DESCRIPTIONS IN CHINESE

NEW IMPLICATIONS FOR THE THEORY OF DESCRIPTIONS

BASED ON A STUDY OF LINGUISTIC DEFINITENESS

IN MANDARIN CHINESE

A THESIS SUBMITTED FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN THE FACULTY OF SCHOOL OF SOCIAL SCIENCES

UNIVERSITY OF MANCHESTER

2018

BY

YU GU

DEPARTMENT OF PHILOSOPHY

UNIVERSITY OF MANCHESTER

LIST OF CONTENTS

Word Count: 83, 091

LIST OF ABBREVIATIONS

ASP	Aspect	P73
CL/CLF	Classifier	P69
CONJ	Conjuctive	P88
DEM	Demonstrative	P222
D	Determiner	P12
DP	Determiner Phrase	P12
DUR	Durative	P99
IP	Inflectional Phrase	P137
MOD	Modification	P74
NP	Noun Phrase	P12
NEG	Negation, Negative	P90
Num	Number	P130
NumP	Number Phrase	P144
PFV	Perfective	P85
POSS	Possessive	P99
PRF	Perfect	P86
TOP	Topic	P79
VP	Verb Phrase	P77
1sg	First Person Singular	P246
3sg	Third Person Singular	P223

ABSTRACT

This dissertation defends a Russellian quantificational account of descriptions based on a systematic investigation of two types of definites in the article-less language of Mandarin Chinese.

Descriptions in the forms of *an F* and *the F* have been central to discussion in philosophy of language ever since Russell's (1905) milestone paper *On Denoting*. Russell proposed that these article-determined noun phrases in English should not be treated as referential expression, but instead as quantificational expressions. In other words, the logical form of the descriptive sentence 'the king of France is bald' is very different to the logical form of the sentence 'Russell is bald.' A sentential utterance containing a referential expression expresses a singular proposition that is about an individual as its direct constituent. A sentence containing a description, on the other hand, needs to be viewed as having a quantificational structure.

Russell's theory of descriptions has two central claims. First, a sentence containing a definite description in the grammatical form of 'the so-and-so' shares a similar structure to a sentence involving a quantifier phrase such as 'every so-and-so'. Second, the truth conditions of a statement with a definite description embedded in need to be analysed as containing a composition of the existential and the uniqueness quantifications.

A striking feature of cross-linguistic study is that only a minority of languages contain an explicit article system. Surprisingly little attention has been addressed to the question of what implications this has for Russell's (or opposing) philosophical theory of descriptions.

In this dissertation, I will draw on a detailed study of one of the most widely spoken article-less languages, Mandarin Chinese, to argue that Russell's philosophical insights still apply even in the absence of grammatically realised articles.

My conclusion will be that the debate concerns the semantics and pragmatics of definiteness is just as relevant in the article-less domain as it is for languages like English where it has traditionally been discussed. Furthermore, I argue that reflection on Mandarin expressions of definiteness support a Russellian quantificational theory of descriptions.

DECLARATION AND COPYRIGHT

I confirm that no part of the material contained in this thesis has previously been submitted for any degree in this or any other university. All the material is the author's own work, except for quotations and paraphrases which have been suitably indicated.

The copyright of this thesis rests with the author. No quotation from it should be published without her prior written consent, and information derived from it should be acknowledged.

YU GU

ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to my supervisor Dr. Graham Stevens for his academic support and guidance in this research project as well as for being a constant source of inspiration and encouragement over the course of the last five years. I came to Manchester in the autumn of 2013 to undertake a doctor's degree in Translation Studies with an inter-disciplinary specialisation in philosophical theories. One year later, my previous supervisor left the university and the possibility of continuing the Ph.D. project became unapproachable. Fortunately, Dr. Graham Stevens signed me up to his team and over the course of the first twelve months; I developed a keen interest in all things pertinent to the philosophy of language; Russell's philosophy, logic, meaning theories, formal semantics, analytic methods, and so on. Dr. Steven's influence can be found on every page of this dissertation. In fact, without his insightful suggestions, emphasis on clarity of arguments, and inspiring feedbacks, it would become an impossible task for me to write a dissertation based on Russell's theory of descriptions. The support of one's supervisor is central to completing a doctoral thesis and I could always rely on my supervisor Dr. Graham Stevens for this.

I am greatly indebted to my secondary supervisor Dr. Martina Faller. I treasure the attention and support she has given me. Her professional advises had a deep impact on my thinking about the subject matter in my studies. Many of the ideas regarding the data analysis as well as arguments developed and defended in this dissertation are learned from my conversations with Dr. Faller. The valuable comments and substantial feedbacks she provided resulted in significant improvements of various sections of the dissertation.

I am thankful to all faculties and graduate students of the Department of Philosophy. Over the years, conversations with them have also had an enormous impact on my thought and work. I am especially grateful to Prof. Thomas Uebel who allowed me to sit in his History of Analytical Philosophy classes. His inspirational lectures broadened my view on the current state of the discipline along with the standard outline.

I take the opportunity to thank Ann Cronley who works as the Postgraduate Research Administrator in the School of Social Sciences. Her heartfelt words warmed my heart and her professional working style effectively prevented excessive exchanges among administrative bodies and thus saved me from any extra work during the hard time of my life.

Perhaps most importantly, I would like to thank my family: my Mama Zeng Liping, my Jiejie (elder sister) Gu Yu, my Gege (elder brother) Yang Jie, and my partner San Tou. Their support and encouragement has been an eternal source of peace and power for me to sail through the frantic, and sometimes very lonely, journey of Ph.D. life. I always knew I could rely on them to be there for me, and this gave me the strength to keep going.

DEDICATION

To the memory of my father

Gu, Cheng-Fu

(1939-2017)

INTRODUCTION

The study of descriptions has been a central part of debate in philosophy of language since Russell's (1905) seminal work *On Denoting*. In *On Denoting*, Russell analysed the English phrases starting with *the* as belonging to the same semantic category with denoting expressions with forms like *no man, some man, a man,* and *every man.* According to this analysis, definite descriptions (*'the F'*) and indefinite descriptions (*'an F'*) are devices of *quantification* rather than *reference*.

Two of the most important objections against this theory are those arising from Straswson's (1950) referential account and Donnellan's (1966) attributive/referential distinction. Strawson (1950) argues that once considering the fact that definite descriptions are used regularly and consistently to refer in English, one has to endorse a referential account of descriptions. For example, in the case of a sentential utterance containing an incomplete description such as *'the table is covered with books'* in a context where more than one table exists, on Russell's theory, the sentence expresses a false proposition due to the uniqueness failure in the quantification of the definite description. However, it is possible that we can take the utterance as expressing a truthful statement in some occasions in daily communications. The Russellian truth-conditional prediction in this case seems yield a contra-intuitive result. Strawson (1950) therefore accused Russell's theory as being inadequate to account for such sentences containing a referential use of definite descriptions.

Through this observation of referential uses, Donnellan (1966) argued that definite descriptions are better characterized as having two distinctive uses; one referential and one attributive or quantificational. The ambiguous account is endorsed widely since Donnellan's (1966) Distinction. However, as Kripke (1977) has stressed, the referential use of definite descriptions does not lead to a direct analysis of semantically referential interpretation of these expressions. Implementing a Gricean semantic and pragmatic distinction, a modified Russellian theory of descriptions drawing upon works from Kripke (1977) and Neale (1990, 2004, 2005) provides a plausible non-semantic analysis of

referential descriptions. The modified Russellian theory argues that the semantics of descriptions is always quantificational, but a speaker can employ a definite description as a device of reference through the accompaniment of various pieces of pragmatic machinery. In contrast to this modern Russellian quantificational theory of descriptions, Kaplan (1970, 1979, 1989a, 1989b) and Devitt (1981, 2004, 2007a) defend a semantic ambiguity account by arguing that there is a linguistic convention in natural language discourse for using definite descriptions referentially, and this referential convention must be considerd as grounding in semantics.

The explanation for why disagreement over this particular semantic analysis should be elevated to such prominence is partly down to the applications Russell's theory has been given outside of semantics. The analysis of definite descriptions was part of a wider theory of the semantics of a (restricted) class of determiner phrases that Russell took to have profound implications for metaphysics, epistemology, and mathematical logic. Within philosophy of language, the prominence of the theory is explained by the way it raises concerns in several areas of far wider significance such as the interface between semantics and pragmatics, syntax and semantics, and the relation between formal languages and natural languages.

Given the extraordinary prominence granted to the theory in the last century of philosophical discussion, it is often overlooked that many languages do not contain definite descriptions in the form most commonly discussed in the above debate because those languages lack definite (and indefinite) articles. Nonetheless, the lack of articles does not entail an absence of definiteness in those languages. Little work has been directed at exploring the relation between the ways in which definiteness is achieved in languages without articles and the expression of definiteness through the use of the definite article. This is surprising as cross-linguistic comparisons often provide data that can be revealing about the semantic profile of certain expression types.

In this dissertation, two prominent definite expressions in Chinese will be investigated. Bare nominals can occur freely in argument positions in Mandarin and are able to obtain a definite reading. Demonstrative phrases, apart from their deictic uses as a complex demonstrative containing a bona

fide demonstrative determiner, are able to be used as direct translations of English definite descriptions. Take Russell's famous sentence 'The king of France is bald' as an example, there are two sentence structures in Mandarin can be described as the representation of the sentence containing the definite description 'the king of France.'

'The king of France is bald.'

1.   Faguo   guowang   shi   tuzi.

      France king   be   bald.

2.   Faguo   de   na   wei   guowang   shi   tuzi.

      Fance   Mod   that   Cl.   king   be   bald.

Both sentences are considered as felicitous translations to Russell's example sentence in English. In the first sentence, a bare noun is used as the translation of 'the king of France' and in the second sentence, a low-attached demonstrative phrase is applied to express the definite reading of the phrase.

Current available theories suggest that definiteness expressed both structures is achieved by a referential mechanism. The definite reading of the bare noun can be explained through distributional features in syntax; such that the topic position of the bare noun guarantees the referentiality of the phrase (Li, 2013). The use of the demonstrative phrase is characterized through a familiar account of definiteness (Jenks, 2015 and 2017). These theories would obviously lend strong support for the referential analysis as well as for the ambiguity account of definite descriptions. However, through the examination of the Mandarin data, this dissertation shows that it is not as straightforward. In fact, this dissertation provides an illustrative overview on how Russell's quantification account is available to capture a wider range of data in the article-less language of Mandarin. Both the bare noun and the demonstrative phrase of 'the king of France' in Chinese can be explained by the quantificational account. The quantificational analysis of bare nouns in Chinese will be explored in Chapter three; and in Chapter four, a detailed discussion on the quantificational reading of low-attached demonstrative phrases will be provided.

The design of the disseration is as the following.

In Chapter one, the quantificational versus referential debate on the semantics of the definite description is outlined. The chapter sets as the background for the analysis developed in this dissertation. At the same time, by reviewing the arguments from both sides, as well as the challenges from the ambiguity account, Chapter one sets out the semantic framework of the Russellian quantificational theory of descriptions.

Chapter two first lays out the language features that are essential to the talk of definiteness in the article-less language of Mandarin. I argue that two syntactic constructions of the noun phrase in the forms of [yi 'one'+ Cl+N] and [Cl+N] can be viewed as indefinite descriptions in the language. I adopt Ludlow and Neale's (1990) method in their analysis of English indefinite descriptions to provide a quantificational account on the semantics of the Chinese indefinite descriptions. I maintain that even though Chinese indefinite descriptions can have specific, definite and referential uses in daily communications, their semantics needs to be analysed within the Russellian framework.

Definite descriptions undoubtedly form the core device of reference management in natural languages. In terms of definite descriptions in Mandarin Chinese, two types of expressions can be found in the language such that they take up the function of definite descriptions. The first type takes the form of bare nouns. Since there is no over definiteness and number marking in the language, Mandarin bare nouns can occur freely in argument positions and obtain a definite reading. The second type of definite expressions that is comparable to an English definite description is in the form of complex demonstratives.

Chapter two also explores current available theories in the literature argue for an ambiguity account of definiteness in article-less languages like Chinese. For example, Jenks (2015 and 2017) assumes that in Mandarin definite bare nouns are used for the situations where the definiteness is licensed by uniqueness conditions, on the other hand, demonstrative phrases can only be used for familiarity triggered definite situations. However, my investigation into the two forms shows that the picture is in fact far more complicated.

Chapter three focuses on the analysis of bare noun definites in Mandarin. I argue that Russell's quantificational account is able to capture the semantics of at least three distributional types of definite bare nouns, namely, bare nouns in left-periphery positions, bare nouns as derived topics and bare nouns in the subject positions.

In Chapter four, the semantics of demonstrative phrases in the language has been explored. Since no article-like determiners can be found in Mandarin, it is presumable that demonstratives take up some functions of the definite article in the language. The assumption directly implies an ambiguity account of complex demonstratives in semantics in the language.if follows the ambiguity view, one could possibly assume that some demonstrative phrases in Chinese are bona fide demonstrative expressions that takes the direct reference in context as their semantic values. On the other hand, some other expressions in the form of a demonstrative phrase are in fact definite descriptions in the language. In this chapter, I argue against the ambiguous thesis. I follow King's (2001) and Stevens' (2011) analysis on English complex demonstratives as related to the function of quantication and argue that Mandarin complex demonstratives are better characterized accordingly.

CHAPTER ONE   DESCRIPTIONS

1. Descriptions in English

What are descriptions? According to Russell, descriptions take simple forms in English. Any syntactic constructions in the form of an *article* plus a *noun phrase* can be labelled as a *description*.

A 'description' may be of two sorts, definite and indefinite (or ambiguous). An indefinite description is a phrase of the form 'a so-and-so', and a definite description is of the form 'the so-and-so'.

(Russell 1919, p. 167)

In Russell's categorization, the non-lexical determiners *the* and *a/an* are the key syntactic markers of description-type Noun Phrases (NPs) in English; and the NPs started with the two articles are respectively split into two groups: the definite description and the indefinite description. Accordingly, *the syntactic definition* of descriptions can be illustrated as follows[1]:

Indefinite Descriptions: *NPs in the form of [a/an+N]*

Definite Descriptions: *NPs in the form of [the+N]*

In virtue of the syntactical definition, the expressions of (a) and (b) are indefinite descriptions; the phrases in (c) and (d) are definite descriptions; whereas (e) and (f) are neither indefinite nor definite descriptions.

   a. A philosopher

   b. An expert in the field of philosophy of language

   c. The philosopher

---

[1] Following Abney (1987), many theorists hold that both definite and indefinite descriptions are determiner phrases (DPs) whose head nods are occupied by the determiners *the* and *a/an*. It is not intended for this dissertation to participate in the *DP/NP* debate. I take the viewpoint; however, to argue that it is the DP theorists' burden to prove that the article-less language, such as Chinese, project the full DP structure in the nominal constructions.

d. The distinguished professor in the graduate centre

e. Every logician

f. Saul Kripke

As demonstrated in the above, Russell's original classification seems irrelevant to the lexical contents of any given phrases. At first sight, it seems that the definition only takes into account of the obligation of a definite or indefinite article in the syntactic formation of the NPs; but not concerning with the semantics of *'a/an'* and *'the'*. Therefore, under the syntactic definition, any phrases initiated with phonologically distinct items but have the same semantic contents of *'a'* or *'the'* would not be counted as a description.

g. Some linguist

h. My brother

i. John's sweaters

None of the above satisfies Russell's grammatical classification. However, even though it is not explicitly expressed, it can be confirmed through literature that Russell (1905) takes the phrases such as (g) to be semantically equivalent to an indefinite description; and (h) and (i) to be equivalent of definite descriptions. Hence, adhere to Russell, the definition of descriptions he proposed contains both the syntactic and semantic concerns. Hence, the definition of descriptions in English can be modified as the following.

The modified definition

Indefinite Descriptions:

Indefinite NPs functionally modified by the indefinite article and their semantic equivalents in other syntactic forms.

Definite Descriptions:

Definite NPs functionally modified by the definite article and their semantic equivalents in other syntactic forms.

The above definition can be analyzed as containing three phrases. First, it syntactically stipulates descriptions from other forms of noun phrases as the syntactic definition does; and at the same time, it relates the indefinite and definite attribution functions of articles to the NPs they modified. Thirdly, it allows the phrases modified by other determiners that have same semantic readings to be included in the categorization of descriptions.

It needs to be noted that the revised definition is not contra to Russell's original classification but a fuller presentation of it. A key proposal from Russell (1905) is that the surface grammar of the natural language can be misleading and consequently a bad guide for philosophers. On Russell's (1905) view, surface grammar misrepresents the logic grammar of propositions. Therefore, at the initial stage, it is necessary for Russell to clearly define the grammatical forms of descriptions, for the purpose of an efficient contrast with their semantic categorizations. The modified definition in the above certainly keeps the consistency with Russell by preserving the content-independent feature of descriptions.

Secondly, it is illusory to maintain that Russell's syntactic notion of descriptions prohibits us to view any semantic equivalent expressions with different syntactic formations as belong to the same semantic category with descriptions. If we limit our choices of descriptions austerely on grammar only, we may reach to a narrow and fallible conclusion that languages without article determiners do not have definite and indefinite descriptions. In fact, the term of 'descriptions' needs to be understood as having a wide application cross-linguistically such that it encompasses all expressions having 'description' semantic features, even for those forms that do not contain an article, as expressions can be found in an article-less language.

According to the modified definition of descriptions, two principles are considered as essential in locating descriptions across languages. The first concerns the syntactic formation of the phrase. Although not all descriptions are in the forms of articles plus NPs, however, in any language that has

an English-like article system, it can be asserted that all the NPs functionally modified by an article (translation of an English article) can be considered as under the same categorization as the English descriptions. In a language that lacks an article system, to define the notion of descriptions purely at the level of grammatical equivalence is implausible. Therefore, in these languages, characterization of descriptions needs to rely on the formal analysis of the underlying semantics. Descriptions thus are defined as the following cross-linguistically.

The cross-linguistic definition of descriptions

Indefinite Descriptions:

Indefinite NPs functionally modified by the indefinite article, their functional equivalents, and/or their semantic equivalences in other languages.

Definite Descriptions:

Definite NPs functionally modified by the definite article, their functional equivalents and/or their semantic equivalences in other languages[2].

2. Russell on Denoting

2.1   The Theories of Descriptions before Russell's (1905) On Denoting

In the Fregean tradition of logic analysis, definite descriptions in the forms of 'the so-and-so' are classified as belonging to the same categorical type of *Names*. Following this characterization, both names and definite descriptions are singular terms whose main function is to *refer to* or *name* a particular object or individual in the world. If a meaningful sentence contains a singular term as its logic subject, then the truth-conditional meaning of the proposition it expressed depends upon the semantic value of the singular term. The semantic value of a singular term is identical with the direct reference it bears. Therefore, the meaning of the proposition with a singular term needs to be analyzed base on the referent entity that the singular term picks out. Such a proposition is an object-dependent

---

[2] Weak definites, for example, fall into the category of definite for the reason that they take the grammatical form of 'the+N'.

proposition, which means, for the proposition to have meanings, the singular term cannot fail to refer (Neale, 1990; Stevens, 2011). For example, given a sentence S contains a singular term b, for S to express a meaningful proposition; b has to pick out a determinate object in the world. If b fails to do so; then S fails to express a determinate true or false proposition.

As illustrated in (1), if taking the definite description 'the winner of Nobel Prize in Literature of 2017' as a singular term b, it can be concluded that the sentence S expresses the following:

(1)   The winner of Nobel Prize in Literature of 2017 is British.

    Proposition expressed: b is British.

The truth value of S is determined by the truth value of b together with the descriptive predicate '*is British'*.

    S is true *if and only if* 'the referent of b is British'.

As a matter of fact, the winner of Nobel Prize in Literature of 2017 *is* Kazuo Ishiguro who is a professional writer of British nationality, and therefore the singular term successfully picks out an individual in the world which satisfies the descriptive content of being British in the proposition.

    $b=$ Kazuo Ishiguro (the individual in actual world)

Since b is British is **true** (the individual referred by the description is British)

Hence S is **true** (it is true that 'the winner of Nobel Prize in Literature of 2017 is British')

However, it is not always the case that a definite description (or even a name) successfully picks out an individual under all circumstances. In fact, a consequence of this singular-term theory of descriptions is that it yields unwelcome results in defending a truth-conditional semantics when there is an empty description which refers to nothing, such as, *the king of France* or *the round square*, occurs in a grammatically well-structured sentence.

(2)   The king of France is an imaginary character.

(3)   The round square is a self-contradictory geometrical object.

If we take the phrases *the king of France* or *the round square*, as singular terms, then they stand for nothing. No individual or object in the actual world can be said to fit into the descriptions. Since both expressions fail to pick out any existing object, in other words, there is no king of France in present days and the round square never exists, it then forces us to make a choice from the following two options in determining the meanings of the sentences. First, we could admit that there is no definite truth-conditional meaning can be stated for (1) and (2). Second, we could take the above two sentences as intuitively true; by adopting our world knowledge that it is possible to imagine a character to be the king of France and nevertheless, the round square is a self-contradictory geometric type of thing. The first option leads us to diminish a well-functioned truth-conditional semantics; and since the second choice postulates the true readings of these sentences, it subsequently posits the existence of these non-existing objects.

Previous to the presentation of Russell's (1905) theory of descriptions, there were a few methods the philosophers use in dealing with this problem caused by empty descriptions. Frege's (1892) solution to the problem is to introduce the notion of *Sense* into the interpretation of propositions. According to Frege's theory, a definite description in the appropriate syntactic form always has sense; and in most cases, it has reference too. Therefore, even though the above empty descriptions do not have ordinary references, they are informative and are able to contribute sense to the contents of the sentences. The sense of an expression is separated from the reference of an expression in the following ways. The reference of an expression is the actual object that corresponding to it. The sense of an expression is the cognitive content or mode of presentation that attached to the expression in virtue of the reference it picks out (Zalta, 2017). As shown in Frege's example of 'the morning star' and 'the evening star', both the expressions have the reference to the planet Venus, yet the two expressions denote Venus in virtue of its different properties. The two expressions therefore carry the same *reference* but different

sense. Sense is normative and constitutes a normative constraint which determining the usage of the expression. Reference, however, does not determine sense. Expressions with same reference can differ with respect to sense. It is possible for the speakers to know the sense of an expression without knowing the reference it has (Miller 2007, p. 43). Equipped with Frege's notion of sense, it is open for one to draw the conclusion that even though the singular terms in the above sentences fail to refer, the speakers can grasp some thoughts about the propositions[3].

Another solution to this problem raised by empty descriptions is to ontologically accept the existence of the Meinongian non-existent entities (Morris, 2007). The logic behind this theory is that singular terms never fail to refer. In the cases where the referent seems not exist, it may be the case that they simply do not exist in the normal form but exist in some other forms of being. One sketchy interpretation of Meinong's ontology (1904) is that existence comes into different forms such that even the non-existent objects can be said to have certain ontological status of being[4]. Meinongism theorists would propose that grammatically well-formed definite descriptions cannot fail to refer because they always stand for some objects. Follow this idea, the objects denoted by *the king of France* and *the round square* exist by taking a variant form of existence other than normal objects in the world, such as, *the queen of England* and *the round circle*. The Meinongian ontology, with this method, provides grounds for ascribing reference to the empty descriptions.

It is worth pointing out that Russell (1903, p. 43) in his earlier work of *Principles of Mathematics* also preserved the semantic referential view of definite descriptions. One interpretation of his theory is that he holds definite descriptions act like singular terms and empty descriptions refer to concepts. He (1905) later came to reject this particular view in *On Denoting*.

---

[3] Frege holds that both names and definite descriptions have senses. Russell rejected the notion of sense postulated by Frege. In OD, Russell (1905, p. 487) described Frege's theory of reference and sense as 'inextricable tangle 'and 'wrongly conceived.' Further argument in Russell's avoidance or rejection to Frege's sense can be found in the discussions of Searle (1958); Blackburn and Code (1978); Carney and Fitch (1979); and Noonan (1996).

[4] It needs to be pointed out that the interpretation and acceptance of Meinong's ontology is not unanimous among philosophers. It is especially arguable that whether the presentation of Meinongian style arguments in Russell's *On Denoting* (1905) is truly a claim that Meinong's ontological followers will commit to. As Kripke noted: "sometimes I have wondered whether Meinong (at least the Meinong of 'On Denoting') was an imaginary figure invented by Russell, who was so upset that he did not really exist that he invented a doctrine that even beings like him have some weaker form of existence" (2005, 1015).

In *On Denoting*, Russell (1905) presented a novel theory of descriptions to replace his older version of treating descriptions as denoting concepts. The new theory provides meaningful analysis of propositions containing empty descriptions without compelling to Frege's notion of *Sense* (Searle, 1958; Carney and Fitch, 1979; Daly 2013); or committing to the ontological existence of Meinongian non-beings[5].

To sum up the discussion at this stage, the view of definite descriptions are *singular terms* can be defined as the followings.

i.   Definite descriptions and names (and demonstrative phrases) belong to the same logical type of terms.

ii.   Definite descriptions are fundamental referential expressions and within modern compositional semantic frameworks, they exhibit the form of reference captured by the semantic type *e*.

iii.   Definite descriptions stand for individual objects.

iv.   The semantic values of definite descriptions are identical with the objects they stand for.

---

[5] As pointed out by Hylton (1998) and Stevens (2011), Russell's 1903 theory of denoting concepts would successfully solve the problem of emptiness without further committing to the Meinongian ontology. Taking the aim of this research and the length of this dissertation in consideration, I will not include a detailed comparison between Russell's 1903 theory of *denoting concepts* and Russell's 1905 *theory of descriptions.* The gist of the differences can be generalized as follows:

The Meinongian intuition:

Since   'The king of France is bald' expresses a proposition.

Hence1 'The king of France' is a meaningful expression.

Hence2 'The king of France' exist.

