and specifying, constitution and specifying, defining and naming, and owning and belonging-to, as examined in §7.5.2. The textual uses (the roles of identifying clauses in the presentation of the knowledge as text), which are realized in thematic structures and patterns of thematic progression, are examined in the macrostructure of a text. An identifying clause probably realizes several textual uses simultaneously, like topic introduction /topic maintenance and topic introduction /topic shift. The experiential uses have a close relationship with the textual uses: A certain type of textual use tends to be correlative with a certain type of experiential use, as argued in §7.5.3.

Identifying relations construed not only directly in clauses but also indirectly in clause /group complexes. They are fundamental in construing our knowledge of the world and presenting the knowledge as text. Take the study of the uses of identifying clauses for example. The process of exploring the uses of identifying clauses is itself an identifying process, which involves several sub-identifying processes. To be more precise, in order to identify the uses of identifying clauses one needs to examine the constituents of the clause – the participants and the process. But they are not seen in isolation; instead, they form an organic whole by specific relations.

# **Chapter Eight Conclusion**

As emphasized in the General Statement in Chapter One, the process of identifying has been an essential part of human life that enables people to acquire knowledge, to get acquainted with others and to get things done. It plays an extremely important role in a variety of domains like education, entertainment, leisure, consumption, etc. The ubiquity of the process of identifying originates from its power to turn abstract concepts in the human mind into reality and makes the relations between different entities or events in the world expressable. It always involves two semiotic processes, one being denotation and the other the inter/intra-stratal realization relationship. The former occurs in all process types, while the latter is specific to the identifying process, linguistic participant 1 and 2 denote entity 1 and 2 respectively, and in this way the specific entities of our experience are construed in language. And the relationship between the two participants in the process is also a semiotic one, embodied in the inter/intra-stratal realization relationship between the two participants that are on the different orders of abstraction.



Figure 8.1 Cognitive circle of the process of identifying

The identifying processes are examined mainly in three respects in the thesis – the grammatical characteristics, the semantic implications and the experiential and textual uses. The three aspects are related by EXHAUSTIVENESS (§8.1), the fundamental

feature in distinguishing identifying processes from other process types. Furthermore, in the examination of the three aspects, the relative idea is always born in mind (§8.2).

#### 8.1 The role of exhaustiveness

The thesis investigates both typical and non-typical identifying clauses. Apart from the identifying clauses that show the four characteristics summarized by Halliday (1994: 123), my account for identifying clauses also includes those that do not present all the four characteristics and those used in taxonomy. In this case, whether the clause in question conveys a realizational exhaustive meaning (the exhaustive meaning in respect of the inter/intra-stratal realization relationship) is an important reference. Two clauses as follows, taken are from COCA and the Wikipedia respectively, are provided as illustrations:

- Michael Alexander Kirkwood Halliday (often M.A.K Halliday) (born 13 April 1925) is a British linguist who developed the internationally influential systemic functional linguistic model of language
- (2) and rewsiana, borealis, udensis, umbellulata and uniflora are the clintonia

The first clause is a non-typical identifying clause with the second participant realized by an indefinite NG and the second clause construes a taxonomic relationship. Both of them are easily confused with an attributive process but are identified as identifying clauses because of the exhaustive meaning they convey in a specified context. Let us consider (1) first. Referentially, both of the two participants convey an exhaustive meaning. Although the second participant is realized by a NG containing the indefinite article *a*, it denotes a class of one member due to the Condition *who developed the internationally influential systemic functional linguistic model of language*. Realizationally, the relation between the two participants is exhaustive. As is known to all systemic functional linguists, the systemic functional linguistic model

of language is developed by no one but Halliday. Therefore, the clause conveys an exhaustive meaning. With respect to (2), it is easily confused with a clause like *monotropa uniflora is an herbaceous perennial plant*, an attributive clause used to make a classification. The difference between them is embodied not only in the realizations of the participants, but more importantly, in the relation between the two participants in each clause. In (2), andrewsiana, borealis, udensis, umbellulata and uniflora exhaust all the members of clintonia. But in the attributive clause, monotropa uniflora is just one of the several members of *herbaceous perennial plant*; other members include peony, hosta, etc. The difference in exhaustiveness can be seen from the contrast between the variants of the two clauses: Andrewsiana, borealis, udensis, umbellulata and uniflora constitute the clintonia vs. \*monotropa uniflora constitutes the herbaceous perennial plant. From the exhaustive meaning conveyed by (1) and (2), it is easy to identify who is Halliday and what is clintonia.