The 1903 theory of denoting concepts accepts the interpretation of *Hence1* but breaks the linkage from *Hence1* to *Hence2* by claiming that the reference of the description is a 'denoting concept'.

The 1905 theory of descriptions, in contrast, proposes that the description is an incomplete symbol which itself contains no meaning. Therefore, the correspondence between the original sentence and *Hence1* is disrupted.

At least two problems are promoted in relation to the ontological implications contained in this referential view of definite descriptions. As explained above, the first problem concerns the ontological status of objects referred by empty descriptions. The second problem derives from the first one and concerns how we should assign truth-values to those propositions containing empty descriptions. It is generally agreed that the motivation for Russell's theory of description is founded upon providing solutions to these problems (Daly, 2013; Ludlow, 2013; Miller, 2013; Morris 2007).

2.2   On Denoting

Russell (1905), with his novel theory of descriptions, abandoned the singular term analysis of definite descriptions. Instead of treating them as semantic referential expressions, he distinguished them from the logical type of singular terms and analyzed them as incomplete symbols. The underlying semantics of incomplete symbols is quantificational; and their meanings need to be determined through the propositional functions that they attached to. The following sentence is the well-known example from Russell (1905)'s *On Denoting*.

 (4)   <u>The king of France</u> is bald.

It is clear that the sentence expressed something about *the king of France* yet the definite description has no referring object in the real world. Russell (1905) thinks that, in this sentence, even though the definite description *the king of France* takes up the grammatical subject position, it is not the logical subject for the proposition. The phrase itself is incomplete in meaning such that its semantic value needs to be analyzed together with the propositional function it attached to. The proper analysis of the definite description in the proposition expressed by (4) involves the following quantifications:

    i.   There is a king of France.

    ii.   There is a unique king of France.

    iii.   The individual is bald.

Under this framework, since the existential quantification (i) failed (due to the fact that there is no king of France in present days); the meaning of the proposition will be false.

In Russell's (1905) novel theory of descriptions, the illusion of definite descriptions being referential is demolished. Russell re-classified definite descriptions into the category of denoting phrases. Denoting phrases include quantifier phrases such as expressions start with *all* or *some*. In contrast to singular terms, denoting phrases *denote* rather than *refer*.

'By a "denoting phrase" I mean a phrase such as any one of the following: a man, some man, any man, every man, all men, the present King of England, the present King of France, the centre of mass of the Solar System at the first instant of the twentieth century, the revolution of the earth round the sun, the revolution of the sun round the earth. Thus a phrase is denoting solely in virtue of its form.'

(Russell 1905, p. 479)

Denoting phrases do not carry any object as their reference; instead, they function as quantifiers whose contribution to the proposition does not depend upon any particular individual they denote (Stevens, 2011). As a species of denoting phrases, definite descriptions do not refer. The proposition expressed by sentences containing definite descriptions is a general proposition. A general proposition is not about any particular object (Fitch and Nelson, 2014).

Through this method, Russell can now solve the two problems mentioned in the above sessions caused by empty descriptions. First, the definite description in (4) is an incomplete symbol and the proposition expressed is a general proposition. Second, since the existential quantification fails, it can be determined that the proposition expressed is false.

Another problem for the direct referring theory of definite descriptions can also be solved if adopted Russell's new account.

(4)   The king of France is bald.

(5)   The king of France is not bald.

The readings of the above two sentences are proved to be tricky for a theorist who holds that definite descriptions are singular terms. Even though she may take up the ontological view that *the king of France* refers to some shadowy figure that exists in certain ontological status, it is clear that the figure

cannot be found in either the list of physical objects that are bald or the set of non-bald objects (Russell, 1905, p. 485). The readings of the sentences in the above pair are noticeably problematic. Nevertheless, the Law of Excluded Middle entails that either (4) or (5) must be true in its reading.

Russell's theory of definite descriptions successfully provides solutions to this puzzle. The quantificational thesis enables a truth value to be assigned for (4). As illustrated in previous contents, sentence (4) is simply not true because there is no king of France existing in the actual world. The reading of (5) is treated as being ambiguous. According to Russell, the sentence can be interpreted in two ways.

(6)   The king of France is not bald.

(7)   It is not the case that the king of France is bald.

Following Russell's analysis, sentence (6) remains to be false. The analysis of (6) follows the same procedures of the sentence (4). The failure for the existential quantification to capture any individual in the world entails the false reading of the entire statement. But sentence (7) is true by virtue of its implication that there is no king of France (Russell, 1905, p. 490). In (7), the negation operator scopes over the existential quantification, in which case the interpretation of the entire sentence is judged as true. The reading of the sentence is interpreted as that the king of France does not exist. The scope-relations enabled by the quantificational analysis of definite descriptions solve the problem of empty descriptions without compelling to the acceptance of Meinongian non-existent beings; and at the same time, retains the Law of Excluded Middle, which is a positive result for Russell's account.

The quantificational account of definite descriptions also solves the problem of the substitution of identicals. Russell (1905, p. 485) presented the problem as the following:

'If *a* is identical with *b*, whatever is true of the one is true of the other, and either may be substituted for the other without altering the truth or falsehood of that proposition. Now George IV wished to know whether Scott was the author of Waverley; and in fact Scott was the author of Waverley. Hence we may substitute "Scott" for "the author of Waverley" and thereby prove that George IV wished to

know whether Scott was Scott. Yet an interest in the law of identity can hardly be attributed to the first gentleman of Europe.'

<div align="right">(Russell 1905, p. 485)</div>

Russell's presentation can be re-interpreted by using the Nobel Prize Winner example mentioned beforehand. Take sentence (8) as an example:

(8)   The winner of Nobel Prize in Literature of 2017 is Kazuo Ishiguro.

The singular term theory of descriptions allows both the definite description and the proper name to be equal in their values for the reason that they both pick out the individual in the world. Suppose the definite description *'the winner of Nobel Prize in Literature of 2017'* is a referring expression *b* and the proper name 'Kazuo Ishiguro' is *b'*, then both *b* and *b'* have the same referent, who is Kazuo Ishiguro; such that *b=b',*

> *b=* Kazuo Ishiguro
>
> *b'=* Kazuo Ishiguro

The singular term theory of definite descriptions indicates that when the subject expression of (8) is replaced by the proper name that bears the identical referent; in theory, the substitution would not alter the meaning of the statement. However, when replaced the definite description with the proper name, an uninteresting statement of *'Kazuo Ishiguro is Kazuo Ishiguro'* is formed. Different to the sentence '*the winner of Nobel Prize in Literature of 2017 is Kazuo Ishiguro'* which is true and interesting, the statement made by the substitution of identicals becomes insignificant.

Russell's solution is to assert that the substitution cannot take place in the first place. The original statement made in (8) containing a definite description is not *about* a person called Kazuo Ishiguro. Instead, it includes a claim about the unique existential property of the winner of Nobel Prize in Literature of 2017 and the individual who fits into the descriptive contents. Unlike the proper name that has a determined referent as the individual, the definite description *denote*s the individual. So

Russell's quantificational account of definite descriptions illustrates the difference between the definite description and the name and subsequently prevents the substitution to take place in practice.

Russell (1905) adopted the technical term of 'denoting' to describe the major role a definite description plays in contributing to the constituent of a proposition. Denoting phrases do not refer and they do not have any references if analyzed in isolation.

The novel theory of descriptions presented in *On Denoting* replaced Russell's (1903) earlier theory of denoting concepts and marks a radical shift in Russell's approach to the ontological commitments of propositions and to all denoting phrases (Hylton, 1998). In the previous points of view, Russell considers the propositions as abstract entities that contain concrete objects as their constituents. These concrete objects contribute to the propositions by direct referring expressions such as definite descriptions and all those individual-denoting expressions. What need to be concentrated in philosophy are the studies of these objects, the propositions and the relation between the propositions and the constituent objects.

In the new theory of descriptions, Russell (1905) eliminated the concept of 'denoting concepts' and pointed out that although the surface grammar of these phrases apparently corresponds them with singular terms, they do not refer to any concept or object but contain complexed logical quantifications. The surface grammar is hence realized to be misleading in the logical analysis of propositions. In *On Denoting*, Russell (1905) rejected the congruence between grammatical forms and logical forms and warned us that the superficial grammatical forms of language are deceptive. Since there is no assumed parallel between the logical grammar and the surface grammar, Russell (1905) comes to the view that it is an important task for philosophers to clearly distinguish the logical forms of the propositions that are masked by the surface grammar of the sentences. This practice is so important to Russell (1918, p. 111) that he stated 'Philosophy…becomes indistinguishable from logic'.

Whether it is intended by Russell in proposing this account, his distinction of logic forms from grammatical forms inevitably stressed the importance of words and sentences themselves in the heart of philosophical research. After On Denoting, it is widely accepted by the philosophers that language itself is of primary concern in philosophical studies (Hylton 1988).

The significance of Russell's denoting theory is unarguably ontological related; in the sense that non-existent beings are eliminated; as well as the Fregean concept of sense is removed. However, it needs to be emphasized that in the broad sense, the theory carries strong epistemologically importance; that is, the understanding of a sentence does not always require the speaker's acquaintance with the subject matter in the sentence.

Suppose in the situation that the sentence '*the F is G'* is true, its truth value entails that there must be a unique *F* which satisfies *G*. The existence of this unique *F* is confirmed by the truth conditions of the proposition. The existence of *F* is, by all means, irrelevant of whether the speaker (or the hearer) is acquainted with this denoted object or not. For example, it is not required for a person to hold the belief of identifying a particular individual to understand the proposition of '*the fastest runner in the world exists*' to be true. This epistemological insight connects closely with Russell's theory of *knowledge by acquaintance* and *knowledge by description*. The knowledge by description allows a person knowing of a particular object outside the scope of one's own experience.

This claim of Russell's is essential in the investigations of various uses of definite descriptions in natural languages. It needs to be emphasized here that Russell's claim of knowing without previous acquaintance directly demonstrates that definite descriptions can be used in introducing novelty into the linguistic contexts. This claim, although never overtly stated by Russell, undeniably recurs throughout Russell's presentations. In contrast, Strawson's (1950) refutation to this novelty-presenting property of definite descriptions revealed his standpoint of lining up with the familiarity theorists who insist that definite descriptions consistently function as tokens of familiarity or identifiability in linguistic exchanges.

2.3   The Theory of Descriptions

The gist of Russell's (1905) theory of descriptions is that descriptions are quantifier phrases rather than direct referring expressions. Descriptions are respectively referred as *the indefinite description* and *the definite description* through the grammatical forms they take as *'a so-and-so'* and *'the so-and-so'*. For example, sentence (9) contains an indefinite description *a man*.

(9)   A man is at your doorstep.

The logic presentation of such a statement can be displayed as in (i).

    (i)   An *F* is *G*.

Claim 1:   There is an individual *x* which is *F*

Claim 2:   *x* is *G*

or in predicate logic: $\exists x\,(Fx \land Gx)$

Applying the analysis to sentence (9), the proposition it expressed would be: *there is at least one x such that x is a man and x is at your doorstep.*

Suppose that the man mentioned in (9) who is at the hearer's doorstep is, in fact, John, it is then felicitous for the speaker to utter (10).

(10)   John is at your doorstep.

According to Russell (1905), the assertions that the speaker made by uttering (9) and (10) are very different. In (10) a particular individual referred as 'John' is involved in the proposition. The assertion that the speaker made in the sentence (9), however, contains the existential quantification of such a man bearing the property of being at the doorstep at the time of utterance. Therefore, even though the reading of *a man* denotes the same individual that the proper name *John* refers to in this context, the semantic analysis of the indefinite description is not identical with the proper name.

The following sentence (11) contains a definite description.

(11)   The father of Charles II was executed.

Correspondingly, the formal presentation of a proposition of (11) is as the following.

(ii)   The *F* is *G*.

Claim 1: there is an individual *x* which is *F*

Claim 2: for individuals *y* such that y is *F*, if *y* is *F*, *y* is identical to *x*

Claim 3: *x* is *G*

or in predicate logic: $\exists x\,(Fx \wedge \forall y\,(Fy \rightarrow y=x)) \wedge Gx$

Apply to the analysis of (11), the sentence contains three quantificational claims.

(11)   The father of Charles II was executed.

i.   It is not always false of *x* that *x* begat Charles II

ii.   For individuals *y* , if *y* begat Charles II, *y* is identical with *x*

iii.   *x* was executed.

In plain language, the sentence expresses that 'there is a unique person who fathered Charles II, and whoever fathered Charles II was executed'.

The analysis equally applies to the definite descriptions with empty denotations, for instance, sentence (4) is analyzed as the following:

(4)   The king of France is bald.

i.   There is at least one king of France

ii.   There is at most one king of France

iii.   And the king of France is bald

In predicate logic: $\exists x \, (F(x) \, \& \, \forall y (F(y) \rightarrow y=x) \, \& \, B(x))$

Considering the truth-conditions for the proposition contains an empty description, it is clear that the statement fails to be true for the reason that the existential quantification is not satisfied in this case.

The analysis of the negation of this sentence can now be easily displayed with scopes.

(5)   <u>The king of France</u> is not bald.

(5') $\exists x \, (F(x) \, \& \, \forall y \, (F(y) \rightarrow y=x) \, \& \, \neg B(x))$

(5'') $\neg \exists x \, (F(x) \, \& \, \forall y \, (F(y) \rightarrow y=x) \, \& \, B(x))$

Follow the standard analysis of empty descriptions, (5') yields a false reading due to the denotation failure. In (5''), with the negation scopes over the entire logic units of the expression, the logical form states that it is not the case that an individual exists such that the individual is both the king of France and being bald.

(12)   George IV believes that <u>the writer of Waverly</u> is Scottish.

Sentence (12) is ambiguous between the *de re* reading in which George IV believes some particular individual and that he is Scottish (with the possibility of not knowing this individual is the writer of *Waverly*); and the *de dicto* reading in which George IV believes that whoever the writer of Waverly is, he is Scottish. Russell's theory captures both readings and the different interpretations are displayed as structural ambiguity.

De re: $\exists x \, [\text{Waverly-writer}(x) \, \wedge \forall y \, [\text{Waverly-writer}(y) \rightarrow x=y] \wedge \text{George IV believes that}$
           $\text{Scottish}(x)]$

De dicto: George IV believes that $\exists x \, [\text{Waverly-writer}(x) \, \wedge \forall y \, [\text{Waverly-writer}(y) \rightarrow x=y] \, \wedge$
           $\text{Scottish}(x)]$

In summary, Russell's theory distinguishes the *de re* and the *de dicto* readings by means of defining the scopes of the relevant quantificational components in the proposition to the negation operator.

The property of being able to interact in scopes with propositional attitude operators is an essential criterion on deciding definite descriptions as quantifiers in natural language analysis. It is a predominant key factor that distinguishes definite descriptions from direct referring expressions. Direct referring expressions, proper names for example, always take wide scope when embedded in propositional attitude reports or other sentences with quantifications; whereas, the definite descriptions are capable of taking both the wide and narrow scopes.

(13)   The present king of France does not exist.

The above sentence is an example of sentences of 'negative existentials; in the sense that the sentence purports to negate an existential claim. Russell's strategy is to treat the definite description as quantifications and hence the reading of the sentence becomes an issue of the scope relationship of the negation quantifier and the packed quantifiers in the definite description. Russell's logic analysis of the sentence is given by (13).

(13') $\neg \exists x$ [*king-of-France*(*x*) $\wedge$ $\forall y$ [*king-of-France*(*y*) $\rightarrow x = y$]]

The negative existential in (13) is analyzed as:

It is not the case that there is a unique *x* such that x instantiates the property of being the king of France.

Treating the definite description as a complex quantificational construction, Russell successfully allowed the negation to scope over the existential assertion and secured the desired truth condition of the sentence.

Both definite and indefinite descriptions do not have complete meanings unless attached to the propositional function. Both types of descriptions contain a complex of quantifications in which involves an existential quantifier. In the cases that the existential quantifier is not satisfied, either in

the case of indefinite descriptions or in the case of definite descriptions, the statements containing them yield false reading as their truth-values accordingly. The difference between an indefinite description and a definite description lies in the assertion of uniqueness, which is expressed as an identification clause. In Russell's theory, uniqueness is captured through the identification in the formula of $\forall$ y (F(y) $\rightarrow$ y=x). Therefore, the definite description forms a special type of quantification which is about one *unique* individual; whereas the indefinite description denotes an ambiguous entity.

Russell's (1905) theory of description can be thus briefly concluded as the following.

i. NPs that start with *the* or *a/an* in English are semantically quantificational rather than referential

ii. Descriptions are incomplete symbols, which means, their meaning cannot be determined in isolation from a sentential structure.

iii. The linguistic meaning of a proposition containing one or more descriptions is object-independent.

iv. Definite descriptions assert semantic uniqueness

v. From (*i*)-(*iii*), definite descriptions do not take the functions as logical subjects and are not captured in the semantic type <e>; which means they are not the in the same category with other definite NPs, such as, proper names, pronouns and demonstrative phrases.

vi. The truth-conditional setback for a proposition containing an empty descriptive phrase can be solved through scopes, without further ontological commitments.

2.4   Uniqueness

In Russell's theory of descriptions, both indefinite and definite descriptions are general terms. The only contrast between a definite description and an indefinite description is the uniqueness quantification contained in *the*. For a proposition containing a definite description to be true, there must be one and only one individual in the model that instantiates the claims of the expression. Uniqueness is a key element embedded in the logical forms of the definite description but not in the formal analysis of the indefinite description. The uniqueness theory of Russell's account of the contrastive analysis of the indefiniteness and definiteness is often referred as the notion of 'semantic uniqueness' (Roberts 2003, p. 290) theory of definiteness.

It needs to point out here that the Fregean-Strawsonian direct reference theorists would not disagree with Russell at the point that uniqueness is expressed by definite descriptions. Frege (1892) considered definite description as singular terms and a singular term refers to a determinate object. In order for this object to be identifiable, uniqueness has to be included in the semantics of a referring term to a certain degree. Strawson (1950) thinks that uniqueness is a precondition for the felicitous use of a definite description. Strawson (1950) argues that the uniqueness Russell asserted is a philosophical concept, which is too strong for the general application of definite descriptions in daily communications. It is not necessary for the use of the definite description entails the strongest form of being philosophically unique; meaning being the one and only one in the world. The use of a definite description, in most circumstances, *presupposes* uniqueness instead of *asserting* it. If this presupposition fails, confusions in communications rather than false statements in logic would be raised. For example, in the case that there are multiple books on the table and the speaker asked the audience to pick out *the book* without a context, the hearer would be confused to identify which book is referred by the speaker.

As stated in previous, both Strawson and Russell agree that there is *uniqueness* that closely connected with the understanding of definite descriptions. The difference between the two theories of uniqueness lies in the semantic versus pragmatic phase of the notion; specifically on whether the uniqueness is entailed by *the;* or it is just presupposed and can be realized only through the usage of the definite

description. The uniqueness theorists following the Russellian account would argue that the uniqueness claim is semantically embedded in definite descriptions.

3. Strawson on Referring

Strawson (1950) questioned the adequacy and accuracy of Russell's theory and claimed that the prediction the theory made is inconsistent with the intuitive and immediate truth value judgements we made in our daily speech acts. He invited us to re-evaluate Russell's assessment on the truth values of the following utterance, contrasting with the empirical decisions we actually made in daily conversations.

(14)   The king of France is wise.

Under Russell's framework, the statement is interpreted as '*there is a king of France, and there is one and only one king of France. Whoever is the king of France, he is wise.*' Because the first conjunct is false, the whole statement is false.

Strawson (1950, p. 330) pointed out that many people would be reluctant to accept Russell's judgement if asked in general. In the activities of daily speech, people will be indecisive on the truth value of this utterance, simply because of the fact that there is no king of France.

Strawson furthered his claim by proposing that the utterance could even be interpreted as a true statement. Suppose it is uttered during the absolute monarchic period in France, for instance, when Louis XIV is in power, and the speakers hold the belief that Louis XIV is wise, then the statement made by (14) is thus a truthful statement. The similar analysis can be extended to all sentences containing definite descriptions. For example, the utterance of '*the Prime Minster of the United Kingdom is a woman*' is true if uttered in 2018; and it would be simply false in 2012. Besides, no truth value can be assigned to the utterance if it is uttered before 1805 (during which time it is unclear if the office of Prime Minister was established at all).

Since Russell's theory fails to accommodate his semantic analysis in accordance with this intuitive judgement of true or false, Strawson (1950) accused Russell as perplexing the notions of meaning and

references, significance and truth conditions; together with the applications of these essential semantic terms to the account of definite descriptions.

Adopting a communication-intention explanation of sentence meaning, Strawson (1950, 1952, and 1964) argues that significant sentences do not always bear a true or false statement. There is no true or false that can be decided if the presupposed subject of the sentence fails to correnspond to any object. Likewise, the expressions do not refer by themselves; it is the people who utter the expressions use them to refer. In Strawson's (1950, 1952, and 1964) theory, an expression or a sentence, if detached from their utterances or uses, needs to be analysed as an *expression-type* or a *sentence-type*. For example, if the sentence *'I like the king of France'* has been uttered twice, there will be two tokens produced upon one *sentence-type*. The two utterances will have their truth values judged separately and the judgment will depend upon the particular context of the speech. Even the word *'I'* would have different references if used by different speakers in different circumstances. The definite descriptions, likewise, would be used to refer to distinctive individuals in separate speech events.

To summarize, Strawson (1950, 1952, and 1964) holds that the semantic concept of *'reference'* only applies to the uses of expressions; but not to the expressions on their own. Similarly, truth-conditions of propositions cannot be decided without considering the actual meaning in speech acts. To Strawson (1950), Russell (1905) overlooked the reality of language use and therefore his theory fails to be a genuine account of descriptions in language. A new theory of descriptions that is able to accommodate the intuitions in the uses of ordinary language is in consequence desired for the purpose of philosophical activities.

Instead of classifying or defining the semantics of expressions in virtue of their lexical properties or linguistic forms, Strawson (1950) thinks that they should be analysed according to the meanings that the speakers make out by using them. In the paradigm of definite descriptions, for instance, Strawson claims that they need to be classified as uniquely referential phrases in oppose to Russell's quantificational account. It is not because these expressions are referring terms by default as Frege

(1892) proposed, it is because when they are used as marking tokens of direct references by the speakers.

''Referring' is not something an expression does; it is something that someone can use an expression to do. Mentioning, or referring to, something is a characteristic of a use of an expression, just as 'being about' something and truth-or-falsity, are characteristic of a use of a sentence.

(Strawson, 1950, p. 80)

Russell's (1905) theory of descriptions denies definite descriptions to be referential and hence claims that they are never logic subjects in the subject-predicate relation of propositions. In contrast, Strawson (1950) argues that what defines the subject-predicate relation is the function that the subject and predicate perform. The function of a subject term is to refer and the function of a predicate is to assign properties to the particular object referred by the subject. Whenever a definite description is in use, it picks out a particular object or individual because it is the purpose of the speaker using it. In the analysis of subject-predicate propositions, the embedded definite description needs to be treated as purely referring terms in logic. On Strawson's view, the failure of recognizing the referential function of the definite description and the misbelief in subject-predicate propositions leads to Russell's deceptive metaphysical assumptions and illusive epistemological insights (Daly, 2013; Morris, 2007).

Strawson (1950) accused Russell's theory being incorrect in the following points. First, it is not compatible with our intuitive reactions to the truth readings of utterances in speech acts; and second, it yields false results such as in the cases of utterances involving incomplete descriptions (felicitously used definite descriptions without the uniqueness claim). Strawson (1950) hence brought about two principles in an attempt to construct a rivalry theory of descriptions.

Strawson's theory proposes that first, '*the F*' taking up the subject position is used by the speaker *to refer*; the phrase therefore needs to be treated as a direct referring term based on the speaker's intention. Second, when '*the F is G*' yields a true value, it does not *entail* the unique existence of *the F*; instead, the proposition only *presupposes* the unique existence of *the F*.

3.1   Sentence Meaning, References and Truth Conditions

One of the objections Strawson (1950) raised against Russell's theory is that definite descriptions should not be analysed as quantifiers. Instead, the function they perform is to introduce direct references into the proposition in communicative contents. As Strawson (1950, p. 331) put forward 'one of the conventional functions of the definite article is to act as a signal that a unique reference is being made— a signal, not a disguised assertion'. According to Strawson (1950), the fundamental reason why a speaker chooses a definite description out of other types of expressions is that she wants the expression to convey a unique reference in the proposition. The true or false statement about the proposition containing the reference as its constituent can be made through adding the predicate content to the reference. An independent expression '*the king of France*' cannot be decided by which individual it picks. The only way to determine the value of the definite description is to consider the pragmatic environments in which the usage of the expression is based. Only by this means, the expression can be said to pick out Louis XIV or Napoleon, or any other particular king in the French history. The decision is made all depend on the event of the utterance containing this expression anchored in space and time. Strawson (1950, 1952, and 1964) also extends this argument to the uses of proper names. According to his theory of references and expressions, proper names do not refer; but the utterance of proper names does.

In Strawson's meaning theory, a sentence can have meaning but at the same time does not have any true or false values. The truthful readings of a sentence can only be decided upon its utterance within pragmatic conditions. In a descriptive sentence, the definite description is intended to refer to objects; and if the reference failure occurs, the sentence can still be meaningful but the statement it made is neither true nor false.

The arguments Strawson made on the references, sentence meanings and truth conditions ally himself with the communication-intention theorists, such as Grice (1989), Austin (1962,1963 and 1979) and later Wittgenstein (Miller, 2007). In their theories, the linguistic meanings of expressions and sentences need to be explained in terms of pragmatic provisions, such as the mental states of the

speaker and the contexts of the communications. Strawson criticized Russell on assuming that the sentences must be true or false, names must refer[6] and definite descriptions only denote; though presenting the idea that only the uses of these linguistic items that can account for these semantic properties.