In sum, exhaustiveness combines the grammatical characteristics, the semantic implications and the experiential and textual uses together, distinguishing identifying processes from other process types and enabling identifying processes to make a definition, symbolize, identify a role or function, and so on.

# 8.2 Relativity

Relativity is interpreted differently in a variety of disciplines<sup>31</sup>. In physics, it refers to the theory of relativity advanced by Einstein; in philosophy and ontology, it is explained in terms of relativism; and in Buddhism, there exists the relative /commonsensical truth. The common ground they share is seeing things from a relative perspective and respecting the relevant context.

<sup>&</sup>lt;sup>31</sup> The meanings of relativity in the three disciplines (physics, philosophy and ontology and Buddhism) are given by the Wikipedia as follows. In physics, relativity means measurements of various quantities relative to the velocities of observers, and in particular, space and time can dilate. Space and time should be considered together and in relation to each other. In philosophy and ontology, relativism refers to the concept that points of view have no absolute truth or validity, having only relative, subjective value according to differences in perception and consideration. In Buddhism, relative or commonsense truth describes our daily experience of a concrete world. (Net. 12.)

The relativity view and context are also fundamental in the description of language. Halliday (1994: F40) emphasizes that in SFL no element is treated in isolation. The role or function of an element in a system is examined in its relation to the role or function of the other element or elements in the system. In other words, an element has a certain function or plays a certain role only when viewed in relation to the other element or elements. This has its origin in the physical world. For example, in Mary's family, she is the daughter of her parents; in the university, Mary is the student busy with her research; in daily life, she is just one of those girls who care about their appearance. They are only some of the roles Mary plays in the society. In the future, she may be a teacher, a mother, etc. The point is that the role Mary plays in a context is identified according to her relation to the other members in the specified context.

In the thesis, I analyze the element or elements of an identifying clause by reference to their relations to the other element or elements in the identifying clause and examine the identifying clauses as a whole by reference to their relations to the other clause types in the transitivity system. For instance, in exploring the exhaustive meaning conveyed by identifying clauses, I consider referential exhaustiveness as well as realizational exhaustiveness. Referential exhaustiveness is indicated by the definiteness of the NGs realizing the participants except for the cases where the NGs denote a class rather than an individual. But realizational exhaustiveness is influenced by the relation between the two participants in the clause regardless of the realizations of the participants. Another example is that in identifying the non-typical identifying processes and some of other process types) I compare the non-typical identifying processes with the typical identifying processes and the processes that they are easily confused with.

Therefore, taking a relative view in the research is essential and scientific.

#### **8.3 Implications for future studies**

The thesis has explored the grammatical characteristics, the semantic implications and the experiential and textual uses of identifying processes in detail. The relevant findings can be applied to pedagogy since identifying processes occur at a high frequency in the tutorial domain. For instance, one can take the textbooks from the different stages of education – primary school, middle school, high school and university – to examine the identifying processes in textbooks, and in this way identifying the dominant types and uses of identifying processes in each stage so as to find out a better way to help students acquire knowledge. Intuitively, it is thought that the identifying processes of making a definition occur at a higher frequency in the textbooks of middle school and high school and those demonstrating the content or findings of some researches occur at a higher frequency in university textbooks. However, this is only an intuition and needs to be supported by experimental studies. Such studies are believed to be helpful in improving teaching methods.