It is therefore obvious that, underpinned by the pragmatic theoretical framework of language and meaning, the criticism Strawson made to Russell fails to engage with the central concerns of Russell's theory. Russell's (1905) theory is not concerned with any particular uses of sentences but with the propositions that they expressed. Russell's purpose is to provide solutions to the truth-conditional readings of the proposition functions without exposing to any pragmatic manipulations.

In addition, Strawson distinguishes the notions of sentences, utterances and statements made by sentences. However, Russell's (1905) theory consistently works for the combination of these distinctive notions (Mates, 1973). For example, it can be said that the statement made by a particular utterance of '*the F is G'* is logically equivalent to what Russell has formulated in his theory *'there is exactly one F and the F is G'.*

3.2   Unique Referential Use and Presuppositions

Another criticism Strawson (1950) made against Russell's (1905) theory is that *'the F'* is used to refer to an object. The semantic value of a definite description is not asserting a cluster of quantifications but is identical with the direct reference it introduces to the contents. Following Frege (1892), Strawson (1950) thinks that the use of *'the F'* presupposes a unique reference of an *F*. In case of the referential failure, the sentence would not receive a solid false reading as Russell would predict, but leaves the truth values undetermined. Strawson (1950) thinks that this theory of presuppositions equips him to state that, unlike Russell's (1905) theory which is inconsistent with our intuitive reactions, his theory of descriptions better characterize the general features of the ordinary language.

---

[6] Russell's theory of names describes proper names as disguised definite descriptions. As Stevens (2011) pointed out Russell's theory of names can be viewed independent with his theory of descriptions. For the purpose of this research, Russell's descriptive theory of names is considered as a separate issue to the debate on the semantics of definite descriptions.

However, in terms of intuitions and semantic contents, it is in fact unclear if Strawson's (1950) theory can be counted as better capturing all the choices of the truth conditions.

Suppose someone uttered the sentence '*the king of France visited out university yesterday.*' It is intuitively true that the person made a false statement. Russell's theory provides satisfactory solutions to the false reading of the statement. In contrast, Strawson's presuppositional argument leaves a truth-value gap of the statement instead of capturing the recognized result. Moreover, it is a fundamental controversial issue on whether we should count our institutions as reliable grounds for testing semantic theories. It is possible for people to come up with conflicting intuitions in situations particularly if a communication-intentional theory of meanings is considered as piloting.

Strawson (1950) converted Russell's (1905) uniqueness entailment into a type of uniqueness presupposition that is realized through pragmatic uses only. Both theories accept that the felicitous use of '*the F*' requires the involvement of a uniqueness effect. The difference lies in whether the uniqueness is a semantic feature of the definite description or a prerequisite of its pragmatic use (Abbott, 2004; Atlas, 2004; Boer&Lycan, 1976; Stalnaker, 1974; Von Fintel, 1999).

3.3   Incomplete Descriptions

In Strawson's (1950) theory, the uniqueness presupposition is only a sufficient condition, but not a necessary condition for the felicitous use of the. Strawson (1950) points out that one might have occasion to utter a sentence containing an 'incomplete description', an expression in the form of *'the F'* but fail to denote uniquely, and expresses a true proposition. For example, the following sentence containing a definite description is considered as a standard piece of ordinary language in daily speech acts, but causing problems for Russell's theory of descriptions.

(15)   The table is covered with books.

(Strawson 1950, p. 332)

Strawson (1950, p. 332) pointed out that the above sentence expresses a true statement even in the case where more than one table exists. Suppose two interlocutors walking into a room with two tables.

One of the tables is covered with books and the other one is not. It is felicitous for one of them to utter sentence (15) and successfully communicate an idea. In Strawson's theory, it is not the case that the speaker asserts the existence of a unique table in general, but the statement presupposed the existence of a unique table that is relevantly selected among the existing tables.

On the contrary, Russell's theory yields unwelcomed results for the above statement. Under Russell's framework, the definite description 'the table' has to denote a unique table. The strong philosophical claim of uniqueness rejects the existence of all other tables in the situation. Since there are more than one table exist, the unique claim failed, and the whole statement has to be judged as false.

It is recognized that the issue of incomplete descriptions is an effective objection made towards Russell's quantificational account of descriptions (Elbourne, 2013; Neale, 1990; Peacocke, 1975). The fact that a proposition with an incomplete description can be true shows the inadequacy of Russell's account in encompassing the complete data of the language.

In the past century, much debate centered on the topic has been conducted among the literature from philosophers and linguists (Bach, 1987, 1994; Neale, 1990; Kadmon 1990; Recanati 1986, 1996; Roberts 2003). In philosophy, the problem of incompleteness is normally linked with the problem of implicit content (Elbourne, 2013). As Neale (1990) pointed out, it is plausible to treat the problem of incompleteness as a general problem of implicit content; or a sub-class of a more general problem of quantifier domain restriction.

In linguistics, the distinction between a proper description and an incomplete description is considered as comparable to Löbner's (1985) distinction of semantic definites and pragmatic definites. Semantic definites represent functional concepts that exist independently of the particular situation of the utterance; while pragmatic definites depend upon the immediate situation of unambiguous reference (Löbner, 1985). The question is whether the incomplete description is in fact a pragmatic definites whose reference has to be determined in each every uses.

In general, the semantic approach to incompleteness can be characterized into two types: the implicit approach and the explicit approach (Neale 1990). The implicit approach accepts that definite

descriptions, like all other quantifier phrases, need a domain for their quantifications. The felicitous utterance of '*the F is G'* includes the condition of exactly one *F* within the domain. The explicit approach is to view definite descriptions as context-sensitive phrases that require proper interpretation under circumstances. In the above example, for instance, the uniqueness claim can be fixed by the speaker explicitly adding the expression '*the table over there'* in the discourse. Both the implicit and explicit approaches aim to exhibit the possible complete semantics in incomplete descriptions.

The pragmatic approach to incompleteness accepts that Russell's (1905) analysis provides sufficient account of the semantics of the definite description but denies that the semantic amendment is possible to save the theory from the problem of incompleteness. Sentences containing incomplete descriptions will receive a false interpretation in any cases due to the failure of the uniqueness claim. However, the pragmatic enrichments of the content (such as the speaker's intention or adding the pragmatically restricted domains) will facilitate the communication between interlocutors and therefore make the use of the definite description felicitous. The truth value of sentence (15), therefore, carries a truth meaning in the context even if what is strictly said is false (Reimer & Bezuidenhout, 2004).

3.4   An Independent Theory of Familiarity

Russell's quantificational account asserts that the only distinction between a singular indefinite and definite description is the uniqueness entailment in the semantics of the definite description. The nature of a quantification phrase is not to refer and therefore is 'neutral' with respect to familiarity (Christophersen 1939, p. 57 p. 74). In contrast, Strawson's referential account of descriptions leads to the claim of what distinguishes the uses of an indefinite description from a definite description is that a definite description refers to a familiar object.

'The difference between the use of the definite and indefinite articles is, very roughly, as follows. We use 'the' either when a previous reference has been made, and when 'the' signalizes that the same reference is being made; or when, in the absence of a previous indefinite reference, the context

(including the hearer's assumed knowledge) is expected to enable the hearer to tell **what** reference is being made. We use 'a'...when these conditions are not fulfilled'.

<div align="right">(Strawson 1950, p. 157).</div>

According to Strawson, the novelty condition and the familiarity condition govern the choices of indefinite and definite descriptions. In particular, when a cooperative speaker uses an indefinite description, she is communicating a singular belief which she thinks the individual it contains is unfamiliar to the audience. Otherwise, she would use a definite description. A definite description is used in the situation that the speaker believes the audience is familiar with its reference.

In Strawson's (1950) account, uniqueness is a pre-condition for the felicitous use of the definite article *the*, but what matters more to the choice between *a/an* and *the* is the conditions of novelty and familiarity either represented in the discourse or embodied in the interlocutor's mind.

It needs to be pointed out that Strawson's familiarity account of definite descriptions is different with the now well-known theory of definiteness in the framework of File Change Semantics from Heim (1982, 1983). Heim's File Change Semantics evaluates a sentence with respect to a file. The basic semantic value of a sentence is not truth conditions but its potential to change the file. Indefinite and definite descriptions are variables that contain information about some entity. The difference is that indefinite descriptions are required to introduce novel entities into the semantic file; while definite descriptions are needed to denote familiar ones (Abbott, 2004).

Strawson's (1950) familiarity theory takes the traditional truth-conditional semantics as the guidance. In his theory, definite descriptions are referring terms and therefore are context-sensitive. Unlike proper names whose referents are rigid, the referents of definite descriptions change with respect to context. Each utterance containing the same definite description provides a distinct token every time when uttered. The speaker decides to use a definite description instead of an indefinite one for the purpose of introducing a familiar entity either has been represented in the discourse or the particular entity is considered as known to the hearer.

Strawson's familiarity theory of definiteness is an independent theory comparing to Christophersen's (1939) theory of definiteness. Christophersen's (1939) theory is often considered to be the founding theory of familiarity (Pupa, 2008).

Christophersen (1939) treated the indefinite description and the definite description as belonging to heterogeneous semantic categorizations. The indefinite description is quantificational for the reason that 'an F has the equal meaning with the phrase 'one F' (Christophersen, 1939, p. 73, p. 98). The felicitous use of the indefinite article is therefore quantificational and neutral in respect to novelty or familiarity.

Definite descriptions, in contrast, are referential phrases in Christophersen's (1939) analysis. The semantic contribution of a definite description is an object or individual. Christophersen (1939) maintains that *'the F'* is used to refer to a particular object in the given context that both the speaker and the hearer are mutually familiar with.

'The article 'the' brings it about that to the potential meaning (the idea) of a word [i.e. the nominal] is attached a certain association with previously acquired knowledge, by which it can be inferred that only one definite individual is meant. That is what is understood by 'familiarity''.

(Christophersen 1939, p. 71).

According to Christophersen (1939), a communication by definite description can only be successful on the conditions that firstly, the referent of the definite description is in the common ground of both the speaker and the hearer; and secondly the referent uniquely instantiates the descriptive property. If the hearer is not familiar with the intended referent, or if the referent fails the unique condition, in either case, the communication cannot be considered as successful.

Compare with Christophersen's (1939) thesis, Strawson's (1950) claim holds a less strong opinion on characterising the descriptions into heterogeneous semantic categorizations; and besides, he (1950) does not make such a strong claim on the uniqueness condition for the felicitous use of *the*.

It is not clear if Strawson (1950, 1952) taking Christophersen's (1939) quantificational view on the indefinite description. Strawson (1952) observed that on one occasion the indefinite description can function as the antecedent of an anaphoric pronoun. Since the anaphoric pronoun is a referring term, Strawson (1952) sees the co-referential anaphora cause problem for Russell's existential analysis of the indefinite description.

With respect to the uniqueness condition, Strawson (1950) believes that it is not a necessary condition for the felicitous use of the definite description. As long as the familiarity is successfully established, a definite description with incomplete uniqueness condition is allowed in the communication. In contrast, Christophersen's (1939) theory allows the definite description to be used in the situations where the referent of the expression uniquely instantiates the descriptive property.

It needs to be emphasized that both Christophersen (1939) or Strawson's (1950, 1952) familiarity theory of definite descriptions would not be an effectual rejection of the Russellian theory. In fact, any familiarity theory including Heim's (1982) dynamic approach would not be considered as a direct rejection of the Russellian quantificational account.

The familiarity theories, in the same fashion, concentrated on the use-theoretical level of indefinite and definite descriptions. Strawson (1950, 1952) promotes his familiarity theory in order to defend a singular term categorization of descriptions in logic. He took the novelty and familiarity as rules to determine the choice of indefinite and definite descriptions respectively. Russell's (1905) proposal, however, focuses on the semantic categorization of descriptions at truth-theoretical level.

To summarize the discussions so far, two major theories of descriptions have been examined in previous sessions: Russell's (1905) quantificational theory and Strawson's (1950) referring theory. In Russell's (1905) theory, logical proper names refer, but descriptions do not. Descriptions are quantificational in line with all other denoting phrases. Strawson (1950) claimed that definite descriptions are used to refer and need to be viewed as singular terms in logic.

In a case in which a description fails to denote anything, the two theories yield different results for the account of truth conditions. On Russell's (1905) view, propositions with empty descriptions are

always false. If the description has no reference, then part of the sentence is false, the whole statement is false. In Strawson's (1950) theory, a statement with an empty description would be neither true nor false. The speakers use descriptions to refer. If the description does not have a reference, there is a truth-value gap in the statement it made.

Both the two theories intend to give a generalized and unified account for the descriptions in all the circumstances they occur and both theories are centered on the 'inner logic' of descriptions (McGinn 2015, p.79). Donnellan (1966) argues that neither the quantificational account nor the referential account of descriptions is complete, because none of the theories covers the full usage of descriptions in natural language. Donnellan raised the possibility that an integrated theory of descriptions with an ambiguous thesis can be established to provide an empirically more powerful and comprehensive account for these devices.

4. Donnellan's Distinction

Donnellan (1966, 1968) challenged both theories from Russell (1905) and Strawson (1950) as incapable of providing a full account of descriptions. According to the Donnellan (1966), any uniform account of descriptions cannot provide a complete theory of descriptions. He (1966) proposes that in reality, descriptions behave in both ways. In some statements, they are quantifier phrases, as Russell (1905) has described; and in other cases, they function as referring terms. Donnellan did not entirely reject any of the two theories. Instead, he (1966) claims that none of the two theories can be taken as completely true to encompass all the data.

Determined by the intentions of the speaker, a definite description can be either quantificational or referential (Donnellan 1966, 1968). For example, if the speaker uttered '*the person who is drinking martini is a philosopher*' when referring to a particular person in sight, then the semantic value of the definite description is the same with the value of the proper name that designates the individual. The definite description is intended to be a direct referring expression and needs to be treated as a singular term in the formal analysis. If the speaker has no intention of using the term as referring and the utterance carries the meaning of '*whoever the person drinking martini is, he is a philosopher*', then

the speaker is using the definite description attributively. In this case, the definite description is a quantifier phrase that denotes a unique person drinking martini.

In Donnellan's (1966, 1968) theory, definite descriptions are fundamentally ambiguous. They can be used referentially or attributively and the underlying semantics of the two types need to be analysed respectively.

4.1   Attributive and Referential Descriptions

The theory of descriptions Russell proposed is a quantificational thesis of the semantics of descriptions. Donnellan (1966) names the view as the *attributive* view. Frege (1892) treated descriptions as name like devices and Strawson (1950) confirmed that they are singular terms in logic. Donnellan calls their stance as the *referential* view.

'I will call the two uses of definite descriptions I have in mind the attributive use and the referential use. A speaker who uses a definite description attributively in an assertion states something about whoever or whatever is the so-and-so. A speaker who uses a definite description referentially in an assertion, on the other hand, uses the description to enable his audience to pick out whom or what he is talking about and states something about that person or thing. In the first case the definite description might be said to occur essentially, for the speaker wishes to assert something about whatever or whoever fits that description; but in the referential use the definite description is merely one tool for doing a certain job-calling attention to a person or thing-and in general any other device for doing the same job, another description or a name, would do as well. In the attributive use, the attribute of being the so-and-so is all important, while it is not in the referential use.'

(Donnellan 1966, p. 285)

The attributive use is the application of *'the F'* to what satisfies the predicate, not any particular thing that is supposed to fix the reference. An example Donnellan (1966, p. 289) provided is the utterance of *'Smith's murderer is insane'* at a crime scene. Through the thought experiment, Donnellan (1966) observed that if used attributively, the reading of the utterance is '*whoever is the murderer of Smith,*

49

he must be insane.' In this context, the definite description does not refer to any known individual. The same description can also be used as referential. The description is used referentially when it functions as a token for the audience to identify the object with its property. The most straightforward instance is that when both the speaker and hearer are directly acquainted with the referent and together with the ostentation of the speaker, the audience can check the prescribed property to the referent intended by the speaker according to her own sense-data. For example, the scene of the above utterance is changed into a court room where the murderer of Smith is handcuffed, and at the same time, is behaving strangely. One of the jurors thus may utter *'Smith's murderer is insane.'* The purpose of her speech act is to single out the individual who is labelled as *'the murderer of Smith'* and the speaker is making a statement about him. In this situation, the definite description is used as a proper name.

Donnellan's (1966) point is that descriptions behave differently according to the speaker's intentions in speech acts. The same description can be used attributively or referentially by the speakers in different situations.

'In general, whether or not a definite description is used referentially or attributively is a function of the speaker's intention in a particular case.'

(Donnellan 1966, p. 290)

According to Donnellan (1966, 1968), the pragmatic condition of speaker's intention is crucial to the interpretation of the definite description.

4.2   Misdescriptions

As stated previously, in examining the value of empty description statements, Russell (1905) thinks that they are plainly false due to the existential failure of the description denotation; whereas Strawson (1950) would claim that there is no truth value can be assigned to them. Donnellan (1966) provides a third option to assign truth conditions to propositions containing empty descriptions. Donnellan thinks that if the empty description is used referentially by the speaker, the statement can have a true reading

considering the communication intentions of the speaker. The empty description may not be truly empty but is a case of *misdescriptions* in speech acts.

He suggests that there may be cases in which the hearer knows the description is not proper, but still be able to identify the object that the speaker intends to refer to. For example, suppose two interlocutors talking in a pub, the speaker uttered *'who is the person drinking martini?'* In the situation that the hearer noticed that what the referred person drinking is in fact water in a martini glass, it is still felicitous for her to response: *'I know which person you are talking about, but that person is drinking water from his martini glass.'* The description that the speaker used failed to have a true reference, but the linguistic exchange is efficacious.

In the above example, whether the speaker knows that he mis-used the description to describe his referent is not a principle concern for the intention of communication. As long as the hearer is able to identify the intended referent, the communication would be considered as successful. The description is used to refer and the semantic value of the referring term, in this case, is the person who was holding the martini glass. Through this method, Donnellan (1966) effectively assigned meaning to an empty description and replaced the empty term with a reference-filled expression containing misdescriptions to the referent in the proposition. The truth value of the proposition is able to be defined.

Donnellan (1966) further suggests that there are environments where the speaker knows that the description is not completely true but still use it to refer to the indented individual. He (1966, p. 291) gives an example of a speaker asking *'is the king in his counting house?'* The speaker may hold the belief that the king is not really a king but a usurper. But since all other people think the king is rightful; she chose to use a misdescription to refer to the spurious king. The referential intention of the speaker is clearly fulfilled by the use of a false description.

Donnellan (1966) therefore rejects Strawson's (1950) truth value gap claim. The above examples of misdescriptions demonstrate that in some circumstances where an empty description is used referentially, the statement made out of it can have true readings.

On the other hand, Donnellan's (1966) example of misdescriptions also diminishes Russell's (1905) account. In Russell's theory, empty descriptions denote nothing. The proposition containing an empty description is straightforwardly false. However, Donnellan's (1966) account of reference with intention is able to assign a truth value to the proposition containing an empty description.

In conclusion, Donnellan (1966) agrees with Russell (1905) on his separating definite descriptions from names as descriptions have distinct semantic profiles. However, he (1966) argues that Russell's theory is incomplete because it fails to take in the referential use of descriptions. Donnellan (1966) assumes that when a definite description is used referentially, it is used as a name; so the description needs to be treated as a logical singular term. For instance, an empty description can successfully achieve a reference and becomes a misdescription because it is used as a name-like device. When a definite description is used as a name, any embedded descriptive content is not relevant for the truth conditions of the proposition containing it.

4.3   The Ambiguous Thesis

Donnellan (1966, 1968) rejects the two uniform theories of descriptions and proposes an ambiguous account. He claims that the speakers can employ definite descriptions to have two separate functions in daily speech acts. The first function of a definite description is to stand for a particular individual, and the second function is to denote something that satisfies the descriptive content. The function that a definite description performs is a choice made by the speaker liable to her intention. If a definite description is used referentially, the speaker has a singular belief about a particular entity and conveys a singular proposition about that individual. A definite description is used attributively, if the speaker has only basic expectations or a general belief about something that will satisfy the descriptive content. The utterance with an attributive description expresses an object-independent proposition.

In conclusion, Donnellan (1966, 1968) argues that neither the quantificational account nor the referential account of descriptions is complete; because none of the theories covers the full usage of descriptions in natural language. He raised the possibility that an integrated theory of descriptions

with an ambiguous thesis can be established to provide an empirically more powerful and comprehensive account for these devices.

As Kripke (1979) observed, Donnellan's own assessment on the ambiguity thesis does not facilitate him sufficiently enough to challenge Russell's semantic proposal of descriptions. It is shared among theorists that Donnellan's distinction of attributive and referential descriptions is a statement made for the semantic ambiguity of the definite article[7]. The ambiguity theorists believe that it is the definite article that has ambiguous semantics; and thus the speakers can employ *the* to express both singular and general propositions.

Kripke (1977) criticized Donnellan's theory and provide an effective modification to the Russellian quantificational account. The method Kripke (1977) adopted is to solidify the distinction between the semantic meaning of an expression and it pragmatic usage in speech-acts. The semantics of an expression is concerned with the truth conditions of a piece of language in contextually independent environments, but the pragmatic machinery comes into performance at the speech-act level that captures the linguistic performance of the utterances.

5. **The Modification of Russell's Theory**

5.1 Kripke

In order to defend a Russellian account of descriptions, one must be able to provide an explanation to the referential description data and at the same time keep the consistency with the core claims Russell (1905) made for descriptions. Kripke (1977) recognized the logic merits of Russell's (1905) theory as well as the linguistic intuition of using descriptions to refer. He then put forward a modification to Russell's (1905) original theory with an attempt to integrate Russell's thesis into the wider application of natural language use.

Kripke's (1977) approach is to discern the difference between a semantic theory of meaning which is in isolation from the impacts of the language use; and a pragmatic theory of meaning which is centred

---

[7] The semantic ambiguous theorists mentioned here include Partee (1972, 1986), Fodor and Sag (1982), Devitt (1974, 1997, 2004), Schiffer (1995, 2005).

on the intended meaning conveyed by the speaker in daily communications. The answer Kripke (1977, 1980) provides to the problem of ambiguity is as follows, the semantic meaning of descriptions is always quantificational and descriptions are possible for referential readings whenever the speaker supplies the pragmatic ground accompanying a particular speech act to fix the referent for the expression. In the formal analysis, the proposition containing a definite description needs to be treated as an object-independent proposition for the reason that the *semantic reference* of the description is quantificational. Nevertheless, in a particular speech act, a speaker can use the definite description intentionally to pick out a particular object and hence created a *speaker's reference* to the description. The sentence in this case can be seen to express something about the particular referent.

Kripke accepted the referential reading of descriptions but rejected the idea that such uses elicit any rigid reference.

'An expression is a rigid designator if it designates the same object in every possible world in which it exists'.

(Kripke 1981, p. 48)

The above definition for the rigid designator Kripke put forward dismisses definite descriptions from the semantic category of being singular terms. For example, the phrase 'the winner of 2017 Nobel Prize in Literature' can felicitously pick out Kazuo Ishiguro in the actual world in 2017, but the referent is not secured for all possible worlds. In contrast, the proper name Kazuo Ishiguro will pick out the same individual in all possible worlds. Therefore, though the contrast between the definite description and the proper name, it is evident that the definite description does not have the essential property of being able to rigidly designate to any particular object. By denying the referent of the referential definite description is rigid, Kripke (1977, 1981) indicates it is intuitively true that referring descriptions need to be explained through pragmatics.

Through the distinction of semantic meaning and pragmatic meaning, Kripke (1977, 1981) suggested that the ambiguity Donnellan recognized in the application of descriptions is caused by the

interference of the speaker's reference in a speech act to the semantic reference of descriptions in the proposition.

Descriptions are fundamentally quantificational as predicted by Russell's (1905) theory. But it may contain the speaker's referent as its value in particular speech act in order to achieve certain communication goals. As Kripke (1977, p. 263 -264) put it:

'We may tentatively define the speaker's referent of a designator to be that object which the speaker wishes to talk about, on a given occasion, and believes fulfils the conditions for being the semantic referent of the designator'. The semantic referent of a description, in contrast, is the individual denoted by the linguistic meaning of the expression: 'if a speaker has a designator in his idiolect, certain conventions of his idiolect determine the referent in the idiolect: that I call the semantic referent of the designator.'

Kripke recognized the ambiguity problem of descriptions; but he successfully integrated the Russellian theory with the wider application of language use. Kripke's modification to Russell's (1905) original theory can be explained by the following:

a. The formal analysis of a proposition containing a definite description is based on the semantic reference of the expression and hence is quantificational and the truth conditions of the proposition are object-independent.

b. In a particular instance of speech act, however, the semantic referent of the definite description is accompanied by pragmatic machinery which creates a speaker's referent.

c. A speaker can then communicate with the speaker's referent as a particular referring object or individual and the analysis of the meaning of the proposition depends on the speaker's intention in using the expression and the context in which it is used.

d.   The semantic reference and the speaker's reference to a definite description do not necessarily

converge (e.g. the case of misdescriptions).

e.   From the above, the issue of the referential use of definite descriptions (including the

misdescriptions that manipulated the truth readings) is an issue of pragmatics.

5.2   Neale

Kripke's modification is echoed by many philosophers in defending the quantificational theory (Grice, 1989; Neale 1990, 2005; Bach 2004b; Salmon, 2004; Stevens 2011). Neale (1990, p. 62), for instance, employs the terms *the proposition expressed* and the *proposition meant* in paralleling to the distinction of Kripke's semantic reference and speaker's reference. Neale (1990, p. 62) defines the distinction as being between 'the genuinely semantical features of an expression ζ and those features of the use of ζ that issue … from nonsemantic facts about the context of utterance and from constraints governing rational discourse'. According to the modified Russellian quantificational theory of descriptions, any referential use of the phrases must emerge from outside of the semantics.

Russell's (1905) original theory of descriptions is interested in the logical analysis of propositions containing descriptions in relation to the discussion of metaphysical and epistemic issues. Kripke's (1977, 1981) modification integrates Russell's theory with a wider use of natural languages. The modification Neale (1990) made with expansion in line with modern linguistic theories, transformed the Russellian account of descriptions to a 'more general theory of natural language quantification.' (Neale, 1990, p. 46-47)

(16)   The table is covered with books.

As pointed out by Strawson (1950), the definite description in the above utterance is incomplete. Since there is certainly more than one table in the world, the uniqueness claim of the description failed in (16). Kripke's (1977) approach is to solidify the distinction between the semantic meaning of the proposition with the pragmatic meaning of the proposition. The linguistic meaning of the

definite description remains quantificational; the uniqueness is restored through pragmatic machinery based on the referential use of the description.

Neale (1990) departed with Kripke (1977) in terms of the approach to recover the uniqueness of the description in the above utterance. According to Neale (1990), the uniqueness claim in the definite description *the table* can be fixed by adding semantic content to the utterance. Neale (1990) states that the utterance of (16) has the semantics *'there is one and only one object that is both a table and covered with books.'* The expression involves a relation between *'being a table'* and *'being covered with books'* and a unique entity that satisfies both properties. The uniqueness of the incomplete description can therefore be restored through semantic instruments. For examples, the incompleteness in (16) can be removed if the speaker provides a domain that is precise enough for the audience to locate only one table in the context of utterance as in (17).

(17)   The table [next to the window in this room] is covered with books.

The linguistic constituent of *'next to the window in this room'* functions as a domain to the quantifier *the*. The uniqueness is recoverable through semantic methods. Neale's account is therefore also concerned with the general account of natural language quantification. If taking the wide range of quantifier phrases into consideration, it can be concluded that incompleteness is not something special to the definite descriptions. Similar situations can be found in standard quantifier phrases as in (18).

(18)   Everyone left the room when the fire alarm went off.

Neale (1990) recognizes what truly denoted by the quantifier phrase *everyone* in the above utterance as in fact *'everyone in the room'* but not *'everyone in the world'*. Even though the phrase is incomplete, the utterance of (18) is felicitous. The material that would make the quantifier phrase complete has been dropped out from the utterance; and the elliptical material can be 'recoverable from the context of utterance' (Neale 1990, p. 96).

Different with Kripke (1977), Neale (1990) solved the problem of incomplete description without referring to the pragmatic approach based on the referential use of descriptions. Moreover, Neale's

solution encapsulates the analysis of definite descriptions in line with standard quantifier phrases and therefore resolves the problem without recourse to defending a semantic ambiguity thesis.

6. A Neo-Fregean Theory of Referential Descriptions

6.1   Referential Descriptions

As discussed in the above sessions, with the Kripkean restoration on treating the referential description as pragmatically pick out the speaker's reference, it is clear that Donnellan's (1966) ambiguity thesis did not overwrite the Russellian account of descriptions. Donnellan's (1966) distinction of the attributive and referential uses of definite descriptions cannot be considered as an assertion of the semantic ambiguity of the descriptions. Instead, the conclusion Donnellan (1966, p. 281) arrived at is in fact at the level of uses: 'a definite description occurring in one and the same sentence may, on different occasions of use, function in either way.'

It is therefore the Fregean-Strawsonian referential theory (which claims that descriptions unambiguously refer) that is categorically under the attack from the ambiguity thesis. If the referential theorists would like to reinforce their account and further their contra argument against the modified Russellian account, a stronger claim on the semantic contribution of the referential descriptions is undoubtedly demanded. A novel referential theory of descriptions has to be formed. The novel theory needs to be able to state that a referential use of the definite description securely generates a singular proposition and the referential description contribute to the truth conditions of the proposition semantics; instead of being a purely pragmatic device that has no contribution to the semantics of the proposition at all.

Devitt (1974, 1981a, 1981b, 2004, 2007a, 2007b)[8] offered a modified referential theory. He rejected the traditional direct reference view that claims that the semantic contribution of a referential description is the object it picks out. Devitt (1974) assumes that apart from the referent, the descriptive content in the expression, on the other hand, also contributes to the truth-conditions of the sentence containing it.

---

[8] and others including Bach (1995, 1998 and 2007)

Racanati (1993, P. 32) referred this perspective of referential descriptions as the neo-Fregean view. The neo-Fregean theory of descriptions claims that both the descriptive content and the individual referent of a definite description need to be considered when assigning truth conditions to the proposition containing them. In contrast with the Russellian claim of referential descriptions as pragmatic uses which do not affect the quantificational nature of descriptions; the neo-Fregean account defends a semantic ambiguity thesis.

The Russellian defenders claim that the referential use of descriptions is a matter of pragmatic accommodations which does not count for the lexical meanings of the sentences. Devitt (1974, 1981a, 1981b, 2004, 2007a, 2007b), on the other hand, argues that the referential description contributes to the truth-conditional meanings of the proposition that it is part of. The contrast can be explained in the following.

Under the Russellian framework, the semantics of a proposition does not depend on the object that satisfies the description in the utterance. Suppose *N* is a logical proper name. The sentence in the form of '*the F is G*' is significantly different with the sentence in the form of '*N is G*'. The definite description sentence expresses a general proposition; whereas the proper name proposition conveys a singular belief. In the referential use, suppose *N* is *F* in which case '*the F*' denotes *N*. Even so, *N* is not counted as a semantic constituent of '*the F is G*'. In the case where '*the F*' is used referentially, the literal meaning of the sentence is not dependent upon *N* which is the referent of '*the F*'.

Devitt's theory claims otherwise. The utterance in (19) contains a misdescription. Suppose *speaker A* and *speaker B* are in a pub and are talking about a person holding a Martini class in sight. As described in the well-known example of Donnellan's (1966), the person holding the Martini class is in fact drinking water instead of the alcoholic drink. It is still felicitous for *speaker A* to utter (19).

(19)   The person drinking martini is a professor of philosophy.

The communication could possibly be successful if both the interlocutors identify the same person as the referent. However, in Russell's theory, the literal meaning of this sentence would be false because the quantification that 'there exists a unique person drinking martini' fails. In Donnellan's (1966)

theory, the truth value of the proposition is based on whether the person referred to *is* a professor of philosophy; despite that the description misdescribed him. The proposition expressed by the sentence conveys a singular belief.

The neo-Russellian theory defenders, such as Kripke (1977) would agree that the sentence conveys a singular belief but that has nothing to do with its literal meaning and therefore the referential description is not semantically significant. Devitt (2007), however, argues that the referent of the misdescription clearly contributes to the truth-conditions of the proposition as a semantic constituent. According to Devitt (2004, 2007), there is no need to derive a different speaker's meaning from the conventional meaning of the sentence because first, the definite description is used regularly as a convention to refer and hence it needs to be considered as part of the linguistic meaning of the definite article *the*; and secondly, the distinction between a semantic and pragmatic meanings is basically unrealizable.

6.2   The Causal Theory of Reference and the Notion of 'Weakly Rigid'

Devitt's (1974, p.186) theory of descriptions is based on the viewpoint that the description achieves its referent through a causal-perceptual link being established between the referential use and the object it referred to. The idea can be comparable to the causal theory of reference Kripke (1980) ascribed to proper names. Kripke (1980, p. 97) argued that the specific reference of a proper name is acquired through an original act of 'naming' as the stage of reference-fixing. All the subsequent uses of this proper name will keep the same reference it acquired through the original 'dubbing' process in which the reference is fixed either by perception or by description (Kripke 1980, p. 97). Take the name *Aristotle* for example, at some point in time and space there was a 'naming ceremony' in which the referent of the individual was tied to the name. After this initial reference-fixing stage, the reference of the name is borrowed and conventionally passed on by the speakers in linguistic exchanges.

Devitt (1981a, 1981b) extends the causal theory of reference from the linkage between a singular term and its referent to the uses of pronouns, demonstratives (bare or complex), as well as the referential

uses of definite descriptions. He (2004:16) compared the referent descriptions with names and demonstratives and argued that there is a 'weak rigidity' in the description semantics.

'…*e* is weakly rigid iff if it designates the same object in every possible world in which that object exists and any descriptive element of *e* applies to that object.'

<div align="right">(Devitt 2004, p.17)</div>

Consider Donnellan's example of Jones being accused to be *'the murderer of Smith'*. One can make the statement of *'Smith's murderer is insane'* by the judgement of Jones' strange behaviours in court. The use of the expression *'Smith's murderer'* (or 'the murderer of Smith') is a referential use. The statement is true in the possible worlds where Jones is the murder of Smith and he is indeed insane; but the statement will be false if in a possible world where the murder of Smith is committed by another person Bill; or in a world where no murder is committed by any one. The referential use of 'the murderer' can then refer to Jones in some possible worlds; but also can refer to Bill in other possible worlds or even fails to refer in a world without any Smith's murderers.

Argued by the quantificational account defendants (Salmon, 1982 and Neale, 1990) that since the referent definite description is not rigid; it is plausible to stage that definite descriptions do not have the same referential meaning as a name; and therefore one can affirm that they do not have any referential meaning at all. Devitt, however, argued that the link between *'Jones'* and the *'the murderer'* is causally grounded in the perceptions of the speakers and hence the reference is successfully secured in this world. It is indeed that the expression *'the murderer'* cannot refer to *Jones* in all possible worlds, but its reference is fixed as 'weakly rigid'. The descriptive content 'murderer' is essential in the reference-fixing and reference-borrowing process. Whenever the link is established as a convention; the phrase is then used as a referential term that consistently picks out the same individual in the linguistic exchanges. The behaviour of a referential description performs is more comparable to a deictic used complex demonstrative rather than a proper name. For example, the description '*the murderer*' can be considered to contain an implicit demonstrative such that it has an implied meaning of '*that is* a *murderer*'. By employing the notion of 'weak rigidity', referential descriptions are

enabled to have semantic meanings even in the cases where they fail to pick out an individual in all the possible worlds.

'… 'the murder is insane' is equivalent either to 'That is a murderer and insane'... 'the murderer is insane' is not rigid. But it is weakly rigid according to the following definition: e is weakly rigid iff it contains, implicitly or explicitly, an element that designates the same object in every possible world in which that object exists and any sentence containing e is true only if any descriptive element of e applies to that object in that world.'

<div align="right">Devitt (2004, P. 17)</div>

6.3   Anaphoric Chains

It is generally accepted that there is a complementary relationship between the English *a/an* and *the* that they are used regularly, conventionally and systematically to form anaphoric chains (Chastain, 1975). In the progression of a conversational discourse, it is typical for a speaker to introduce a piece of novel information with an indefinite description and later in the course of the conversation, supplement it with a definite description. In an anaphoric chain formed by descriptions, the use of indefinite and definite description is in a coordinated fashion and hence they are semantically complementary. The anaphoric chains of indefinite and definite descriptions can be illustrated in Pupa's (2008 p. 16-17) example.

In a conversation of Sally and John, Sally says:

(20)   Today, **a dog** was chasing **a woman** down our street. Fortunately, **the woman** was quicker than **the dog**; **the women** escaped unharmed.

The most natural understanding of the above discourse is that Sally's utterance is about one particular dog and one particular woman. The speaker, Sally, coordinates her usage of *'a dog'* and *'the dog'*; as well as *'a woman'* and *'the woman'*. In each use, the indefinite description functions as an antecedent to the definite description.

The anaphoric chains cannot be reverted by using indefinite descriptions as anaphora.

(21)   Today, **the dog** was it again. **A dog** was chasing **the woman** down our street. Fortunately, **a woman** was quicker than any dog.

In English, the above usage of definite description *'the dog'* and *'the woman'* together with the use of the indefinite *'a dog'* and *'a woman'* fail to instantiate an anaphoric chain. It is not prohibited though for the definite description 'the dog' to be analysed as an antecedent, as shown in the following:

(22)   Today, **the dog** was it again. **He** was chasing a woman down our street.

It is natural to interpret the pronoun in the above sentence to have an anaphoric reference to the definite description. The definite description '*the dog'* and the pronoun *'he'* successfully formed an anaphoric chain in the sentence. However, the use of indefinite descriptions as anaphora is prohibited in English as displayed in the following example.

(23)   Today, **a dog** was chasing **a woman** down the street. **A dog** almost bit **a woman**. Fortunately, **a woman** was quicker and escaped unharmed.

There is no anaphoric chain that is formed in the above sentence. Indefinite descriptions are incapable to function as anaphors. With this respect, the indefinite and definite descriptions are separated. Definite descriptions can serve as both antecedents and anaphors; while indefinite descriptions can only function as antecedents. Any complete theory of descriptions needs to provide explanations of this divergence.

An adequate account of the anaphoric chains formed by descriptions must satisfy at least two requirements. First, it must provide explanations on how the truth conditions can be analysed for the propositions containing description anaphoric chains. Secondly, it is essential for the theory to account for the fact that the anaphoric chains in the utterances are about the same individual.

It seems that it is easier for one to adopt a Fregean-Strawsonian (as well as a neo-Fregean) referential account to meet the two requirements than implementing a Russellian quantificational account.

The traditional referential account would argue that in cases of anaphoric uses of the definite descriptions, uniqueness of reference is not required in the sense that the definite descriptions pick out the references made by the earlier occurring indefinite descriptions.

(24)   **A man** was jogging down the street and **the man** was seen turning left at the crossing.

In the above example, the definite description *'the man'* function as a pronoun that picks out the same referent of the indefinite description in the antecedent proposition. Indeed, in many cases, an anaphoric definite description can be replaced by a pronoun or vice versa, without altering the meaning of the sentences. Any theorist adopting a referential theory of descriptions and pronoun anaphora would argue that the exchange between definite descriptions and pronouns provide evidence for a direct reference account of the definite descriptions.

The neo-Fregean theorists who hold a causal theory of reference would argue that the anaphoric chains create a reference-fixing process between the reference of the antecedents and the anaphors. The anaphoric definite description is in fact d-descriptions which are used referentially by the speaker.

But problems occur when applying the quantificational account to the uses of anaphoric definite description.

(25)   **A girl** was jumping ropes. **The girl** looked happy.

The first difficulty for the Russellian theory is the different packages of quantifications enfolded in the indefinite and definite descriptions. According to the quantificational account, the antecedent proposition *'a girl was jumping ropes'* needs to be analysed as:

[An x: girl x] (jumping-ropes x)

In Russell's theory, the indefinite description is ambiguous; and hence the antecedent proposition in the above seems to be compatible with the existence of more than one girl in the domain. In contrast, since there is a uniqueness quantification embedded in the semantics of definite descriptions, the anaphoric proposition needs to be analysed as the following:

[the *x*; girl x] (looked-happy *x*)

It seems that the anaphoric proposition is incompatible with the existence of more than one girl in the domain.

Suppose there are two girls in the situation. One named Alice who was jumping ropes and indeed looked happy; while the other named Beth and Beth was not jumping ropes at all. The existence of Beth would not cause any problem for the true reading of the antecedent proposition; but the anaphoric proposition would be false under the Russellian framework because the uniqueness quantification failed in this situation. Obviously, the antecedent and anaphoric propositions should be analysed to have synchronized truth conditions. Hence for the Russellian theory to be accountable, it needs to fix the unsavoury result.

Following Davies (1981), a Russellian theorist could hold that the utterance of the anaphoric proposition involves an incomplete description which can be fixed by explicitly extend the expression to a fuller noun phrase.

(26)   **A girl** was jumping rope. **The girl who was jumping rope** looked happy.

On this modification, the anaphoric proposition is true relative to the domain of both utterances. The anaphoric proposition is therefore compatible with the antecedent domain which contains more than one girl. However, it is not compatible with a domain containing more than one jumping-rope girls. But since both propositions hold the same truth values together if and only if there is one and only one girl who was happy, the felicitous use of the anaphoric chain render the existence of other girls as irrelevant.

Following this analysis, the anaphoric chain formed by the descriptions is about the same individual. The antecedent proposition is true in terms of one individual exist in the domain. The anaphoric definite uniquely denote the individual. Even if the two propositions do not contain any individual as their constituents, the indefinite and definite description used are about the same individual who uniquely satisfies the anaphora.

But the elliptical content fix approach seems to provide wrong predictions if the anaphoric chains contain a contradictory.

(27)   A: A girl was jumping rope.

        B: The girl wasn't jumping rope.

Adopting the elliptical approach, the utterance of B needs to be interpreted as '*the girl who was jumping rope wasn't jumping rope'*. It is obvious that the statement falls into a contradictory. But the fact is that by the utterance B is not contradictory to herself but is making a contradictory statement to A's assertion. The Russellian theory seems to be incapable for the account of contradictory anaphoric chains of descriptions.

A possible solution to this issue from Davies (1981) and Ludlow and Neale (1991) is to emphasize that the elliptical content of the definite description contains retrievable descriptive content from the antecedent. In above utterance of B, the definite description is used by the speaker in an ironical manner. The appropriate interpretation of the utterance needs to be viewed as the following:

[The *x*: girl *x* & said-to-have-been- jumping-rope *x*] ~ (jumping rope *x*)

Thus, the elliptical approach does not entail that the statement made in B's utterance is a contradiction.

6.4   Conclusions

In conclusion, Devitt's theory of descriptions is founded on the idea that causal chains of communication occur whenever a description is used referentially. The theory labels the referential descriptions as d-descriptions that link to the causal chain through their descriptive contents. The Russellian quantificational descriptions are possible in the daily use of language and the quantificational descriptions are attached to A-chains (attributive chains, in contrast with causal chains) in which situations no causal relationship can be found. The theory can therefore be viewed as a theory of ambiguity. Following the neo-Fregean theory, the semantic ambiguity of the definite descriptions is in-built and the Russellian restoration method by pragmatics is misleading. Devitt

(2004, 2007a) and Reimer (1998) argue that it is not adequate for the Gricean-Kripkean approach of treating the referential descriptions as pragmatic to undermine the semantic referential account of descriptions.

Devitt's referential account argues that it is a linguistic convention to use the definite description referentially and therefore the referential use of *the* needs to be understood as a semantic property of the definite article. The theory also requires the hearer to make an inference of the speaker's referent, but it did not address the issue of how this identification can be achieved. Even if we take it for true that there is a semantic convention the referential uses, a convention for exploiting causal-perceptual links between thoughts and objects, this convention would not specify how the causal chains are exploited or applied in communication (Bach, 2007). Simply characterizing the use of a description by the speaker as referential and pointing out that it involves the intention for the hearer to identify the same object that in the speaker's belief via a casual-perceptual link does not explain how the hearer manages to do so.

CHAPTER TWO   MAPPING DESCRIPTIONS IN CHINESE

1. Sketch of Chinese Language Features

1.1 Introduction

This section will briefly introduce four language features that are related to the key objectives of the investigation of Chinese descriptions. The data that constitutes the main research focus of this chapter as well as the whole dissertation is from Mandarin. Mandarin is a variant of Chinese language that is originally spoken across the northern areas of China and now is established as the national language of the country. The convention applied in this dissertation is the *Pinyin System*, which is the official *Romanization System* that represents the language through phonetics. In this dissertation, the terms *Mandarin* and *Chinese* may be used interchangeably; and the data in other variants of Chinese languages including *Cantonese* will be explicitly stated if applied.

In Sections 1.2 and 1.3, two morpho-syntactic issues that connect closely to the expression of number and definiteness in the language will be explored. Section 1.2 concerns the lack of number inflection in the language; and in Section 1.3 the issue of the absence of articles as marking devices of definiteness will be stressed. Section 1.4 provides an overview of Chinese nominal structures together with the definite and indefinite interpretations of the noun phrases in the language.

In Section 1.5, the feature of topic-comment structures, which is considered as a prominent feature in Chinese, will be outlined. It is generally believed that the topic-comment relationship has a direct linkage with the notion of referentiality in the language. A more detailed discussion on topicality in terms of its connection with referentiality and definiteness will be presented in Chapter Three; where the bare noun definites on topic positions are investigated.

1.2   Number-less and the Count and Mass Distinction

Many languages including English overtly mark the count and mass nominal distinction through overt grammatical devices. In English for example, a number inflection suffix is employed for marking the plurality of countable nouns. In contrast, English mass nouns remain neutral in terms of number and hence are recognized as uncountable in syntax. Grammar-wise, English count and mass nouns are distinguished through the overt number inflection, for example, *chair/chairs*; but not *furniture/ *furnitures.* Also, count nouns can be directly modified by numerals, as in *five chairs;* but whenever a mass noun is combined with a numeral, a measure word is often required, as in *five pieces of furniture*. In English, it is obligatory to mark the plurality of count nouns with the number inflection suffix when a counting interpretation of multiple entities of the noun phrase is involved. Mass nouns take the number inflection when they receive measuring readings for counting purposes, for instance, the mass term *wine* can sometimes be used in its plural form as in *two wines*, in which case the mass term undergoes a shift from a mass denotation to a counting interpretation of two quantity-denoting (such as *bottle* or *glass*) measurements of *wines*. In addition, the plurality marked mass nouns can also indicate kind variations in their denotation. For instance, apart from the quantity-denoting interpretation, the noun phrase *two wines* can also mean two different brands of wine.

In contrast with English, a prominent feature of Chinese language is that there is no number morphology in the language system that overtly marking the singularity or plurality of common nouns in grammar. All Chinese nouns behave like English mass nouns in terms of remaining neutral in number at the syntactic level. Besides, all Chinese nouns do not combine with quantification directly. A classifier is obligatory whenever a noun is quantified by numbers.

(1)   a.   yi   zhi   *mao*

         one   Cl   cat

         'one cat'

     b.   san   zhi   *mao*

         three   Cl   cat

'three cats'

c.   henduo zhi   *mao*

        many   Cl   cat

        'many cats'

As demonstrated in the above examples, the common noun *mao* remains in its bare form in both singular and plural denotations. A classifier *zhi* is employed in both readings and the classifier does not have a direct translation in English. In (1.c) the determiner *henduo ('many or much')* is used. Lexically, *henduo* can be translated as both *'many'* and *'much'* in English. Determiners like *'many'* and *'much'* are sensitive to the count and mass denotations in English. Some determiners behave like *'many'*, such as *every/each* or the indefinite article *a/an*, and they obligatorily select count nouns in the modification. Some determiners are only allowed to be used with mass nouns, such as, *little* or *much*. In Chinese, however, as demonstrated above, the distinction of count or mass quartiers does not apply in the language.

The definite and indefinite articles contrast with each other in terms of the syntactic selection relationship with the number denotation of the nouns in English. Unlike the indefinite article, the definite article is unrestrictive such that it can combine with either count or mass nouns. A grammatically well-formed indefinite description requires the indefinite article to be used with a singular count noun. It is generally accepted that in English the use of the indefinite article together with either a mass noun or a count noun in plural form would be considered as ungrammatical. The construction of the indefinite article plus a mass noun is only allowed when the mass noun shifts its reading into measurement or kind denoting. The definite article, on the other hand, can be used for all types of noun phrases in terms of number.

In contrast, determiners in Chinese are not selective in terms of the count and mass distinction. It is not possible to contrast the corresponding English determiners such as *many* versus *much*; or *few* versus *little* in Chinese due to the fact that the Chinese nouns are number-less in grammar[9].

The number-less feature of the language can be concisely illustrated as the following.

i.   There is no number morphology to separate the countable and uncountable nouns.

ii.   All nouns cannot be quantified by numbers directly but need a classifier to be inserted

iii.   Determiners in Chinese are insensitive to the count and mass denotations of common nouns.

Since there is no syntactic marking of count and mass nouns in Chinese, a question raised here is whether the semantic distinction of count and mass domains can be established in the language. Answers to this question vary depending on what is considered as the nature of the semantic distinction of the count and mass domains in the natural language.

It is argued in the literature that the linguistic encoding of count and mass expressions are believed to carry some importance in the metaphysical discussion of *stuff* and *thing* (Mark, 2016). It is generally assumed that only count nouns can be marked with singularity or plurality because they denote atomic and discrete entities. Discrete things are countable. Mass nouns, on the other hand, have the denotation of *stuff* that is composed by homogeneous and non-atomic entities; and henceforth the mass nouns are uncountable (Gillon, 1992; Chierchia 1998a; Rothstein, 2010). The theory claims that mass domains contain cumulative and homogenous entities, such as *water*, and the count domain is neither cumulative nor homogenous, such as *bottle*. The simplified explanation is that a unit of *water* plus another unit of *water* forms something that also belongs to the denotation of *water*; and if split a certain quantity of *water* into two, two quantities of *stuff* that both in the denotation of *water* are

---

[9] Cheng and Sybesma (1999) hold that classifiers in the language take the function as the lexical markers that distinguished the count and mass nouns. I agree with Li (2013) on that a distinction between 'individuation' and 'countability' needs to be made concerning the functions of classifiers. The classifiers function as type-shifters that individuate the noun denotation from a kind reference. But an individual-level denotation does not indicate the notion of 'countability' as it is interpreted in English. Besides, the syntactic test Cheng and Sybesma (1999) suggested was not sufficient to establish the dichotomy of count and mass classifiers. Therefore, I take the ground that there are no obvious lexical or grammatical markers in Chinese grammar.

divided. This formation and division of *water* are only possible for the *stuff* in the mass domains. In contrast, an entity in a count domain, such as *a bottle,* is neither cumulative nor homogenous. The sum of two bottles is not in the same denotation of the *thing of bottle* but in the denotation of plural *bottles*. If separated a *bottle* into two, it gives two pieces of such a thing; with neither of which falls into the denotation of *bottle* (Link, 1983; Krifka, 1991).

The parallel of linguistic encoding of count and mass distinction with the natural structure of matter has been challenged by many linguists and philosophers. Firstly, Quine (1960) pointed out that there is a problem for the divisivity theory. Water, for example, can be divided into units that are too small to be recognized as *water* and it is a question if these divisive units are still countable as covered in the denotation of *water*. The problem can be demonstrated in a clearer picture when taking the mass noun *furniture* as an example in the consideration. The word *furniture* is syntactically marked as a mass noun in English. However, the constituents of *furniture* including objects such as chairs, desks and beds that are encoded as countable in linguistics and at the same time recognized as *things* in nature. If a chair is divided into two pieces, neither of the two pieces will fall into the categorization of the term *chair* (but only in the categorization of *chair parts*) and it is obvious that the pieces of the chair cannot be characterized as containing in the denotation of *furniture*.