Apart from the application of the findings, the system of identifying processes is still open to expand. In Chapter Three, I have introduced the idea of indeterminacy and its relation to fuzziness and topology. In effect, indeterminacy has a close relationship with another concept, that is, language as a probabilistic system (cf. Halliday 2005, Halliday and Matthiessen 1999, Martin and Matthiessen 1990, Matthiessen 1995b, 2015). Central to the probabilistic system is 'choice', which leads to 'neutral' vs. 'marked' (cf. Halliday 1963) and 'favoured combination' vs. 'disfavoured combination' (cf. Matthiessen 2015). In the present study, both neutral identifying processes are those that show all the characteristics of a typical identifying process, and the marked ones are those that lack one or two of the characteristics. Seen from a different perspective, the neutral identifying processes are the ordinary identifying processes, while the marked ones are the predicative Themes, thematic equatives and identify statements taking a special structure. In regard of the

favored and disfavored combinations, I have discovered the favored combinations in identifying clauses such as the verbs of symbolization and indication foregrounding the extra-stratal realization relationship, processes realized by the verbs of indication easily confused with verbal processes, the experiential use of making a definition relating to the textual use of making an introduction in a taxonomic report, identifying clauses construing taxonomic relationship having the process realized by verbs of constitution, etc. More favored and disfavored combinations can be explored by corpus studies. For example, in some registers the identifying mode tends to combine with the intensive type, but in other registers the identifying mode may tend to combine with the possessive type or the circumstantial type.

In addition, other aspects of identifying processes remain to be probed into in future studies. A research worth expecting is in the interpersonal domain with the focus on mood and modality. Take imperative identifying clauses for instance, they show distinctive features from indicative ones. Compared with identifying indicatives, identifying imperatives occur at a much lower frequency of occurrence. One will see this by searching for the data in COCA. For simplicity, I only demonstrate the frequency of occurrence of two types of clauses – the negative imperative and the negative indicative. Both of them have *you* as Subject. I search for the negatives instead of the positives considering that if I searched for the positive unmarked imperatives in the corpus, i.e. [be the], I would get the indicatives containing *used to be the, is going to be the,* etc., apart from the imperatives. Therefore, I choose the negative unmarked cases, i.e. [do n't be the], to guarantee that all the results are imperatives.

1	DO N'T BE THE	24
1	YOU ARE N'T THE	48

Figure 8.2 Frequency of occurrence of [be the] and [do n't be the]

The negative indicatives are twice as many as the negative imperatives. The

difference is related to the commodity in exchange. According to Halliday and Matthiessen (2004), the indicatives are used to exchange information, and the imperatives are used to exchange goods-&-services. Exchanging goods-&-services concerns actions and is reflected in giving orders such as 'should do' or 'should not do'. Therefore, the imperatives are usually found in material processes. The meaning of exchanging information is much broader: The information can be the information of action, state, feeling, etc. Since identifying processes are processes of being, it is natural that they are construed more frequently in indicative clauses.

Apart from the interpersonal metafunction, one can also investigate the ergative aspect of identifying clauses in the experiential domain and the non-structural aspect of identifying clauses in the textual domain. The examinations in the three metafunctions will help expand the system of identifying processes.

# **Appendix 1**

The following pie charts show the distribution tendencies of the 37 verbs selected from COCA and the grouping of those which present a similar trend.



#### 1. become & remain



2. show, suggest, indicate, demonstrate, imply & mean







#### 3. include, involve & contain







#### 4. form, constitute & spell







#### 5. follow, cause & surround









6. represent, reflect, mark, imply & mean





7. exemplify, illustrate & instantiate







8. own, belong to, lack & deserve









#### 9. act as, function as & serve as







#### 10. add up to, equal & offset







## 11. realize



#### 12. outweigh, outlast & outrun



4%

13%

9%

13%



# **Appendix 2**

The Ostrich or Common Ostrich, (*Struthio camelus*), is one or two species of large flightless birds native to Africa, the only living member(s) of the *genus Struthio* that is in the ratite family. Some analyses indicate that the Somali Ostrich may be better considered a full species apart from the Common Ostrich, but most taxonomists consider it to be a subspecies.