Secondly, cross-linguistic evidence shows that the mapping of count and mass domains is not unified in the world languages. For example, the noun *hair* is marked as uncountable in English but countable in Italian (*capelli vs capello*). Scholars who claim that mass noun domains have homogenous reference have to distinguish the linguistic properties in a language and the subject matter in the real world. In other words, they are compelled to make a decision on whether the homogeneity is a property of substance; or a property of the language that is encoded in the mass-form syntax (Doetjes, 2011).

Chierchia (1998a, 1998b) challenged the homogenous reference of mass noun domains and pointed out that all mass noun domains contain structures that are built upon minimal parts; even these

minimal parts can be vague. Chierchia (1998a), follow Link (1983) and Landman (1989), proposed

that the mass and count domains can be captured in a formal model of the Boolean lattice structure.

(2)
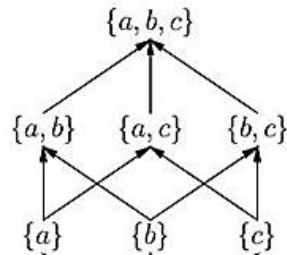
The bottom individuals of the semi-lattice are the denotations of singular count nouns. These elements

can be illustrated as names, such as Bill or Fred; and common singularities, such as, *'man'* in forming

the reference of singular definite NPs like *'the man'*. The denotation of plurals gives the set of

elements closed under sum including {a,b,c, a⊔b, a⊔c, b⊔c, a⊔b⊔c}.

Take the common noun *'dog'* for example:

(i)   *dog*→{dog1, dog2, dog3}

(ii)   *dogs*→{{dog1, 2, 3}, {dog1, 2},{dog1, 3} , {dog2,3}

In Chierchia's theory, the pluralities are contained in a domain formed by the sets of elements in the

upper structure. Mass domains, comparable to pluralities, also denote the sets of individuals

structured exactly the same as in (2).

Previous theories (Link, 1983; Landman, 1989) argue that the mass noun domain is non-atomic since

the minimal parts of mass denotations are not necessarily accessible through linguistic devices.

Therefore, an atom-less Boolean algebra representation shall be used for the cumulative and

homogeneous mass nouns. Chierchia (1998a), on the other hand, points out that neither homogeneity

nor cumulative property can be counted as the root of mass/count distinction for the following

reasons. First, many mass nouns denote the entities that have atomic parts, such as, *salt* or *rice*.

Secondly, not all mass nouns in English are intuitively homogenous such as quasi-kind terms

including *cutlery* or *furniture*. Some count nouns, however, denote objects that display obvious

homogenous characteristics, i.e. *fence, line, plane* and *sequence* (Rothstein, 2010). Finally, Chierchia (1998a) maintains that the discussion of mass and count distinction shall not be based on the real world properties, such as homogeneity or discreteness; but needs to be based on the structure of matter and how the semantic distinction is revealed through it.

In the case of Mandarin, Chierchia (1998b) claims that all Chinese nouns are mass in semantics for the reason that the language lacks true singulars. All nouns in Mandarin Chinese require a classifier to be inserted when quantified by numerals. As the plural formation depends on the presence of singulars in the language, Mandarin is then proved to have no plurals[10]. I follow Chierchia (1998b) on and hold that all Mandarin nouns have mass denotation and are kind-denoting in semantics.

1.3   Article-lessness and the Definiteness Marking

Another difference between Chinese and English is that there are no definite or indefinite articles in the Mandarin language system. Speakers of Mandarin use *'one+Cl+N'* to express indefiniteness in the situations where an indefinite article would be used if translated into English. Demonstratives *'zhe (this)'* and *'na (that)'* are used to express definiteness in the language on some occasions where the definite article would be employed in English.

(3)   -Ni   zenme chidao le?

       You   how   late   ASP

       'Why are you late?'

       -Wo   zai   lushang yudao yi ge xuesheng, tan le   ji   ju.

        I   on   way   meet   one CL student,   talk ASP   several sentence.

       'I met a student on the way and we talked for a little while.'

---

[10] For an extensive discussion of Chierchia's account c.f .Bach (2008), Dayal (2009) and Dobrovie-Sorin & Beyssade (2012)

(4) Ni   shuo   de   zhe   ge   ren   bu   zai   zheli.

You   talk   MOD   this   CL   person not   at   here.

'This person you mentioned is not here. /The person you mentioned is not here.'

(5) Wo   zuotian   mai   de   na   ben   shu   hen   youyisi.

I   yesterday   buy   MOD   that   Cl   book   very   interesting.

'That (the) book I bought yesterday is very interesting.'

In example (3), the number phrase *'one+Cl+student'* has an indefinite reading that can be comparable to the English indefinite article phrase *'a student'*; instead of a number reading of *'one student'*. The structure of *'one+Cl+N'* Chinese can have both readings but it is habitually used to introduce indefiniteness that with an existential quantification in the language (Chen, 2004). The proximal demonstrative '*zhe (this)*' in the sentence (4) and the distal demonstrative '*na (that)*' in (5) in these uses are both definite markers and can be viewed as a translation equivalent of the English definite article *the*.

Neither of the two demonstratives in the examples has referential or ostensive interpretations. As pointed out by Li (2013), since there are no articles in the language, it is natural for the native speakers to use demonstrative to express definiteness; and therefore, Chinese demonstratives are often considered to be possible candidates for the D-ship in syntax (Sio, 1976). It is, however, not agreed among linguists on whether any of the demonstratives or other linguistic devices can take the full function of the definite article in the language. Chen (2004) and Huang (1999) assumed that the distal demonstrative is developing towards a definite article in the language. Cheng and Sybesma (1999, 2012), on the other hand, argued that classifiers take the function as the definite article in both Cantonese and Mandarin. Other linguists (Ning, 1996; Si, 2004; Zhang, 2006) think that the modification marker 'DE' needs to be considered as the equivalent of the definite article in Chinese.

(6)   gaogao   de   nanhai

        tall   MOD   boy

        'the tall boy'

(7)   Zhangsan   de   maoyi.

        Zhangsan   's   sweater

        'Zhangsan's sweater/ the sweater of Zhangsan's

All the above-mentioned perspectives on the definiteness marking in Chinese are inclined to locate a

linguistic substitute in the language that is able to play the grammatical role of the definite article. I

take the ground that there is no grammatical distinction of definiteness and indefiniteness in Chinese.

Whether a language has a grammatical category of definiteness depends upon if there are specialized

grammatical means primarily used for the particular function (Lyons, 1999). In English, typical

grammatical definites are phrases start with *a/an* or *the*. Unlike English, Chinese has no definite

articles. Therefore, there is no grammatical definiteness can be characterized in the language.

However, the lack of grammatical definites in Chinese does not overwrite the semantic distinction of

definite and indefinite noun phrases categorizations. Various syntactic forms, such as demonstrative

phrases and bare nouns can be accountable for expressing definiteness in the language.

1.4   Basic Nominal Constructions and the Definite and Indefinite Interpretations

First of all, Chinese nouns habitually occur in their bare forms in the argument positions as in (i) and

generate flexibility in contextual interpretation with respect to number and definiteness readings.

Besides, the nominal phrasal structure in the argument positions commonly appears in the following

forms of (ii) to (v).

    (i)   N

(ii)   Cl+N

(iii)   Num+Cl+N

(iv)   Dem+Cl+N

(v)   Dem+Num+Cl+N

A relative clause (RC) can also be attached to a demonstrative phrase with a modification marker (MOD) as in (vi) and (vii) and generate the following constructions.

(vi)   RC +MOD+Dem+Cl+N

(vii)   Dem+Cl+RC+MOD+N

In terms of the definiteness interpretation, bare nouns can have both definite and indefinite readings and also an opaque reading in some situations.

(8)   Gou   yao   guo   malu.   (*Definite*)

       Dog   want   cross   road.

       'The dog/dogs wants to cross the road'   (Cheng and Sybesma, 1999, p. 510)

(9)   Wo   xiang   mai   motuoche.   (*Indefinite*)

        I   think   buy   motorcycle.

       'I am thinking of buying a motorcycle.'

(10)   Zhangsan   yao   zhao   yisheng.   (*Opaque*)

       Zhangsan   want   look-for   doctor

       'Zhangsan wants to find a doctor/some doctors/the doctor/the doctors.'

As illustrated in the above examples, the bare noun in the pre-verbal position in (8) introduces a

definite interpretation. In (9), the bare noun *motuoche ('motorcycle')* takes the Verb Phrase (VP) restricted position and obtains an indefinite reading. The interpretation of the bare noun in (10) is opaque in terms of both number and the value of definiteness.

The [Cl+N] construction in Mandarin always has an indefinite reading when taking the post-verbal position of a sentence.

(11)   Wo   yudao   ge   xuesheng.

       I   meet   Cl   student.

       'I met a student.'

As Cheng and Sybesma (1999) pointed out, the *yi*-construction in the form of *[yi ('one') +Cl+N]* is often considered as comparable to the English indefinite descriptions. The *yi*-construction in Mandarin can have both a quantificational reading of *one +N*; as well as an indefinite description reading of *a/an+N*. For example, the following sentence has two readings when translated into English. The first reading is that the speaker met *one* student but not three or five; and the second reading is that the speaker met an ambiguous student and the proposition expressed is equal to the proposition expressed in (11).

(12)   Wo   yudao   yi   ge   xuesheng.

       I   meet   one   Cl   student.

       'I met one student' or 'I met a student.'

1.5   The Topic-comment Structure

In general, the notions of topic and comment together with their relationship are considered as the reflecting the information structure of the sentence and the discourse containing the sentence. A topic is informationally defined as the constituent of the sentence which this sentence is *about* and the comment is the part of the sentence of what is said about the topic (Lambrecht, 1996). In English, a

typical topic-comment structure can be exemplified as a simple sentence containing a subject and a predicate. For example, in the sentence *'Russell is writing a letter'*, the subject *Russell* is what the sentence is about and the predicate *'writing a letter'* is the comment of the sentence that conveys the information about *Russell*. Typically, in English, topics are noun phrases in the subject position of the sentence. Comments, on the other hand, are the open sentences that formally consist of the predication.

It is often claimed that since the topic-comment structure occurs so frequently in Mandarin Chinese such that the language is considered as a topic-prominent language; in contrast with the subject-prominent language such as English (Li and Thompson, 1976, 981).

'One of the most striking features of Mandarin Chinese structure, and one that sets Mandarin apart from many other languages, is that in addition to the grammatical relations of "subject" and "direct object", the description of Mandarin must also include the element 'topic'. Because of the importance of "topic" in the grammar of Mandarin, it can be termed a topic-prominent language.'

(Li and Thompson 1981, p. 15)

The distinction between the subject and the topic of a sentence is syntax-structural versus informational. As Li and Thompson's (1976 and 1981) pointed out, the difference between a subject-predicate structure and a topic-comment relationship is that while it is necessary for a subject to grammatically link with the predicate; it is not necessary for a topic to have this grammatical link with the comment. It is sufficient to identify a subject simply through its syntactic relation with the predicate; but it is not sufficient to identify a topic-comment structure purely based on the syntactic formation of a sentence. Li and Thompson (1976 and 1981) claimed that the syntactic notions of subjects and predicates are not well-established in the Chinese grammar. It is the topic-comment structures that play the major role in conveying information by the language users.

Before exploring the Chinese topic-comment structure, it is worth noting here that the topic-comment construction is a universal phenomenon that can be found in all languages. Reinhart (1981) applied a file-card metaphor to describe the relationship of the topic and comment structures in natural language. The topic functions as the constituent that establishes a file card and the comment is the information that stored in the file card.

(13) a. [John]$_{TOPIC}$ [married Mary] $_{COMMENT}$.

b. [Mary] $_{TOPIC}$ [married John] $_{COMMENT}$.

The above example briefly illustrates Reinhart's (1981) explanation of topic-comment relations. The file card in (13.a) is about 'John' and hence 'John' is the topic of the sentence and the VP structure 'married Mary' is the comment about John. Sentence (13. b) although roughly has the same meaning is not about 'John' but about 'Mary' and her marital status. Therefore, 'Mary' is considered as the topic of the sentence.

The topic and comment relationship are encoded differently across languages. Some languages distinguish the topic constituent in syntax and overtly mark the topic by formal devices or morphological makers. The syntactic indication of topic-comment structures is language-specific. For example, in languages like Japanese and Korean, the topic constituent of a sentence is segmented by particles. The topic marking particles in these languages are grammatical elements whose main function is to mark topics. In English, however, no overt markers can be found for the topic constituent. A topic can be introduced by lexical items, pauses or intonations in the speech act, and though contrastive presentations in information settings.

(14) Speaking of [the president] $_{TOPIC}$, I didn't see him in the meeting room this morning.

(15) As for [his heath] $_{TOPIC}$, the president is fine.

(16) -What do your siblings do?

-[My sister]$_{TOPIC}$ studies music and [my brother]$_{TOPIC}$ studies engineering.

In (14) and (15), the lexical items of *'speaking of'* and *'as for'* are used to indicate what a sentence is about. In (16), the contrastive representation of '*my sister'* and *'my brother'* set up the contrastive topics in answering the question about the speaker's siblings.

Unlike in Japanese and Korean, topics in Chinese are not overtly marked by particles nor by other special functioning elements. The identification of the topic in the language depends on the linear word order as well as the semantic readings of the sentence (Chen, 2009). Chafe (1976) recognizes the 'Chinese style topics', as scene-setting expressions that often appear in the sentence-initial

positions. The function of these expressions is to set 'a spatial, temporal or individual framework within which the main predication holds' (Chafe1976, p.50). Follow Chafe's (1976) theory, it is assumed that Chinese topics are loosely associated with a syntactic position. However, unlike subjects which are syntactically and semantically integrated with the predicate structure of the sentence. The relationship between a topic and a comment is mainly semantic.

The definition of topics among theorists in Chinese linguistics is inconsistent; especially when analysed in contrast with the syntactic notion of subjects. Li and Thompson (1976, 1981), as mentioned before, stress that the topic-comment relationship is independent of the syntactic constructions of subject-predicate structures. They (1981, p. 15) maintain that 'in addition to the grammatical relations of 'subject' and 'direct object', the description of Mandarin must also include the element of 'topic''. The statement indicates that 'topic' is a syntactic element in Chinese that can be paralleled to the notions of 'subjects' and 'objects'.

Another popular view among linguists in the Chinese language is to treat 'topic' as a purely grammatical notion that is independent from the discussion of the subject and predicate construction. (Huang, 1982; Li, 1990; Her, 1991; Jiang, 1991; Tan, 1991; Xue, 1991; Ning, 1993; Qu, 1994). Her (1991) proposed that 'topic' needs to be viewed as a grammatical function that needs to be treated as separate from the subject of a sentence. Detailed discussions on the definition of topics and features of topic-comment structures in Chinese will be illustrated in the next chapter where the discussion of bare noun definites in topic positions is centred.

Also, different types of topics[11] can be found in Chinese, among which three typical types are listed in this section. All of the topics are in the sentence-initial positions.

---

[11] The types of topics are related closely to the debate on how topics are generated in the language. Some linguists hold that topics are base generated and others think that there is a movement occur in the topic position.

The first type of topics involves a resumptive pronoun in the comment structure. The topic NP functions as an antecedent of the resumptive pronoun and the pronoun can take up the subject, direct object or indirect object positons.

(17)   a.   Zhang xiaojie, ta   renshi wo.

                 Zhang Miss,   she   know   I.

                 'Miss Zhang, she knows me.'

        b.   Zhang xiaojie, wo   renshi ta.

                  Zhang Miss,   I   know   she.

                 'Miss Zhang, I know her'

        c.   Zhang xiaojie, wo   gei   ta   san   ben   shu.

                 Zhang Miss,   I   give   she   three   Cl   book.

                 '(to) Miss Zhang, I gave her three books'

The resumptive pronoun and the topic NP share the co-reference of 'Miss Zhang'. In (17.a), the pronoun takes the subject position and in (17. b) the direct object position and indirect positon in (17.c). This type of topics can be comparable to a typical English topic-comment structure sentences as in (14) and (15).

The second type of topic-comment structures involves a direct object movement in the word order. This type of topics is considered as typical in the usage of Chinese language. The object is exacted and moved to the sentence-initial position to form a topic clause. Hence, the normal SVO word order in the language is converted into OVS for the syntactic formation of the topic clause.

(18)   a.   Zhang xiaojie, wo   mei   jiandao.

                 Zhang Miss   I   not   see.

                 'As for Miss Zhang, I didn't see *her*.'

        b.   Yu   mao   chi   le.

                 Fish   cat   eat   PERF.

                 'As for the fish, the cat ate *it*.'

        c.   Qianbi wo   mai   le,   shu   wo   mei   neng   mai   dao.

Pencil I buy PERF, book I not able buy get.

'As for the pencil/pencils, I bought it/them, but the book/books, I couldn't get it/them.'

The third type of topic-comment structure found in Chinese consists a double nominative construction. Two NPs are found in the preverbal position and the two noun phrases display a domain-subset relation (Kroeger, 2004).

(19) a. Zhe xie che san liang shi wo de.

This Cl-PLURAL car three Cl be I POSS.

'(Among) these cars, three of them are mine.'

b. Shuiguo wo zui xihuan chi putao.

Fruit I best like eat grape.

'(among) fruits, I like the grapes the best.'

c. Changjinglu bozi chang.

giraffe neck long

'As for giraffes, their necks are long.'   (Chen 2009, p.168)

The above examples are recognized as typical topic-comment structures in the language. Apart from these formations, other constructions[12], such as the adverbial phrases 'Yesterday' can also take up the sentence-initial position and function as the semantic topic in a topic-comment structure.

It is generally agreed that topics in Chinese display the following features:

a.   Topics invariably occupy the S-initial position of the first clause in a topic chain.

b.   Topics can optionally be separated from the rest of the sentence in which it occurs overtly by one of the four particles a (ya), ne, me, and ba.

c.   Topics are always definite.

---

[12] Other syntactic constructions including Ba-construction or Lian..Dou construction are considered to mark topics (Shyu 1995, and Tsao 1987a). It is also argued that Ba-constructions functionally mark secondary topics (Tsao 1987). Hence, the notion of topics needs to be viewed as locating at different levels in the sentence construction.

d.   Topics are the notion of discourse; it may, and often does, extend its semantic domain to more than one clause.

e.   Topics are in control of the pronominalization or deletion of all the coreferential NPs in a topic chain.

f.   Topics, except in clauses in which it is also subject, play no role in such processes as true reflexivization, Equi-NP deletion, and imperativization.

<div align="right">(Shi 2000, p.384)</div>

2. Indefinite Descriptions in Chinese

2.1   The Syntactic Constructions of Chinese Indefinite Descriptions

It is widely accepted that even though Chinese lacks articles as overt determiners for expressing definiteness and indefiniteness; the closest approximants of an indefinite marker serving all the major functions of a regular indefinite article as the English '*a/an*' can be found in the language (Chao, 1968; Chen, 2003, 2004; Cheng and Sybesma, 1999, 2004; Lü,1944; Paris,1981; Li and Bisang, 2012; Li, 2013).

Chen (2003) observes that the construction of number *one* plus a classifier in the form of [yi*'one'*+Cl] can be viewed as the replacing element for the indefinite article and a *yi*-phrase in the form of [yi*'one'*+Cl+N] is an indefinite description. Li and Bisang (2012) think that the classifier (Cl) in bare classifier phrases [Cl+N] solitarily functions as an indefinite determiner in the language and therefore a bare classifier phrase in Mandarin can be considered as an indefinite description. My view is that Mandarin Chinese favours similar grammatical categorizing devices for singular indefinite references as encoded in the English indefinite descriptions. Both [yi*'one'*+Cl+N] phrases (with an unstressed number *yi* 'one') and bare classifier constructions in the form of [Cl+N] can be considered as indefinite descriptions in Chinese.

Russell's (1905 and 1919) distinction of definite and indefinite descriptions is firstly grammatical. Indefinite descriptions in English are functionally modified by the indefinite article *a/an*; and definite

descriptions start with the definite article *the*. The two articles contrast with each other in their grammatical selective properties. The definite article can be combined with both mass and countable nouns and allow the countable common nouns to be in either singular or plural forms. The indefinite article, on the other hand, only allows singular common nouns to be selected in forming a grammatically well-structured [a/an +N] construction. Henceforth, contra to a definite description, an indefinite description in English automatically receives a singular denotation anchored by a syntactically singular count noun in combination. Based on Russell's (1905 and 1919) analysis, the distinction between definite and indefinite descriptions is that there is a uniqueness quantification embedded in the semantics of definite descriptions but not in the semantics of indefinite descriptions. In the semantics of indefinite descriptions, only the existential quantification is entailed. Both [yi*'one'*+Cl+N] and [Cl+N] constructions of Chinese indefinite descriptions display singularity in syntax and introduce existential quantification in semantics; just as the English indefinite description does.

2.1.1   Bare classifier phrase [Cl+N] in Mandarin

A bare classifier phrase in Mandarin refers to a phrase composed of just a classifier and its head noun without any numerals or demonstratives preceding the classifier. In Mandarin, a bare classifier phrase consistently receives an indefinite interpretation with the denotation of an individual or object[13]. The singularity denotation and the indefinite interpretation of a bare noun phrase can be evidently demonstrated by comparing a [Cl+N] phrase with a bare noun in the argument position.

Mandarin bare nouns are allowed to be in the argument positions in the use of the language. Since there is no overt number or definiteness markers for bare noun arguments, they are often considered to have the general number and are flexible in receiving definite or indefinite readings (Chen, 2004;

---

[13] Bare classifier phrases in the forms of [Cl+N] can be found almost in all Sinitic languages; however, the syntactic distribution and semantic interpretation of bare classifier phrases vary and can be categorized into several types accordingly[13] (Jiang and Hu, 2010). Cantonese [Cl+N] phrases, for instance, take strong positions in syntax and introduce definite readings instead of indefinite ones. In this dissertation, the discussion is restricted to Mandarin data only.

Cheng and Sybesma, 1999; Rullmann and You, 2003). Bare classifier phrases in the form of [Cl+N], however, indicate singularity and indefiniteness in any context.

The singular denotation of [Cl+N]

(20)   Wo   mai   le   shu.   (*bare noun: number neutral*)

       I   buy   PFV   book.

       'I bought one or more books.'

(21)   Wo   mai   le   ben   shu.   (*bare classifier: singular*)

       I   buy   PFV   Cl-$_{VOLUME}$ book.
       'I bought a book.'
       'I bought a book.'

As shown in the above example, in (20), the NP *shu 'book'* in the bare form denotes a number neutral concept of 'book' (or according to Cheirchia (1998b), it is kind denoting in this usage). In contrast, even if there is no numeral 'one' overtly stated in (21), the bare classifier phrase [Cl-$_{VOLUME}$ +book] denotes a singular book.

The following examples of anaphora in the continuation clauses further demonstrate the point that [Cl+N] are always singular.

(22)   a.   Wo   mai   le   mao.   Mei   zhi   dou   hen   congming.

              I   buy   PVF   cat.   Each   Cl$_{ANIMAL}$ all   very   intelligent.
              'I bought cats. Each is very intelligent.'

       b.   Wo   mai   le   mao.   Ta   hen   congming.
             I   buy   PVF   cat.   It   very   intelligent.
             'I bought a cat. It is very intelligent.'

(23) a. #Wo   mai   le   zhi   mao, mei   zhi   dou   hen   congming.

I   buy   PVF   Cl-ANIMAL cat, each   Cl-ANIMAL all   very   intelligent.

#'I bought a cat. Each is very intelligent'

b.   Wo   mai   le   zhi   mao.   Ta   hen   congming.

I   buy   PVF   Cl-VOLUME   cat.   It   very   intelligent.

'I bought a cat. It is very intelligent.'

In the above examples, the quantifier *mei ('each' or 'every one of')* lexically selects plural denotations to be its antecedents. Chinese bare nouns with the unspecified number allow both singular pronoun and the quantifier *mei ('each' or 'every one of')* to be its anaphor in the continuation clauses. Bare classifier phrases, in contrast, always indicate singularity and hence cannot take up the function as the antecedent of the plural quantification *mei ('each' or 'every one of')*.

Indefinite interpretations of [Cl+N]

Bare nouns:

(24)   a.   Shubao   diu   le.   *(Definite)*

Handbag   lose   PRF

'The handbag is missing.'

b.   Wo   xiang   mai   shubao.   *(Indefinite)*

I   want   buy   handbag.

Shenme   yang   de   dou   xing.

Any   design MOD   all   OK.

'I want to buy a handbag/ some handbags. Any style/design is OK.'

    c.   Wo   qu   mai   shu.   *(Opaque)*

           I   go   buy   book.

'I'm going to buy some books/a book/the book/the books'.

Bare classifier phrases:

(25)   a.   Wo   xiang mai   ge   shubao.   *(Indefinite)*

           I   want   buy   Cl$_{\text{GENERAL}}$ handbag.

'I want to buy a handbag.'

Not: 'I want to buy some handbags.' or 'I want to buy the handbag.'

    b.   Wo   yu-dao ge   ren.   *(Indefinite)*

           I   meet   Cl$_{\text{GENERAL}}$ person.

'I met a person.'

Not: 'I met some persons.' or 'I met the person.'

In terms of the definite and indefinite readings, bare nominal arguments in Chinese have flexible interpretations. It is widely accepted that Chinese bare nouns tend to receive definite readings when they occur in strong positions; such as in the pre-verbal subject or topic positons. In lexically restricted positions, bare noun arguments are inclined to have indefinite, existential or indeterminate readings. Mandarin bare classifier phrases, however, strictly occur in lexical governed positions and introduce indefinite interpretations.

Mandarin [Cl+N] in lexical governed positions

(26)   a.   #Liang   che   du-zhe   chu-kou.   *(pre-verb)*

CL-VEHICLE   car   block-CONT   exit

'A car is blocking the exit.'

b.   Lisi   tiao   le   liang   che.   *(post-verb)*

Lisi   pick   PVF   Cl-VEHICLE   car

'Lisi selected a car (to buy/ to use).'

Unlike in some southern Chinese languages[14], [Cl+N] constructions in Mandarin cannot take pre-verbal positions and function as the subjects of the sentences. The existential *you ('there be')* need to be used proceeding a bare classifier phrase for the construction to be able to take the strong position before the main verb.

(27)   You   Liang   che   du-zhe   chu-kou.

There-be   Cl-VEHICLE   car   block-CONT   exit

'There is a car blocking the exit.'

In (27), the bare classifier phrase '*liang che ('Cl-VEHICLE+ car')*' takes a stronger position before the main verb *du-zhe (block-CONT).* According to Huang (1982, 1987), the verb *you ('to have or there be')* in Mandarin, is an existential verb that can occupy the sentence-initial position. Since the verb '*you*' takes the sentence initial position in the above example, the classifier phrase '*liang che (Cl-VEHICLE+ car)*' is considered as located in a restricted position; and therefore can be used before the verb *du-zhe (block-CONT).*

In summary, a Mandarin bare classifier phrase can be viewed as a candidate for Chinese indefinite descriptions because it *(i)* does not introduce a measuring reading *(ii)* introduces indefiniteness. In

---

[14] For example, Cantonese bare noun phrases are allowed in the strong positions and introduce definite readings instead of indefinite readings. For a more detailed discussion of bare classifier phrases in Sinitic languages in terms of definiteness, see (Cheng & Sybesma 1999, 2004; Li, 2013;Li& Bisang, 2012; Wu & Bodomo, 2009;Gebhardt, 2011).

comparing with the English indefinite descriptions, the [Cl+N] phrases in Mandarin share similar the same semantics but display distinctive features in syntactic distributions. The English indefinite descriptions in the form of [a/an + N] can take both pre-verbal and post-verbal positions. The Chinese indefinite descriptions in the form of [Cl+N] are only allowed in lexical restricted positions.

2.1.2   The indefinite [yi+Cl+N] construction

Another phrasal construction in Chinese that can be claimed to be the candidate of indefinite descriptions is the [yi+Cl+N] construction (Chen 2003, 2004; Lü 1944). *Yi* is the numeral *one* in Chinese. The literal meaning of [yi+Cl+N] is 'one N.' In English, the quantity denoting number phrase 'one N' and the indefinite description 'a/an N' take distinct syntactic forms. In Mandarin Chinese, however, since there is no article available, the numeral 'one' phrase in the form of [yi+Cl+N] takes both functions. The construction of [yi+Cl+N] is ambiguous between the quantity-denote and indefinite-denote readings.

Lü (1944) firstly points out that there are two variants of the [yi+Cl+N] phrases: a variant with a strong or stressed *yi*, which serves as a quantity denoting phrase; the other variant contains a weak or unstressed *yi,* which is not quantity denoting; but generates the indefinite readings. The contrast can be illustrated as the following.

The stressed yi

(28)   Fangjian   li   you   yi   zhang   zhuozi, san   ba   yizi.

Room   inside have   one   Cl-SPREAD   table   three   Cl-HANDLE   chair.

'There are one table and three chairs in the room.'

(29)   Ta   mai   le   yi   ben   shu,   bushi   san   ben.

He   buy   PVF   one   Cl-VOLUME   book,   NEG   three   Cl-VOLUME.

'He bought one book, not three.'

The stressed *yi* has the meaning of the cardinal number *'one'* and quantify over the modified noun. As displayed above, the stressed *yi* phrases are direct translations of the English number phrases of 'one N'.

The weak or unstressed yi

(30) Ta   na   le   (yi)   ben   shu   jiu   likai   le.

He   take   Perf   (one)   Cl-VOLUME   book   then   leave   Part

'He took a book and then left.'

(31) Zhangsan   shi   (yi)   ge   guzhi   de   ren.

Zhangsan   be   (one)   Cl-GENERAL   stubborn   MOD   person.

'Zhangsan is a stubborn person.'

Lü (1944) pointed out that the weak *yi* is not only phonologically unstressed but also considered as *weak* in the lexical readings. It can hence be viewed as a redundant semantic items as demonstrated in the above examples of (30) and (31). The unstressed *yi* can be omitted in these contexts without altering the readings of the sentences. With the presence or absence of the unstressed *yi*, the sentences are unaffectedly accepted as grammatical and are used interchangeably in daily communications[15].

The two readings of the [yi+Cl+N] construction can therefore be effectively distinguished by the syntactic reduction test. It is possible to take the number *yi* *('one')* out of the discourse if the construction has a weak or indefinite reading; and it is not acceptable to omit the *yi* *('one')* phonologically if the phrase has a quantity-denoting reading.

(32) a.   Jiaoshi   li   zhi   you   yi   ge   nansheng,

---

[15] Lü (1944) emphasized that in oral discourse, the speakers tend to choose the omitted form of unstressed *yi;* whereas in the written form of the language, the full structure of [yi+Cl+N] is often preferred.

Classroom   inside   only   have   one   Cl_{GENERAL}   boy

bu   shi   san   ge.

not   be   three   Cl_{GENERAL}

'Inside the classroom, there is only one boy not three.'

b.   # Jiaoshi   li   you   ge   nansheng,

Classroom   inside   have   Cl_{GENERAL}   boy

bu   shi   san   ge.

not   be   three   Cl_{GENERAL}

#'Inside the classroom, there is only a boy not three.'

c.   Jiaoshi li   you   ji   ge   nansheng?

Classroom   inside   have   how many   Cl_{GENERAL}   boy

'How many boys are there in the classroom?'

—You   yi   ge   nansheng.

There-be   one   Cl_{GENERAL}   boy

'There is one boy.'

—# You   ge   nansheng.

There-be   Cl_{GENERAL}   boy

'There is a boy.'

In (32 a.) and (32 b.), the number reading of the cardinal *one* is emphasized by the contrastive

statement of *'not three'*. It is, therefore, not acceptable to phonologically reduce the *yi ('one')* in the

construction. The same applied to (32.c) in which case a strong or stressed *yi ('one')* is required in answering the question of 'how many'.

In summary, the number one phrase in Mandarin in the form of [yi+Cl+N] has two readings: a quantity reading and an indefinite description reading. It is possible to separate the two variants by a phonological-syntactic reduction test of the number *one*. A quantity reading of the number *yi ('one')* does not allow the number to be omitted either in speech acts or in written forms; on the other hand, an indefinite description reading of the *yi*-phrase allow the number *one* to be dropped in both situations.

2.1.3   *The two indefinite description constructions*

As illustrated in the above examples, the two indefinite description constructions, i.e. the bare classifier phrase of [Cl+N] and the number *yi ('one')* phrase of [yi+Cl+N], can be used interchangeably without discriminations. The only difference between an indefinite [yi+Cl+N] phrase and a bare classifier phrase is distributional. The unstressed *yi*-phrase can take both pre-verbal or post-verbal positions; while the bare classifier phrase is only allowed for lexical restricted positions.

It is, however, not agreed among theorists whether the two constructions can be viewed as completely equal either at the level of syntax or at the level of semantics. I summarize the debate concerning the disagreement mainly into two competing theories: the *one-deletion theory* and the *semantic-distinctive theory*.

The *one-deletion theory* states that a bare classifier phrase [Cl+N] can be viewed as a reduced form of an unstressed *yi* construction. The only difference between them is that the fuller form of [yi+Cl+N] can take up the subject or topic positions; while the bare classifier form can only occur in lexical restricted positions. Apart from this syntactic distributional requirement, there is no semantic or pragmatic differences that can be found in using the two forms of Chinese indefinite descriptions (Lü, 1944).

The *semantic-distinctive theory* argues that since [yi+Cl+N] can take the strong positions, such as taking the pre-verbal argument positions or embedding within the BA-construction, the [yi+Cl+N] construction delivers both specific and unspecific indefinite readings. In contrast, the indefinite [Cl+N] phrase does not have specific indefinite uses[16]. In comparing the two constructions, only the unstressed *yi* construction is the best approximate of an English indefinite description (Chen, 2003, 2004).

Both theories have their problems. I argue that the problem with the one-deletion theorists is that they overlooked the individuation function of the classifier by emphasizing that it is the numeral one that solely achieves the singular and indefinite reading. I follow Chierchia (1998b) and Krifka (1995) in treating the basic readings of Chinese nouns as kind-denoting. The main function of a classifier is to shift the kind references into entity-denoting references (Cheng and Sybesma, 1999; Lyons, 1999). I follow Li and Bisang (2012) and claim that the bare classifier phrase generates the singular and indefinite reading without the stipulation of an unseen *yi* in its semantics. Instead, the bare classifier phrase projects a ClP structure with the classifier takes the individuating function.

(33)   a. Classifier $=\lambda k\lambda x.$ INST $(x, k) \wedge$ ATOM(x)

   b. $\|shu\| =$BOOK

   c. $\|ben\ shu\| =\lambda x.$INST $(x, $BOOK$)\wedge$ ATOM$_{Volume}(x)$

(Li and Bisang 2012, p. 347)

As illustrated in the above, the classifier performs the function as a type shifting operator which mapping the instantiation of a kind term into an entity reading. The bare noun *shu ('book')* has the basic reading as the *book* kind. When combined with the classifier, the bare noun shifts its reading

---

[16] Note that Jiang (2012) shows that the theory is incorrect. As discussed below, the writer agreed with Jiang (2012) on denying the semantic-disctinctive theory of the two constructions.

from kind-level references to the object-level denotation. The classifier phrase *ben shu ('Cl+book')* therefore denotes an entity that belongs to the *book* kind.

Since [Cl+N] in Mandarin always occurs in post-verbal positions, the default existential quantification over the VP domain automatically licenses the existential quantifier which unselectively binds the variable in the indefinite [Cl+N] phrase (Diesing, 1992; Jiang, 2012)[17].

I disagree with the semantic-distinctive theory in claiming that [Cl+N] constructions do not have specific readings. Different with the semantic-distinctive theorists, I argue that the distinctive syntactic features do not license any differences in the semantics of the two forms of Chinese indefinite descriptions. Both [yi+Cl+N] and [Cl+N] can be comparable to the English indefinite descriptions in introducing specific or unspecific indefinite denotations.

(34) Mei   ge   haizi   dou   you   ben   tonghua   gushui shu.

      Every Cl   kid   all   have   Cl   fairy   story   book.

      'Every kid has a fairytale book.'

The above utterance has two readings. One of the readings is that every kid has a different fairytale book, in which case, the indefinite description takes narrow scope when interacting with the quantifier *every* and receives an existential reading. The second reading of the utterance involves one specific book as the speaker's reference, in which situation, the indefinite description *a fairytale book* scope over the quantifier *every*. The Chinese sentence of (34) contains an indefinite description in the form of bare classifier phrase. It has exactly the same ambiguous reading as found in the English utterances. The bare classifier phrase is able to take the wide scope and introduce an indefinite but specific book as its reference.

---

[17] Note that one problem with this view is that [Cl+N] in object position can scope high, over the VP operators (2012). In the following paragraph, the view that [Cl+N] cannot have specific readings is denied.

In conclusion, both weak [yi+Cl+N] and [Cl+N] phrases are indefinite descriptions in Mandarin. I follow Ludlow and Neale (1991) in their analysis of the English indefinite description and distinguish the uses of Chinese indefinite into five different uses accordingly: *i)* purely quantificational uses; *ii)* referential uses; *iii)* strongly specific uses; *iv)* weakly specific uses; and *v)* indefinite descriptions used as definite descriptions. I also employ the terms and definitions designed by Ludlow and Neale (1991) and argue that comparable to the English indefinite descriptions, none of these referential-related uses of Chinese indefinite descriptions reflect any genuine semantic referentiality. Instead, a Russellian existential quantificational theory of the indefinite descriptions needs to be applied in explaining the semantics of the Chinese indefinite descriptions.

2.2   A Russellian Analysis of Chinese Indefinite Descriptions

The Russellian framework can be briefly recapped as the account that indefinite descriptions are quantificational. However, mirroring the debate on the definite description semantics, many philosophers and linguists hold that indefinite descriptions appear to function more like referring expressions and/or are semantically ambiguous (Chastain, 1975; Donnellan, 1978; Wilson, 1978; Fodor & Sag, 1982). In this section, by analyzing the usages of Chinese indefinite descriptions, I argue that Chinese indefinite descriptions, exactly like their English equivalents, can be used to introduce referential, specific, and even definite references in ordinary language applications. These apparent referential or specific uses, however, are non-semantical. In the fashion as Kripke (1977) has stressed for definite descriptions, I follow the Gricean/Kripkean distinction of the *speaker's intention* and the *speaker's meaning* and argue that the ambiguity displayed in Chinese indefinite descriptions is not a genuine semantic ambiguity. My view is that there is a fundamental difference between a bona fide referring expression and a Chinese indefinite description type of term. The cross-linguistic evidence shows that a unitary Russellian theory of descriptions can be reinforced.

There are two important theses contained in this section for underpinning the arguments. The first concerns the definition of Chinese indefinite descriptions. Among the vast discussions on the indefiniteness in Chinese, no literature can be found linking the linguistic analysis with the

philosophical characterization of indefinite descriptions of the language. It is hence crucial for this dissertation to determine the candidates for Russell's (1905) definition of indefinite descriptions in the article-less language as the first step. The second thesis contains the analysis of the semantics of Chinese indefinite descriptions. It can be concluded that even though the syntactic formations and distributions of Chinese indefinite descriptions differ from their equivalents in the article languages, such as English, the semantics of these Chinese data can be captured by the Russellian quantificational account.

2.2.1   Terminologies

It is necessary to elucidate some basic concepts and terminologies before proceeding to the discussion of Chinese indefinite description semantics. These terminologies are used by Ludlow and Neale (1990) in their analysis of English indefinite descriptions. I will adopt their method in the investigation of Chinese indefinite descriptions.

2.2.1.1 Referring expressions and Quantificational expressions

In Russell's (1905) theory, the meaning of a referring expression '*b*' is the direct reference it introduces. A proposition contains *b* is *about* the entity *b* refers and therefore if the reference does not exist or the hearer has no acquaintance with the object or the individual *b* refers, the meaning of proposition simply cannot be entertained. A quantificational expression, in contrast, does not take a particular object as its semantic value. A proposition contains a quantificational expression combing a monadic predicate expression can still be interpretable even when the hearer has no direct acquaintance with the entity.

'I shall say that an object is 'known by description' when we know that it is 'the so-and-so', i.e. when we know that there is one object, and no more, having a certain property.'

(Russell 1911, p. 159)

On Russell's view, the fundamental difference between a referring expression *b* and a quantificational expression *the F* is mainly epistemic. Unlike the referring expression, no denotation failure or lack of acquaintance with the denotation of *the F* obstructs the understanding of propositions containing a quantificational expression.

2.2.1.2 Singular and General propositions

A singular proposition in the form of '*b is G*' is *about* the entity denoted by the referring expression *b*. To understand the proposition, it is necessary for the hearer to identify the referent of *b*. A general proposition is not about an entity but a variable that satisfied the descriptive contents. It is possible for the hearer to think about or make a belief about the particular object involved in the descriptive contents even if she has no direct acquaintance with the object.

Ludlow and Neale (1991) used the terms *singular propositions* and *general propositions* to separate these two types of propositions backed up by two different kinds of knowledge: knowledge by acquaintance and knowledge by descriptions.

2.2.1.3 Speaker's ground (**SG**), Proposition meant (**PM**) and Proposition expressed (**PE**)

The *speaker's ground (SG)* for a proposition consists of the most belief that the speaker has in building the grounds for the utterance. The *proposition meant (PM)* can be comparable to Kripke's concept of *Speaker's Intention;* and it represents the proposition meaning that 'the speaker intends to communicate' (Ludlow and Neale 1991, p. 176). The term *'the proposition expressed (PE)'* refers to the literary meaning expressed by the surface structure of the sentence. As mentioned above, on a Russellian analysis, the **PE** of a singular proposition and a general proposition needs to be analyzed distinctively. The **PE** of a singular proposition is *about* the referent of a referring expression; however, the **PE** of a general proposition needs to be analyzed with the cluster of descriptions denoting the entity.

2.2.2   The uses and the semantics of Chinese indefinite descriptions

2.2.2.1 The purely quantificational use

Similar to English indefinite descriptions, Chinese indefinite descriptions can be used purely

quantificationally. Suppose in a situation that I receive a message from a friend; saying that a student

of her will come and hand in her assignment to me when she is out of the office. Base on my general

belief that a student of hers will come to the department and leave her assignment with me on that

day; it is felicitous to utter the following sentence to describe the up-coming event.

(34)   Yi   ge   xuesheng   jintian hui-lai   jiao   zuoye.

        One   Cl-$_{\text{GENERAL}}$ student   today   will come   hand-in assignment.

        'A student will come and hand in her assignment today.'

The sentence will successfully communicate as an explanation why I cannot leave my desk on that

day. The indefinite description *yi ge xuesheng ('one Cl student')* is used purely quantificationally. No

particular student is intended to be the referent of the indefinite description. The speaker holds a

general belief and the utterance is meant to convey a general proposition about [an *x*: Student *x*]. The

proposition meant (PM) is identical with the general belief that is contained in the *Speaker's Ground*

(SG). The purely quantificational use of indefinite descriptions can be analysed as the following.

The purely quantificational use

The Speaker's Ground (SG): consists of a general proposition

The Proposition Meant (PM): is to express a general proposition

The Proposition Expressed (PE): contains a general proposition

PE=PM=SG

Chen (2003, p.1171) describes the purely quantificational use of Chinese indefinite descriptions as the

'non-identifiable and non-specific reference use'; as illustrated in the following example.

(28) Ta xiang mai (yi) zhuang   fangzi, shenme fangzi   dou   xing.

He want buy   one CL-BUILDING   house any   house   all   do

'He wants to buy a house; any house will do.'

The number phrase *yi zhuang fangzi ('one Cl house')* (or the bare classifier structure *zhuang fangzi ('Cl house')*) is not used as quantity denoting but as a non-specific indefinite description. The indefinite description posits the existential of a house that matches the descriptive contents. The interpretation of the sentence can thus be analyzed as: [an x: *House x*] (*He wants to buy x*). The clause *'any house will do'* indicates that the speaker does not hold *a specific house* in her mind and therefore the wide scope / specific reading of the indefinite description does not apply to the interpretation in this case.

2.2.2.2 The referential use

An indefinite description is used referentially if a referential content *b* is involved in the proposition. Consider the situation that both the speaker and the hearer know a person called Zhangsan; and they both share the information that Zhangsan is a fugitive. Suppose the speaker saw Zhangsan arguing with the hearer's girlfriend and uttered:

(36) Yi   ge   taofan zai he   ni   de   nvpengyou   chaojia.

One   Cl-GENERAL   fugitive DUR with your POSS girlfriend   argue.

'A fugitive is arguing with your girlfriend.'

The indefinite description *yi ge taofan ('one Cl fugitive')* is used referentially by the speaker based on the conditions of:

i)   both the speaker and the hearer know Zhangsan

ii)   both the speaker and the hearer know Zhangsan is a fugitive

iii)   the hearer is aware that the speaker is using the expression referentially

The condition iii) is a claim of identifiability. In linguistics, the pragmatic notion of identifiability indicates that the referent of an expression is in some way identifiable to the addressee (Anderson, 1985; Lyons, 1968; Hawkins, 1978). With the pragmatic notion of identifiability being involved, the referential use of Chinese indefinite descriptions needs to be considered as realized through pragmatic machineries.

Another example further demonstrates the referential use of indefinite descriptions is to use them together with an ostensive indication.

(37) Kan!   Yi   ge   ren   zai   ba   ni   de   luobu!

      Look! One Cl-GENERAL man   DUR   uproot your POSS   turnip.

      'Look! A man is uprooting your turnips.'

In the situation that both the speaker and the hearer are sitting in front of the garden window, what the speaker truly conveys by the utterance is that 'Look! *That man* is uprooting your turnips.' It is accurate to characterize the uses of the indefinite descriptions in the above occasions as a genuine direct referring use; however, these referential uses do not reflect their semantic nature.

The reasons can be listed as follows. First, the eligible referential use of the indefinites requires the contexts being fulfilled with non-semantical but pragmatic enrichment. As demonstrated above, the referential use of an indefinite expression demands the hearer's awareness of the speaker's intention of using it as direct reference. There are two ways for the hearer ability to identify the speaker's intended referent: either there is a tacit understanding between the interlocutors with shared knowledge about a particular object or individual; or there is an ostensive gesture or intention from the speaker for the hearer to achieve a sense-data acquaintance with the referent. None of these two conditions are semantic. In the case that the hearer fails to identify the referent pointed out by the speaker through the ostensive gesture, the communication will be considered as failed; because the hearer cannot grasp the *proposition expressed (PE)* in the speaker's utterance in the world *W* at time *t*.

Second, it is obvious that a referential indefinite description is fundamentally different from a genuine referring expression; such as a proper name.

(38)   a.   Zhangsan   zai   he   ni   de   nvpengyou   chaojia.

Zhangsan   DUR   with   your   POSS   girlfriend   argue.

'Zhangsan is arguing with your girlfriend.'

b.   Yi   ge   taofan   zai   he   ni   de   nvpengyou   chaojia.

One   Cl-GENERAL fugitive DUR with   your   POSS   girlfriend   argue.

'A fugitive is arguing with your girlfriend.'

The proper name 'Zhangsan' in (38 a.) directly refers to a person by that name. If the hearer does not know who Zhangsan is, the proposition cannot be entertained. In (38 b.), the indefinite description *yi ge taofan ('a fugitive')* refers to Zhangsan. Even though the indefinite description has the same referent with the proper name Zhangsan, the descriptive content of being a fugitive contributes to the communication. In the use of the proposition containing the proper name Zhangsan, a failure of communication immediately occurs if the hearer has no idea who the person is. In contrast, in the indefinite description proposition, it takes an extra step for the hearer to receive the information of *'someone is a fugitive'* before linking the description to refer to Zhangsan. In the case that the hearer fails to identify Zhangsan to be the referent of the indefinite description, the descriptive contents nonetheless contribute significantly to the understanding of the sentence meaning. Comparing with the proposition containing a proper name, a proposition contains a referential indefinite description involves an additional procedure in the understanding of its meaning. The contrast in the epistemological process of (38 a.) and (38 b.) posits a significant difference between a referential indefinite description with a genuine referring expression.

Besides, in the issue of mis-descriptions, the proposition with referential indefinite description may yield undetermined truth conditions. Suppose that both Zhangsan and Lisi are fugitives known by the

interlocutors and both had an argument with the hearer's girlfriend at the same place *P* but at different times t_1 and t_2. When the speaker uttered (38 b.), the speaker uses the indefinite description to refer to Zhangsan; but by the time the hearer checks the situation, Lisi is involved in the argument event. The truth value of (38 b.) differs depending on whether it is judged by the speaker or the hearer. Both the speaker and the hearer consider that the indefinite description *'yi ge taofan ('a fugitive')'* is used referentially, but unlike a true referential expression that has a fixed referent, the direct reference of the indefinite description changes via contexts.

In summary, Chinese indefinite descriptions behave like their English counterparts and can be used referentially to introduce a direct referent. However, the referential uses cannot be viewed as a semantic due to the fact that the pragmatic mechanism is essential in understanding the proposition containing referential indefinite descriptions.

2.2.2.3 The specific use

An indefinite description is used specifically when the speaker has a particular individual in mind when uttering the sentence.

(39)   Yi   ge   ni   reshi   de   xuesheng   jintian lai   le.

   One   Cl-GENERAL   you   know   MOD   student   today   come   PVF.

'A student you know in person came today.'

In contrast with the referential use, a specific use of the indefinite description does not require the referent to be identifiable to the hearer.

The referential use can be analysed as the following:

The Speaker's Ground (SG): contains a singular belief

The Proposition Meant (PM): is to express a singular proposition

The Proposition Expressed (PE): contains a general proposition

SG=PM

SG≠PE

PM≠ PE

In contrast, the specific use can be analysed as the following:

The Speaker's Ground (SG): contains a singular belief

The Proposition Meant (PM): is to express a general proposition

The Proposition Expressed (PE): contains a general proposition

SG≠ PM

SG≠ PE

PM=PE

In the specific use, there is a particular entity in the speaker's mind but the speaker is not intended to communicate the singular belief to the hearer. Ludlow and Neale (1991) distinguish two types of specific use of indefinites: the strongly specific use and the weakly specific use. An indefinite description is used weakly specifically in the case it is nearly impossible for the hearer to identify the particular referent in the speaker's mind; as illustrated in (40).

(40) a. Yi   ge   faguoren   jintian   hui-lai   wojia.

      One Cl-GENERAL   French   today   will come   my home.

   'A person from France will come to my home today.'

Suppose both the indefinite descriptions in (39) and (40) are used specifically, according to Ludlow and Neale's (1991) theory, it is easier for the hearer to identify the referent of the indefinite description *yi ge ni reshi de xuesheng ('a student you know')* in (39) compare to the indefinite

description *yi ge faguoren ('a French person)* in (40). It is a strong specific use of the indefinite description in (39) and a weak specific use in (40).

The contrast of strong and weak specific use of indefinite descriptions is characterized as 'identifiable specific reference' and 'non-identifiable reference' in linguistic theoretical framework (Abbott, 2002; Chen 2003, 2004; Karttunen, 1969).

The identifiable specific reference

(41) Ta   qunian mai   le   (yi)   zhuang fangzi

      He   last:year buy   PFV   one   CL   house

      'He bought a house last year.'

The non-identifiable reference

(42) Ta   xiang   mai   (yi)   zhuang fangzi,   shenme fangzi dou   xing.

      He   want   buy   one   CL   house   any   house   all   do

      'He wants to buy a house; any house will do.'