<u>Ostriches share the order Struthioniformes with the kiwis, emus, rheas, and</u> <u>cassowaries</u>. It is distinctive in its appearance, with a long neck and legs and the ability to run at maximum speed of any bird. <u>The ostrich is the largest living species</u> <u>of bird</u> and lays the largest egg of any living bird (extinct elephant birds of Madagascar and the giant moa of New Zealand did lay larger eggs).

Ostriches usually weigh from 63 to 145 kilograms (140-320 lb). Ostriches of the East African race (*S. c. massaicus*) averaged 115 kg (250 lb) in males and 100 kg (220 lb) in females, while the nominate subspecies was found to average 111 kg (240 lb) in unsexed adults. Exceptional male Ostriches (in the nominate subspecies) have been weighing up to 156.8 kg (346 lb). At sexual maturity (two to four years), male Ostriches can be from 2.1 to 2.8 m (6 ft 11 in to 9 ft 2 in) in height, while female Ostriches range from 1.7 to 2 m (5 ft 7 in to 6 ft 7 in) tall. New chicks are fawn with dark brown spots. During the first year of life, chicks grow about 25 cm (10 in) per month. At one year of age, Ostriches weigh around 45 kilograms (100 lb). Their lifespan is up to 40 or 45 years.

The feathers of adult males are mostly black, with white primaries and a white tail. However, the tail of one subspecies is buff. Females and young males are greyish-brown and white. The head and neck of both male and female Ostriches is nearly bare, with a thin layer of down. The skin of the female's neck and things is pinkish gray, while the male's is blue-gray or pink dependent on subspecies.

The long neck and legs keep their head up to 2.8 m (9 ft) above the ground, and their eyes are said to be the largest of any land vertebrate – 50 mm (2.0 in) in diameter;

they can therefore perceive predators at a great distance. The eyes are shaded from sun light falling from above. However, the head and bill are relatively small for the birds' huge size, with the latter measuring 12 to 14.3 cm (4.7 to 5.6 in).

The skin varies in color depending on the subspecies, with some having light or dark gray skin and others having pinkish or even reddish skin. The strong legs of the Ostrich are unfeathered and show bare skin, with the tarsus (the lowest upright part of the leg) being covered in scales - red in the male, black in the female. The tarsus of the Ostrich is the largest of any living bird, measuring 39 to 53 cm (15 to 21 in) in length. The bird has just two toes on each foot (most birds have four), with the nail on the larger, inner toe resembling a hoof. The outer toe has no nail. The reduced number of toes is an adaptation that appears to aid in running. Ostriches can run at a speed over 70 km/h (43 mph) and can cover 3 to 5 m (9.8 to 16 ft) in a single stride. The wings reach a span of about 2 meters (6.6 ft), with the wings chord measurement of 90 cm (35 in) being around the same size as those of the largest flying birds. The wings are used in mating displays and to shade chicks. The feathers lack the tiny hooks that lock together the smooth external feathers of flying birds, and so are soft and fluffy and serve as insulation. Ostriches can tolerate a wide range of temperatures. In much of their habitat, temperatures vary as much as 40 °c (100 °F) between night and day. Their temperature control mechanism relies on action by the bird, which uses its wings to cover the naked skin of the upper legs and flanks to conserve heat, or leave these areas bare to release heat. They have 50-60 tail feathers and their wings have 16 primary, four alular and 20-23 secondary feathers.

The Ostrich's sternum is flat, <u>lacking the keel to which wing muscles attack in</u> <u>flying birds</u>. The beak is flat and broad, with a rounded tip. Like all ratites, the Ostrich has no crop and it also lacks a gallbladder. They have three stomachs, and the caecum is 71 cm (28 in) long. Unlike all other living birds, the Ostrich secretes urine separately from faeces. Combined in the coprodeum, they store the faeces in the terminal rectum. They also have unique pubic bones that are fused to hold their gut. Unlike most birds the males have a copulatory organ, which is retractable and 8 in (20 cm) long. Their palate differs from other ratites in that the sphenoid and palatal bones are unconnected. (Net. 10.)

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