                                                                        (Chen 2003, p.1171)

A difference from a linguistic notion of 'identifiable specific reference' versus a philosophical notion of 'a strongly used specific indefinite description' is that from the linguistic perspective it is more concerned with the possible inferrability of the hearer to identify the reference; while in the philosophical discussions, it is more focused on the speaker's intention of conveying a singular belief through the proposition.

2.2.2.4 The definite use

An important feature of Chinese indefinite descriptions is that Chinese indefinite constructions can be used in combination with definite expressions, such as proper names, kinship terms with unique

implications and definite bare nouns in Ba-constructions (Chen, 2003). It is first reported by Lü (1944) that proper names can take up the common noun position in the indefinite [yi+Cl+N] constructions.

(43) Zhi zhe   yi   ju,   ba   (yi)   ge   Jiang Ping   hu   le   yitiao.

   Only this   one   utterance BA   one   CL   Jiang Ping   scare   PFV   jump.

   'Just this one utterance gave Jiang Ping a fright.'

(Lü 1944, p.164, Chen 2003, p.1172 (ex 6))

As shown in (43), the indefinite construction is used with a proper name 'Jiang Ping'. Although both the full construction of [yi+Cl+N] and the [Cl+N] structure can be used with proper names, it is more natural to phonologically omit the *yi* when the indefinite is used to introduce a definite reference.

(44)   Dangxia   ba   ge   Zhang San he Li Si   xia   de   mudengkoudai.

   instantly   BA   CL   Zhang San and Li Si   scare   CSC   dumbstruck

   'ZhangSan and LiSi were instantly struck dumb with fear.'

(*in Peculiar Fate of a Heroine(1821-1875)*, Wen 2007, p.43)

The example of (44) originally from the novel written in the mid-19th century was cited by Chen (2003, p. 1177) and Lü (1944, p.145) for the purpose to demonstrate that with the number one being reduced, the indefinite [Cl+N] construction can even be used to introduce plural references. In the above case, the plural references are composed of two proper names.

The particular use of Chinese indefinite constructions in combination with proper names needs to be distinguished from the use of English indefinite article with proper names. In English, it is allowed for the indefinite article *a/an* to be combined with a proper name to deliver the meaning of 'a person called…' or 'a certain…'.

(45)   a.   There is a Bill Jones on the line.

          b.   A Susan is at the reception and waiting to see you.

In both cases of (45), the expression of 'a + proper name x' can be understood as a reduced form of 'a person called x'. It is assumed that in English when the speaker uttering sentences as (45), she implies that the referent by the proper name is not necessarily identifiable to the hearer.

The use of Chinese indefinite construction with proper names does not allow the possibility of non-identifiability by the addressee. A unique referent is indicated to fit into the [*yi*+Cl+ proper name] description. The indefinite plus proper name is felicitous if first, both the speaker and the hearer knows a person called by that name; and second that person fits into the description of the utterance (e.g. was scared as in (43) and (44)).

The distinction can be illustrated more clearly when a proper name-like kinship term is involved.

(46)   Ta bei pengyou   ba   (yi)   ge   taitai   gei   pian   zou le.

        He BEI friend   BA   one   CL   wife   PP   cheat   away CRS

        'He was cheated by his friend out of his wife' or

        'He suffered from his friend cheating his wife away from him.'

(47)   Ta qiannian   si le ge die, qunian   you   si   le ge   niang.

        He year:before:last   die PFV CL father last:year   again die   PFV CL mother

        'His father died the year before last, and his mother died last year.'

It is normally accepted that the kinship terms such as *taitai ('wife')*, *die ('father')* and *niang ('mother')* have an inferable uniqueness in their references. Chen (2003, p.1169) explains that the indefinite construction [yi+Cl] in this example serves as a backgrounding device which marks the low thematic importance of the referent in the context; and the phenomenon of using the indefinite [yi+Cl]

construction introducing low thematic importance definite referent in Chinese as 'an implicational relation between non-referentiality and low thematic importance.'

For example, in (44) where the indefinite introduces plural references, Chen (2003) explains the usage as has following reasons. Firstly, since the two persons were mentioned in previous discourse, the indefinite construction and proper name construction indicates that the referents are identifiable to the addressee. Secondly, with the *yi* being taken out, the reading of *oneness* is reduced to the minimum; only the indefiniteness is kept for the context. The marking of proper names with indefiniteness means that the references have low thematic importance in the information structure.

In the definite use of Chinese indefinite descriptions, a unique reference is introduced. Follow Ludlow and Neale's (1991) analysis, the definite use of the indefinite can be illustrated as follows:

The Speaker's Ground (SG): consists of a general proposition with a definite description

The Proposition Meant (PM): contains a general proposition with a definite description denotation

The Proposition Expressed (PE): is a general proposition with an indefinite description

SG= PM

SG≠ PE

PM≠PE

In conclusion, it is obvious that even though Chinese indefinite descriptions can be used in referential-related situations, such as the referential, specific and definite uses, reading them as referring is largely based on the utterance meaning rather than the sentence meaning. There is a fundamental difference between an indefinite description and a truly referential expression. It is commonly accepted by linguists that indefinite descriptions across languages indicate existential quantifications (under Russell's analysis). In the literature, however, the debate can be found on whether they are better analysed as referring terms (Bach, 2008) or are ambiguous between quantifiers and referring expressions (Chastain, 1975 and Devitt, 2004). By analysing Chinese indefinite descriptions under the

Ludlow and Neale's (1991) framework, it is evident that indefinite descriptions are existential quantifications as Russell (1905) described and all the referential-related usage can be explained in terms of the pragmatic mechanism including the utterance meaning and the speaker's intention. The referential-related usage plays a significant role in information structure of the language; it is, however, cannot be analysed as an issue indefinite description semantics.

3. Definite Descriptions in the Article-less Language

As Schwarz (2013, p. 534) pointed out, the definite description without question constitutes a core device for managing reference in all natural languages. Even though the syntactic formation of definite description expressions varies across languages (especially in the languages without articles, the syntactic contrast between a definite description in English and a definite description without the article is obvious), there are certain features that are unified for all definite descriptions irrespective to the individual syntactic presentation across languages.

Definiteness as a key notion of natural language has been in the centre of much debate among both linguistic and philosophical literature. Lyons (1999) observes the definiteness versus indefiniteness distinction is a universal phenomenon that can be found in all world languages. However, the expressions that can be categorized as under the taxonomy of being definite vary from language to language. Whatever the exact range of definite phrases a language characterizes, it is undoubtedly that definite description is a core constitute of such a categorization. In other words, in looking for a definite description equivalent in an article-less language, a key criterion for an expression is its faculty of being able to introduce definite reference.

3.1   Grammatical, Pragmatic and Semantic Definiteness

The status of a noun phrase being definite is specified at various levels of representations in the studies of natural languages. At grammatical level, definiteness can be encoded by using a wide range of overt markers including affixes, clitics or morphologically weak free forms including typical grammatical or functional morphemes (Lyons 1999, p. 279). In languages displaying any form of overt markings of definiteness, the notion can be analyzed as under the grammaticalized

categorization. The prototypes of grammatical definiteness in English, for example, are descriptions. Definite and indefinite descriptions are definite noun phrases with the noun being determined by the definite article *the* and the indefinite article *a/an* in the surface grammar (Abbott, 2004).

Articles are not the only grammatical marking for definiteness. Lyons (1999) classifies the encoding of definiteness broadly into two types: simple and complex definiteness. Simple definiteness includes expressions functionally modified by article-like items (either in affix or free-form determiner forms); while complex definiteness is encoded by something 'other than presence or absence of an article' (Lyons 1999, p.107). The syntactic formation of this type of definite expressions is complex. The range of encoding complex definiteness varies according to the availability of different linguistic devices in different types of languages. For example, in English, proper names, pronouns, demonstrative and possessive phrases are all considered to be the representation of complex definiteness (Lyon, 1999).

The study on grammatical definiteness mainly focuses on the descriptive analysis of the morphological encoding of the definiteness feature in one language or the contrastive study on the phenomenon cross-linguistically. Different languages contain different marking systems for grammatical definiteness; and a definite maker in one language may be interpreted differently in another. According to Lyons (1999, p. 237), the tradition of the grammarian works on definiteness is often linked with the discourse approaches that is adopted in characterizing identifiability in pragmatics. The hypothesis traces back to Apollonius Dyscolus in the second century AD who investigated the presence and absence of Greek definite article in terms of whether the referent is known to the hearer (Householder, 1981; Lyons, 1999). Influence by Dyscolus and Maetzner (1880), Christophersen (1939) argued that the use of the English definite article *the* directs the hearer to a piece of mentioned or known information in the conversation. In turn, Christophersen's (1939, p.28) claim of '*the-form* supposes that the hearer knows it' significantly influenced Jespersen's (1943) theory of stages of familiarity in the account of definiteness; and later Prince's (1992) notion of 'hearer-old information'.

The theories of definiteness introduced above are all classified under the framework of pragmatic studies. Firstly, the notion 'identifiability' is essential in the pragmatic investigation of how definiteness and indefiniteness can be captured. In the pragmatic theories, the brief summarization of definite and indefinite contrast is roughly explained as that the use of definite expressions is a matter of expressing familiarity or *knowness* (Abbott, 2004). Lyons (1999, p. 253) points out that the notion of identifiability and the correlated notion of familiarity is particularly attractive to capture definiteness in referential uses, 'especially where the referent is a physical entity locatable in a physical context'.

The semantic analysis of definite noun phrases is often attributed to Russell (1905) regarding his analysis of definite descriptions in the celebrated article *On Denoting*. Lyons (1999) observes that in contrast to the pragmatic investigation on definiteness, the formal semantic or logic analysis of definiteness prefers the *uniqueness (inclusiveness)* approach as the main tactic in accounting for singular and plural definites in the natural language. The notion of uniqueness and inclusiveness is typically attractive to the theorists in the discussion of non-referential uses of the definite descriptions. Under Lyons' (1999) specification, there is a tendency for the theorists to apply a familiarity approach that better characterize the referential uses of definite noun phrases; and the uniqueness approach that is preferred in mapping semantic definiteness and provide better explanations on the non-referential nature of definite expressions. Lyons (1999, p. 253) observes the two prominent yet competing theories of definiteness as reflecting the referential and quantification debate on the status of definite descriptions. Lyons (1999) further explained in his book that in both linguistics and philosophy, the issue is much more complicated that even a combination of the two theories is argued to be necessary.

Definiteness has two values: the definite and indefinite status. Both familiarity and uniqueness theories predominantly concern with the contrastive analysis of the two values. Russell's (1905) noting of uniqueness quantification of definite descriptions sets up the foundation of a semantic uniqueness theory in capturing the definite value. In this theory, what sets the definite and the

indefinite value apart is the uniqueness proposition embedded in the definites. The uniqueness condition is also defended in the Fregean-Strawsonian referential theory. It is fortified that uniqueness is presupposed by the referential use of *the*. In contrast with the notion of 'semantic uniqueness' under Russell's proposal, the Fregean-Strawsonian notion of uniqueness condition is often referred as 'referential uniqueness' (Abbott, 2014; Bach, 2004; Biner and Ward, 1998; Roberts, 2003; Löbner, 1985). Both notions can account for the uniqueness of definiteness. The difference is that only semantic uniqueness can be viewed as directly in competition with the familiarity theory. As mentioned previously, in the referential theory, the uniqueness condition is supplementary to the felicitous use of the definite article to refer to a particular entity. What governs the choice of a definite description over an indefinite one is familiarity. It is not necessary for the definite description to instantiate the uniqueness property. For example, in the use of the incomplete description *'the table'* in the sentence *'the table is covered with books'*, providing both interlocutors share the identifiability of which table it is referred, whether the uniqueness condition is fulfilled or not will not be an issue.

The competing theory to the familiarity account is the approach in terms of semantic uniqueness. The first conflict of the two theories lies in the referential and quantificational dispute over the nature of definite descriptions. The semantic uniqueness theory argues that the definite description is semantically quantificational. The familiarity theory takes the ground that the definite description is fundamentally referential. The second disagreement between the two camps concerns the distinction of the indefinite and definite value. The familiarity theory holds that what distinguishes the indefiniteness from definiteness is a matter of novelty-familiarity contrast. The use of an indefinite description is to introduce a piece of new information into the context; whereas the use of the definite description must involve a referent which has been explicitly mentioned in previous discourse or is among the shared knowledge between the speaker and the addressee. The semantic uniqueness theory maintains the contrast displayed between the two is the extra uniqueness quantification found in the definite description.

Both uniqueness and familiarity approaches to capture the essence of definiteness face challenges from the linguistic data across languages. Many theorists hold that a hybrid methodology needs to be applied to the complete account of definiteness (see Abbott, 2014). Centering on the quantificational versus referential debate, the discussion of familiar definites and unique definites is concentrated within the range of the two competing theories. I propose that both accounts can present some level of truth for the account of definiteness in natural language uses but only the semantic uniqueness account is appropriate in the semantic analysis of definite descriptions in both English and Chinese.

3.2   Two Syntactic Forms of Chinese Definites

Mandarin Chinese lacks the direct translation of the English articles. There is no simple grammatical definiteness can be found in the language. However, it is widely accepted that both bare nouns and complex demonstratives are allowed in introducing definite references as the English definite descriptions do in the language (Chao, 1968; Cheng and Sybesma, 1999; Li and Thompson, 1981; Jenks, 2015, 2017; Sybesma and Sio, 2008).

Previous work has shown that Mandarin allows bare nouns to express definiteness in argument positions (Chao, 1968; Chen, 2003, 2004; Cheng and Sybesma, 1999; Jenks, 2015, 2017).

Mandarin definite bare nouns

(48)   a.   Hufei   he-wan-le   tang.

Hufei   drink-finish-PERF   soup

'Hufei finished the soup.'

b.   Gou   yao   guo   malu.

Dog   want   cross   road

'The dog(s) want to cross the road.'

(Cheng and Sybesma 1999, p. 510)

c. Yueliang   sheng shang lai   le.

Moon   rise   up   come PERF

'The moon has risen.'

(Chen 2004, p. 1165)

As pointed out by Cheng and Sybesma (1999), Mandarin bare nouns can have various interpretations in terms of definite and indefinite readings; and the definite interpretations of bare nouns are connected closely with their syntactic distributions. In post-verbal positions, Mandarin bare nouns can receive definite, indefinite or opaque readings. In the pre-verbal positions, however, as demonstrated in the above examples, it is only possible for Mandarin bare nouns to have definite readings[18]. An exemplification of how various interpretations of bare nouns are connected with their syntactic distributions will be illustrated in the next chapter. According to Cheng and Sybesma (1999, 2012), bare nouns receive the definite readings through an unseen □□operator. Mandarin bare nouns are not really bare but an N-to-Cl movement occurs to shift the bare noun predicates of type <e, t> into arguments of type <e>.

Li and Bisang (2012) argued that the definiteness features of bare nouns are affected by the syntactic distribution of word order interrelated to the topic-comment structure in Mandarin. Pre-verbal Mandarin bare nouns receive definite readings when taking up the topic or subject positions; and bare nouns embedded in the disposal Ba-construction are always definite.

Jenks (2015, 2017) argues that bare noun definites can only be used in uniqueness licensed definite situations. Mandarin bare noun definites are banned in the anaphoric uses and hence they are the expressions of uniqueness definiteness. In contrast, the anaphoric definites can only be expressed by demonstrative phrases in the language.

---

[18] Mandarin bare nouns can also have generic readings. The issue generic reading of bare nouns will be discussed separately in Chapter Three.

English demonstratives have the primary function of deixis (Fillmore, 1982, 1997; Chen, 2004; Diessel, 1999; Himmelmann, 1996), Chinese demonstratives; in contrast, can be used to introduce definite references: a function that is comparable to the English definite article.

Mandarin definite demonstrative phrases

(49) a. Zhangsan   de   na   ben   shu   bu   zai   wo   zheli.

       Zhangsan   POSS   that   Cl   book   not   at   I   here.

       'The/that book of Zhangsan's is not at mine./I do not have the book of Zhangsan's.'

    b. Wo   zuotian   mai   de   na   ben   shu   diu   le.

        I   yesterday   buy   MOD   that   Cl   book   lose   PVF.

       'The book I bought yesterday was lost.'

    c. Wo xihuan zhe zhou shi, dan bu xihuan xie   shi   de   na ge ren.

        I   like   this Cl   poem, but not like   write poem MOD   that Cl person.

       'I like this poem, but not the person who wrote it.'

As shown in the above example, although demonstratives maintain their deictic nature, the readings of the demonstrative phrases are definite and need to be translated as the definite descriptions in English.

Although both bare nouns and demonstrative phrases are direct translations of English definite descriptions, it is argued that the two syntactic constructions represent two types of definites in natural language (Jenks 2015, 2017), namely unique definites and familiar definites.

3.3   An Ambiguous Theory of Chinese Definites

Jenks (2015) follows Schwarz (2009) and distinguishes two types of definites in natural language uses: unique definites that are licensed by uniqueness and familiar definites which are triggered by the

familiarity of the referent. The relevant notion of familiarity applied is what Roberts (2003, p. 288) defined as *strong familiarity*. Strong familiarity is realized by anaphoricity, in which cases an explicit antecedent denoted by the definites is obligatory in the discourse.

Schwarz (2009) demonstrates that German distinguishes the two types of definites by marking them with different definite articles. A weak definite article is used in the definites licensed by uniqueness and a strong article is applied in the situations of anaphoric definites.

(51) a. Armstrong flog als erster zum Mond.

Armstrong flew as first one to-the$_{weak}$ moon

'Armstrong was the first one to fly to the moon.'

b. Der Empfang wurde v om// #vondem Bürgermeister eröffnet.

The reception was by-the$_{weak}$ by the$_{strong}$ mayor opened

'The reception was opened by the mayor.'

(Schwarz, 2013, p. 538)

The definiteness readings in both sentences in (51) are licensed by uniqueness according to Schwarz (2009 and 2013). It is our general knowledge that there is one and only one moon in the world and therefore a weak article is used in (51.a) in the situation. In (51.b) it is infelicitous to use a strong article in constructing the definites 'the mayor' because it is shared as a common knowledge that there is one and only mayor in each city. In both sentences, there is no need for any previous mention of 'the moon' or 'the mayor', and therefore, Schwarz argued what is crucial for the felicitous use of a weak article is that there be a unique referent that is fitting into the descriptive content. As demonstrated in (51.b) a strong article cannot be used in uniqueness licensed definite situations.

(52) Peetje hee jister an kü$_1$ slaachtet. Jo saai, det kü$_1$ wiar äi sünj.

Peetje has yesterday a cow slaughtered. One says the$_{strong}$ cow was not healthy

'Peetje has slaughtered a cow yesterday. One says the cow was not healthy.'

(Ebert 1971, p. 107 c.f. in Schwarz 2013, p.540)

The definite phrase 'the cow' in the above example is anaphoric and refers to the same cow mentioned by the indefinite phrase 'a cow'. The prior mention of the cow in the text licenses the felicitous use of the definites and hence a strong article must be involved. In this situation, the use of a weak article is not allowed.

Schwarz (2009) extends his argument into the ambiguity of the English *'the'* and proposes the following for the interpretations of a unique definite article and a familiar definite article.

Unique definite articles (Schwarz 2009, p. 148):

$\| \text{the}_{\text{unique}} \|^{g} = \lambda s_r. \lambda P : \exists!xP(x)(s_r).\iota x[P(x)(s_r)]$

Anaphoric definite articles (Schwarz 2009, p. 260):

$\| \text{the}_{\text{anaphoric}} \|^{g} = \lambda s_r. \lambda P. \lambda y : \exists!xP(x)(s_r) \wedge x = y.\iota x[P(x)(s_r) \wedge x = y]$

Based on Schwarz's (2009 and 2012) observation on the article language, Jenks (2012 and 2015) noted that the distinction of unique definites and familiar definites can be found in numeral classifier languages which have no articles. In the numeral classifier languages, such as, Thai, Japanese and Mandarin, the unique definites are expressed by bare nouns and familiar definites are realized as demonstrative phrases or overt pronouns.

According to Jenks (2015), there are four situations that can be considered as unique definite situations; including larger situation definites, weak definites, immediate situation definites and some uses of bridging. In contrast with the unique definite uses, familiarity definites contain an additional semantic argument in their denotation and an explicit antecedent is involved in the linguistic contexts. In an article-less language, there is a tendency that the anaphoric definites are expressed by indexical expressions, such as the demonstrative phrases (Jenks 2015).

In the expression of unique definites, bare nouns are used in larger situation uses (termed from Hawkins 1978), in which cases the uniqueness is licensed by general knowledge of the world.

(53)   duaŋ-can (#duaŋ nán) sàawàaŋ mâak.

         Moon (CLF that) bright very

         'The moon is very bright.'

                                    (Thai example from Jenks 2015, p. 106 ex (4))

Secondly, the bare nouns in numeral classifier languages are used in weak definites situations.

(54)   Sùthêep phaa Sŏmchay   pay(thîi)   rooŋ-phayabaan

             Su.   Take   So.   go to   hospital

             'Suthep took Somchai to the hospital.'

      b.   # Sùthêep   phaa   Sŏmchay   pay*(thîi)   tɨk

              Su.   Take   So.   go to   building.

             'Suthep took Somchai to the building.'

                                    (Thai example from Jenks 2015, p. 107 ex (7) and (8))

In the weak definites in (54.a), in Thai, a bare noun form of 'hospital' is used. In contrast, in a non-weak definite situation of 'the building', the use of a bare noun is not allowed.

The third situation that involves a bare noun definites is the immediate situation use, in which case the uniqueness of the referent is shared as common knowledge by the speakers. The following examples show that in the environment that there is only one car and one dog in the household, it is felicitous for the speakers to use a bare noun as definite.

(55)   a.   rót   yùu   thîi-năi?

Car   LOC   place-which

'Where's the car?'

b.   mǎa   kamlaŋ hàw.

dog   PROG   bark

'The dog is barking.'

The fourth environment for using bare nouns as definites in numeral classifier languages is part-whole bridging. Bridging uses of definite articles are referred as associative anaphora in Hawkins' (1978) term or inferrables in Prince's (1981) terminology. Schwarz (2009) demonstrates that in German the part-whole associative anaphora is realized by unique definites; whereas the producer-product association patterns as familiar/anaphoric definites. Jenks (2015) finds the same pattern in article-less languages such as Thai.

(56) a.   rót   khan   nán thùuk   tamrùat sàkàt   phrɔʔ mâj.dâj tìt   satikəə

car   CLF   that ADV.PAS police intercept   because NEG attach   sticker

wájthîi <u>thábian (#baj nán)</u>.

keep at license CLF that

'That car was stopped by police because there was no sticker on the license.'

b.   Pɔɔl   khít   wâa   klɔɔn   bòt   nán   prɔʔ mâak,   mɛ̂ɛ-wâa   kháw cà

Paul   thinks COMP poem CLF   that   melodious very, although   3P   IRR

⋀

mâj   chɔ̂ɔp   <u>náktɛɛŋklɔɔn #(khon nán)</u>.

NEG   like   poet   CLF that

As shown in the above example, in virtue of a part-whole relationship, the antecedent car and the license of its part instantiate the bridging as a unique definites and can be expressed by the bare noun 'license'. However, in a producer-product relationship of the poet and the poem, a demonstrative has to be used.

According to Schwarz (2009, 2012 and 2013) and Jenks (2015 and 2017), both types of definites are necessary components in the use of natural languages and hence any unified theory of definiteness needs to be reviewed and replaced by the uniqueness-plus-familiarity mixture view in order to capture the full picture of definites across languages.

In the case of Mandarin, it is argued that the exact same pattern applies (Jenks 2017). Bare noun definites are used in the four sub-categorizations of uniqueness licensed definite situations. Demonstrative definites are not good candidates for unique definiteness but are used for anaphoric or strong familiarity cases. The following two chapters concentrate on bare noun definites and demonstrative definites respectively.

CHAPTER THREE   MANDARIN BARE DEFINITES

1. The Interpretations and Distributions of Mandarin Bare Nouns

Mandarin Chinese is an article-less language. All nouns in Mandarin can appear bare in argument

positions. Yang (2001) compared the uses of Chinese bare nominal as similar to the uses of English

bare plurals. Both Chinese bare nouns and English bare plurals in argument positons can have *kind-

level* as well as the *object-level* readings. The difference is that English bare plurals only receive

indefinite readings in object-denoting uses, but bare nouns in Chinese, apart from the indefinite

reading, are able to obtain the definite reading.

1.1   Kind-level Interpretations

First of all, bare nouns in Chinese can be readily combined with *kind-level* predicates and generate

kind references in these sentences.

(1)   *Class-I kind-level predicates*

    a.   Xiong   juezhong   le.

        Bear   extinct   ASP

        'Bears are extinct.' *or* 'The Bear is extinct.'   *(Krifka 1995, p. 1, ex(1a))*

    b.   Jing   kuai   juezhong   le.

        Whale   soon   be:extinct   PRF

        'Whales will soon be extinct.'   *(Li 2013, p. 90 ex (4.a))*

(2)   *Class-II kind-level predicates*

    a.   Gou   daxiao   geyi.

Dog   size   different.

'Dogs come in different sizes.'   *(Yang 1998, p. 248, ex(2c))*

    b.   Konglong   dang-shi   hen   pubian.

Dinosaur   during that time   very   widespread.

'Dinosaurs were widespread during that time.'

As displayed in the above examples, similar to English bare plurals, Chinese bare nouns automatically receive kind interpretations when combining with kind-level predicates. In sentence (1) the predicate *juezhong ('being extinct')* has a direct translation of *'vanish-kind'* in English, which lexically licenses the kind reference of its subjects *xiong ('bear')* and *jing('whale')*. The predicates in example (2 a.) and (2 b.) both denote some collective, distinguishing or characteristic properties of a kind and therefore are also considered as having the kind-level reading (Carlson, 1977). Yang (2001) distinguishes the two kind-level predicates as Class-I kind-level predicates and Class-II kind-level predicates. The Class-II type, in contrast with the pure kind-predicate such as *'being extinct'* in Class-I, denotes certain properties of a kind. Mandarin bare nouns can readily combine with both types of kind-level predicates and obtain the two types of kind reading correspondingly.

Secondly, Chinese bare nominals, like English bare plurals, can introduce *generic readings* in the combination with individual-level predicates.

(3)   *Class-I individual-level predicates*

    a.   Shu   shi   renlei de   jingshen   shiliang.

Book   be   human MOD spirit   food.

'Books are food for the human soul.'

Lit: 'Books are to our mind, as food to our body'.   *(Li 2013:86 ex (1.a))*

b. Xiongmao chi zhuzi.

Panda eat bamboo

'Pandas eat bamboo' or 'The panda eats bamboo'

c. Gou hen congming.

Dog very intelligent.

'Dogs are very intelligent' or 'The dog is intelligent'. *(Yang 2001: 20, ex (12c))*

(4) *Class-II individual-level predicates*

a. Hongpingzi bozi chang.

Red-bottle neck long

'Red bottles have a long neck.' *(Yang 2001: 23, ex (15))*

b. Da laoshu naiyaoxing ruo.

Big rat drug-resistance weak.

'Big rats have weak drug-resistance property.'

Unlike sentences (1) and (2) in which the predicates are typically kind related, the predicates in sentences (3) to (4) are at the individual-level. The bare nominal arguments in the sentences convey generic readings. Generic readings are not about individual objects, but when combining with individual-level predicates, a nominal argument with generic readings can express properties which are true of a kind, a species or a class of objects (Krifka et al., 1995).

In (3) and (4), the Mandarin bare noun subjects instead of denoting an abstract entity of kind that is related to specimens; their denotations capture the characterization or generalization about the set of entities. Yang (2001), in analogy with the classification of kind-level predicates, distinguished the individual-level predicates into two classes, Class I individual-level predicates and Class-II

individual-level predicates. However, she did not provide a determined explanation on how the two sub-classes can be characterized. My assumption is that by comparing the examples she used, the distinction is based on the denotations of the noun phrases in the subject positions they pattern with. As shown in (3) the word *'book'* in both Chinese and English can be easily linked to a book-kind reference and the phrases *xiongmao ('panda')* and *gou ('dog')* are names of the animal kinds. These nominal phrases habitually gain kind-references in a wide range of uses. Class-I individual-level predicates are appropriate for combining with these habitually-gained kind terms to form generic reading sentences.

In contrast, the subjects in (4) form a temporary class of a kind. Normally, neither the Chinese bare noun phrase *hongpingzi ('red bottle')* or the English bare plural *'red bottles'* are considered to instantiate a natural kind. An extra process of fixing the generic reference is often required. For instance, in the situation that a factory manufactures two types of bottles, red bottles and green bottles, it is felicitous to utter (4) to distinguish them as two kinds; with the description *'have long neck'* attributing a contrastive property between the two kinds. Class-II individual-level predicates can be used in this situation and generate generic reading sentences.

Both the *generic reading* and the *kind reading* fall into the same categorization of *kind-reference* of noun phrases. The difference is that kind readings are often connected with abstract kinds that are related to specimens; while the generic readings are more about the properties of a group of entities (Kratzer, 1989). Bare nouns in Chinese consistently introduce kind and generic readings at argument positions when combined with either kind-level or individual-level predicates.

1.2   Various Interpretations at Individual-level

Apart from the kind and generic readings, bare nominal arguments in Chinese also receive definite, indefinite and opaque interpretations.

(5)   Definite interpretations

a.   Gou   yao   guo   malu.

Dog   want   cross   road.

'The dog/dogs wants/want to cross the road.'

(Cheng and Sybesma 1999, p. 510)

b.   Ren   lai   -le

man   come-ASP

'The man came'   *(Yang 1998, p. 251 ex (6a.))*

(6)   Indefinite interpretations

a.   Ta   mai   le   shu.

He   buy-PERF   book

'He has bought a book/books'   *(Kuo 2008, p.1083 ex (4a.))*

b.   Wo   xiang   mai   shubao.

I   want   buy   handbag.

'I want to buy a handbag/ some handbags.'

(7)   Opaque readings

a.   Yuehan   zai-zhao   yisheng

John   be-look-for   doctor

'John is looking for doctors'   *(Yang 2001, p. 26 ex (21b.))*

b.   Zhangsan   xiang   zhao   jingcha.

Zhangsan   want   look-for   police

'Zhangsan wants to look for the police (for help).'

As illustrated in the above examples, Mandarin bare noun arguments receive various interpretations including definite, indefinite and opaque readings. It is observed that, in terms of definiteness, the interpretations are closely related with the syntactic distributions of bare nominal arguments. There is a tendency that the pre-verbal bare nouns are definite; whereas post-verbal bare nouns are often interpreted as indefinite or existential (Chao, 1968; Chen, 2004; Cheng and Sybemsa, 1999, 2012; Dayal, 2009; Huang,1982; Li & Thompson 1976, 1981; Li, 2011, 2013; Paris, 1981; Jiang, 2012; Shi, 2002, Sio 2006, Tsai,1994; Xu & Liu, 1997; Yang 1998, 2001; Yuan,1996; Zhu,1982).

According to Yang (2001), Mandarin bare arguments demonstrate strong resemblance to English bare plurals in terms of the subject-object asymmetry of interpretations. English bare plurals obtain kind and generic readings in pre-verbal positions and introduce indefinite and opaque readings in lexical restricted positions, such as the object positions. Mandarin bare arguments differentiate with English bare plurals in the sense that in Chinese, bare nouns can have definite readings in strong positions; but in English, bare plurals do not obtain definiteness in any context.

1.3   *The Parallel between Mandarin Bare Nouns and English Definite Singulars*

Yang (2001) observed that if compared with English kind-denoting terms, bare nouns in Chinese demonstrate more resemblance with English bare plurals than English definite singulars. I argue that in a broad sense of general interpretations, Chinese bare nominals display stronger resemblance with English definite singulars.

Yang (2001) argued that Chinese bare nominals pattern with English bare plurals to be able to readily combine with any kind-level predicates. English definite singulars, however, only combine with Class I kind-level predicates. I observe that in terms of the Class I kind-level reading, both Chinese bare nouns and English bare singulars display an extra definite reading, which the English bare plurals do not have.

(8)   a. Gou   mei   juezhong.   a.1 The dog is not extinct. = the dog kind

            Dog   not   extinct.

'The dog is not extinct.'

b. Gou shi   burudongwu.   b.1 The dog is a mammal. = all dogs

   Dog be   mammal.

   'The dog is a mammal.'

c. Gou   hen   congming.   c.1 The dog is intelligent. = most dogs.

   Dog   very   intelligent.   c.2 The dog is intelligent.=a definite dog

   'The dog is intelligent.'

In the above examples, both Chinese bare nouns and the English definite singulars have kind and

generic readings. It needs to be noted that in (8 c.) both Chinese bare nominals *gou ('dog')* and the

English definite description *'the dog'* have two readings. The first reading of (8 c.) is, as displayed,

the general interpretation of '*most dogs have the characteristic properties of being intelligent'*. The

second possible reading is that '*there is one and only one dog which is intelligent'*. The resemblance

of having both generic and definite readings set apart Chinese bare nominals with English bare

plurals; for the reason that English bare plurals do not obtain definite readings in any circumstance.

Similar observations can be found in sentences containing Class-II individual-level predicates.

(9)   Class II kind-level predicates

    a.   Red bottles have a long neck.

    b.   The red bottle has a long neck.

    c.   Hong   pingzi bozi   chang

             red   bottle   neck   long

             'Red bottles have a long neck.'   *(Yang 2001, p. 23 ex (15))*

Yang (2001, p. 23) argued that in example (9), both English bare plurals and bare nominals in Chinese have generic readings readily available in the context. However, the generic reading of the English bare singular in (9.b), is discourse-dependent. The definite singular is possible to obtain both definite and generic readings; and the choice is based on whether the individual-level predicate *'have a long neck'* is interpreted as a characteristic property of a kind or a description of a particular entity. Since it is not necessary for the Mandarin bare noun to obtain the generic reading depending upon the meaning of the predicate, it can be concluded that Chinese bare nouns pattern with English bare plurals more than they do with English definite singulars. Yang's (2001) conclusion overlooked the fact that the interpretations of the bare noun subject in (9) come in a compound formation that is more complex than the readings of both English bare plurals and definite singulars.

(10)   Hong   pingzi   bozi   chang

            red   bottle   neck   long

Reading 1:   'Red bottles have a long neck.'

Reading 2:   'The red bottle has a long neck.'

              sub-reading 1: the red bottle=*generic*

              sub-reading 2: the red bottle=*definite*

Reading 3:   'The red bottles have long necks.'

As illustrated above, different with the English bare plural '*red bottles'*, in addition to the generic reading, the Mandarin bare noun obtains a definite reading. Due to the lack of number marking in the language, the definite reading of the Chinese bare noun can be translated as both singular and plural in English; which cannot be reflected by a regular English definite singular. Neither the English bare plural nor the singular definite can be accountable for a complete translation of the bare noun subject in (10).

Yang (2001, p. 23) also argued that English definite singulars are incompatible with the generic reading triggered by 'inductive generalization' (a term from Greenberg,1998). In contrast, bare Chinese noun can obtain generic readings in those situations. Henceforth, it is implausible to parallel Chinese bare nouns with English definite singulars. She demonstrated her point through the following example.

(11)

  a. Rutgers professors seem to be born on weekdays. Generic statement

  b. The Rutgers professor seems to be born on a weekday. *generic statement

  c. Beida jiaoshou haoxiang dou shi zhoumo chusheng.

    Beiijng-uni professor apparently all be weekend be-born

'Professors of Beijing University seem to be born on weekends.'

(Yang 2001, p. 23 ex (16))

Yang (2001) argued that since the generic reading of (11 b.) seems impossible but the generic reading of '*Beida jiaoshou (Beijing University professors)*' in (11 c.) can be successfully generated, it shows that there is a fundamental difference in terms of generic interpretations between the two phrases. I agree with Yang (2001) on that it is implausible to recognize the reading of (11 b.) as generic. However, it needs to be pointed out that the sentence of (11c.) is not equivalent to (11a.). A universal quantifier *dou ('all')* is employed in the Chinese sentence.

(12) *repeated of (11c.)*

Beida jiaoshou haoxiang dou shi zhoumo chusheng.

Beiijng-uni professor apparently all be weekend be-born

'All professors of the Beijing University seem to be born on weekends.'

∀ x (Beijing-University processor (x) → born on weekends(x))

It is unattainable for Yang (2001) to draw the conclusion that the bare noun obtains the generic reading in the same fashion as the English bare plural phrase. In fact, if taking the *dou ('all')* quantifier out as in (13), the generic reading of the sentence becomes blurry.

(13)   Beida   jiaoshou   haoxiang   shi   zhoumo   chusheng.

        Beiijng-uni professor   apparently   be   weekend   be-born

        '*Professors of the Beijing University seem to be born on weekends.'

        or '*The professor of the Beijing University seems to be born on a weekend.'

It is arguable if a generic reading is still possible in (13) unless it is setting in the situation of contrastive topics of the information structure in the discourse. In fact, even in the situation that the bare noun functions as a contrastive topic, the kind reading of the sentence comes unnatural to the native speakers.

In brief, even though bare nouns in Chinese are not overtly marked as definite, they are able to introduce definiteness that can be comparable to the English definite singulars.

2.   The Basic Readings of Chinese Bare Nouns and the Semantics of Bare Definites

2.1   The Basic Readings of Chinese Bare Nouns

The semantics of bare nouns in English has received much attention since Carlson (1977), and the discussion on the semantics of bare nouns in Mandarin is more or less encircled within the influences from the insightful works by Krifka (1995) and Chierchia (1998a, 1998b).

2.1.1   Krifka's (1995) view on Mandarin bare nouns

Krifka (1995) assumes that the basic reading of Chinese bare nominal phrases is that of a kind. For example, a bare noun *xiong ('bear')* names the natural kind of *Ursus*, which serves as the basic reading of a bare noun argument for the rest of syntactic and semantic derivations. This assumption is

on the basis of two thoughts: first, every language which 'allows for bare NPs at all uses them as expressions referring to kinds'; second, ontologically kinds seem to come before specimens (Krifka 1995, p. 399). Based on the assumption, Krifka (1995) proposes that the basic semantics of Chinese bare nouns are kind denoting; and all other interpretations of Chinese bare nouns are derived from this kind denotation.

(14)   a.   Xiong   juezhong   le.

          Bear   vanish-kind   ASP

          'The bear is extinct.'

      b.   Wo   kanjian xiong   le.

          I   see   bear   ASP.

          'I saw (some) bears.'   *Krifka (1995, p. 398 ex (1a.) and (1b.))*

The bare noun *xiong ('bear')* in (14 a.) has kind reference and in (14 b.), it obtains an individual-level indefinite reading. According to Krifka, the indefinite reading of the bare noun is derived from its kind denotation through an operation $\textbf{\textit{R}}$. The operator $\textbf{\textit{R}}$, in essence with Carlson's (1977) instantiation relation, applies to kind terms and retains 'specimens or individual sums of subspecies of the kind'. (Krifka 1995, p. 399). Classifiers in Chinese are the lexical realization of this operation relation between kind and entities in Krifka's (1995) theory.

(15)   a.   san -zhi xiong

          three-CL bear

          'three bears'

      b. [M zhi] = $\lambda n\lambda y\lambda x[\textbf{\textit{R}}(x,y)$ & $\textbf{OU}(y)(x)=n]$

      c. [Num san] = 3

d. [MP san zhi]= λyλx[**R**(x,y) & **OU**(y)(x)=3]

e. [N xiong] = Ursus

f. [MP san zhi xiong] = λx[**R**(x,Ursus) & **OU**(Ursus)(x)=3]

(Krifka 1995, p. 399, p. 401 ex (1d) and (5); Jiang 2012, p. 46 ex (27))

If *x* is an individual and *y* is a kind, then **R** *(x, y)* is the realization relation of *x* being an instantiation of kind *y*. **OU** stands for *object unit*. **OU** is a function that takes a kind and yields a measuring unit of the specimens of that kind. In the above example, the grouping of the numeral 3 and the individual classifier *zhi* is a combination of the instantiation function of the classifier plus the measuring units of 3; and therefore yields a measure function that measures the number of specimen of the *xiong ('bear')* from kind into three individual bears of the kind.

In Krifka's (1995) theory, Chinese classifiers yield a function that combines a number individual to a kind. The number plus the classifier forms a measure phrase that measures the number of specimens of that kind corresponding to the value of the combined number. He proposes the following two syntactic rules that are displayed in (16 a.) and (16 b.). The formula in (16. a) illustrates how a number phrase is formed for the interpretation of a measure phase; and (16 b.) demonstrates how a measure phrase is applied to a noun and complete a measure-reading noun phrase.

(16)   a. $[[\ _{MP}[_{NUM}\ α][_M\ β\ ]= [[_Mβ\ ]]\ ([[_{NUM}\ α]])$

       b. $[[\ _{NP}[_{MP}\ α][_N\ β\ ]= [[_{MP}α]]\ ([[_N\ β]])$

Follow the above analysis from Krifka (1995), the semantics of the two measure/classifier phrases in (17 a.) and (17 b.) can be respectively presented in (18 a.) and (18 b.).

(17)   a.   san   qun   xiong

               three   Cl$_{-group}$ bear

               'three groups of bear'

b.   san   zhi   xiong

three   Cl$_{-individual}$ bear

'three (individual) bears'

(18)   a. $\|qun\| = \lambda n\lambda k\lambda x.R(x, k) \wedge herd(x)=n$

$\|san\ qun\| = \lambda k\lambda x.R(x, k) \wedge herd(x)=3$

$\|san\ qun\ xiong\| = \lambda x.R(x, BEAR) \wedge herd(x)=3$

b. $\|zhi\| = \lambda n\lambda k\lambda x.R(x, k) \wedge NATURAL\text{-}UNITk(x)=n$

$\|san\ zhi\| = \lambda x.\ R(x, k) \wedge NATURAL\text{-}UNITBEAR\ (x)=3$

$\|san\ zhi\ xiong\| = \lambda x.R(x, BEAR) \wedge NATURAL\text{-}UNITBEAR(x)=3$

There is no structural difference between (18 a.) and (18 b.). The only difference is that the classifier

used in (18 a.) is a measure classifier (Cheng and Sybesma, 1999) that can be comparable with an

English measure word, in this case, *herd*. The classifier in (18 b.) is an individual classifier which

indicates the natural partition unit of an individual bear (in Cheng and Sybesma's term). For the

theorists (Cheng & Sbyesma, 1999; Li, 2011, 2013) who hold that there is a dual function of

measuring and counting in the semantics of classifiers, there is a fundamental difference between the

two constructions in Krifka's example. The measure word *qun ('herd')* yields a set of instantiations of

the bear kind. The individual classifier, on the other hand, counts the bears by their natural

individuation. Therefore, under Cheng & Sybesma's framework, (17 a.) has a NP construction; while

(17 b.) projects the DP structure (with the individual classifier functions as D). Krifka (1995) does

not discuss the dichotomy of the two types of the classifiers and he treats both readings as kind

measuring readings. I follow Krifka's (1995) on the analysis of classifiers as lexical realization function from kind to individual readings and hold that it is the main function of classifiers in the language. The dichotomy of measuring and counting functions is irrelevant in this matter and no distinct syntactic structures are generated in the examples in (17).

By postulating that bare nouns denote kinds, Krifka's (1995) theory provides a straightforward account for why bare nominals in the language can combine directly with a verb and occur freely as arguments. Under the assumption that all Mandarin bare nouns are kind-denoting and the entity-denoting reading is derived only by applying classifier phrases, one would think that not only the word *xiong ('bear')* denotes to kinds but that the modified noun *hui changge de xion ('bear who can sing')* is also kind-denoting. However, this generalization is problematic from a compositional point of view.

A relative clause is a modifier of type $<e, t>$. The problem is how a type $<e, t>$ modifier combines with a kind term which is of type $<e>$ yields a desirable result. To solve the type problem, Krifka (1995) introduces the new type of entity, *concepts*. Concepts, like kinds, are abstract entities related to objects but are more general than kinds. Unlike kinds, concepts can be created along the progress of the speech act without requiring any well-established background knowledge on the part of the speaker and the listeners (Yang, 2005). In Krifka's (1995, p.405) words, concepts 'need not be well established but could be constructed from scratch'.

According to Krifka (1995), modified nouns can either denote kinds or denote concepts. For example, the modified noun *hong pingzi ('red bottle')* is a concept that a classifier phrase can be applied to. To handle the modification of the term *pingzi ('bottle')* by the adjective *hong ('red')*, Krifka introduces an operator **σ** which applies to a given predicate.

(18) $\sigma(\mathbf{P}) = \iota\mathbf{y} \, \forall \, \mathbf{i} \, \forall \, \mathbf{x} \, [\mathbf{RTi(x,y)} \leftrightarrow \mathbf{Pi(x)}]$

(Krifka 1995, p. 404)

The operator **σ** yields concepts and if **P** is a property of an object that is attributed by the given predicate, σ**(P)** refers to the concept whose realizations are the entities to which **P** applies. Follow this analysis, even in the case where *hong pingzi ('red bottle')* fails to correspond to a well-established kind shared by the speakers, the NP still denotes an abstract concept of a class of entities bearing the property of being red.

(19)   [hong 'red']= λy. σ (λiλx [**red.for**$_i$ (x, y)& **RT**$_i$ (x, y)])

(The object *x* is red for the concept *y* in world *i* and *x* is an instance of the concept *y*.)

Following the above analysis, the modified noun phrase *hong pingzi ('red bottle')* can either denote a concept that introduces the generic reading as in (12); or it can be combined with a classifier phrase such as *san ge hong pingzi (three Cl$_{-individual}$ 'red bottle')* and yields an object-denoting noun phrase of type *<e>*.

In brief, Krifka's (1995) assumption can be summed up as the following.

i.   Bare nouns denote kinds

ii.   The abstract entities of concepts are more comprehensive than kinds in terms of concepts can be established from scratch.

iii.   Kinds form a subset of concepts: **KIND ⊆ CONCEPT**

iv.   Modified nouns can either denote concepts or kinds.

v.   Classifiers are a realization relation to kinds and concepts.

As mentioned previously, an advantage of Krifka's analysis is that it provides a straightforward account for the fact that Mandarin bare nouns can occur freely as arguments. Another view I subscribe is that classifiers are functions from numerals to kinds. Krifka's analysis certainly yields welcomed result in predicting the basic kind readings of bare noun arguments and the [Num+Cl] functions in the language. However, two obvious problems suggest themselves to the absolute approval of Krifka's (1995) theory.

First, to fully appreciate Krifka's approach, one has to ontologically recognize *concept* as a type of abstract entity. Krifka's Fregean-style reasoning of *concepts* versus *objects* introduces extra abstractedness into the argument of kind denotation, concept denotation and their relation to entity-level readings in natural language expressions. Krifka's logic can be recapped briefly as when an expression does not denote an *object* nor it refers to a *kind*, it denotes a *concept*. Since nominal phrases in languages are able to denote concepts, concepts exist. In contrast with objects, concepts are abstract entities. Comparing with another abstract entity of kinds, concepts are not as well-established as kinds. The affliction contains in this claim is that there is no proper ontological classification of *concepts*.

Frege (1824) thinks that concepts belong to *references (Bedeutung).* A concept is the reference of a grammatical predicate. Russell (1902-1904) takes the stand that concepts are constituents of propositions—an idea he rejected later in the theory of descriptions proposed in *On Denoting*. Krifka's (1995) notion of concepts is comparatively vaguer. It is unclear if Krifka (1995) treats concepts as abstract entities existing in the world or occurring in linguistic expressions only; or, it is in fact a kind of both.

Another challenge to Krifka's theory is that it provides an inadequate account for the definite readings found in Chinese bare noun denotations. Krifka (1988, 1995) holds that bare NPs across languages are ambiguous between a kind denotation (in the combination of kind-level predicates) and an indefinite reading (in individual-level contexts). However, unlike English bare plurals, Chinese bare nouns obtain extra definite readings in both generic and episodic contexts. Krifka's proposal does not include in depth analysis of how the definite reading can be derived from the basic kind readings of bare nouns.

2.1.2   Chierchia (1998)

Chierchia (1998a) proposes that the denotation of nominals is set by a semantic parameter. The Nominal Mapping Hypothesis contains two principles of *argument* establishment and one mapping parameter, which yields three types of languages.

Type one   [+arg, -pred] e.g. Mandarin

Type two   [-arg, +pred] e.g. French and Spanish

Type three   [+arg, +pred] e.g. English

Nominals across languages have two features of [±argument] and [± predicate]. The [+arg] nominal can freely occur as arguments and has kind denotations as their basic readings. The [+pred] nominal maps into predicates directly and denotes property. Mandarin Chinese is in the [+arg, -pred] categorization, which means all nouns in Mandarin denote kinds (Chierchia 1998b, p. 353). The kind-denotation allows bare nouns to directly map into arguments. English, in contrast, is a [+arg, +pred] language in which bare singulars are banned for the argument position in the langauge. In English, only mass nouns and count plurals can appear bare as arguments.

There are two principles in the Chierchia's hypothesis, namely, *Blocking* and *Ranking of Meaning*. *The Blocking Principle* states that if a language has overt determiners as type-shifting devices, then the use of convert type-shifting operation in this language is normally blocked. In a language that does not have overt type-shifter; nominals are able to obtain the definite and indefinite readings through convert type-shifting operations. In Mandarin, since there are no definite or indefinite articles as overt markers, bare nouns taking argument positions can have various readings through automatic type-shifting operations via unseen operators.

In an article language such as English, Chierchia (1998a, 1998b) assumes that the definite article takes the D-ship position and performs the type-shifting operation. According to Chierchia (1998a, 1998b), the definite article in English can be analysed as the ι operator which indicates uniqueness and maximization.

(20)

a. [*the dog*] = ιDOG(w), defined only if there is exactly one dog.

b. *[the dogs]* = ιDOGS(w) is defined, if DOGS(w) is not empty, due to cumulativity of DOGS

The existence of the definite article as an overt iota operator in English blocks the option of covert type-shifting operations. For this reason, bare singulars cannot occur as arguments without restrictions in the language. However, for kind readings, since there is no overt determiner for kinds available, English bare plurals can be arugmentized through a convert operation via type-shifting. In the article-less language i.e. Mandarin, there are no overt operators available in the system; and therefore, the definite readings of bare nominals must be realized by a convert ι operator.

(21)   Gou   yao   guo   malu.

        Dog   want   cross   road

        'The dog wants to cross the road.' or 'The dogs want to cross the road.'

(Cheng and Sybesma, 1999,p.510 ex (2 a.))

        [$_{IP}$ ι **gou** [$_{IP}$ malu$_i$] [$_{VP}$ yao-guo t$_i$]]]

In contrast with the definite reading, the indefinite reading of nominal phrases across languages is derived from the kind readings through the scope-shifting operation at the level of logic form (LF) (Chierchia, 1998a, 1998b). In English, for example, bare plurals are interpreted as generic outside the verb phrase (VP) domain and if the bare nominals are within the VP domain, an existential (∃) or indefinite reading is generated.

(22)   Computers route modern planes.

Chierchia (1998b, p.367 ex (39))

The bare plural 'computers' can have either a generic reading of '*the computer kind has the function*

of routing modern planes' or an indefinite reading of '*there are some computers that can route modern planes.*' In Chierchia's analysis, the generic reading comes from the basic kind denotation of the noun phrase. The indefinite reading is achieved by moving the nominal *'modern planes'* out of the VP domain and confine the reading of *'computers'* within the VP domain in the LF. For the ranking of definite, indefinite and kind readings, Chierchia holds that the definite interpretation (ι) ranks over the interpretation of indefinites ($\exists$). Taking the kind readings into account, it is recognized that both (ι) and ($\exists$) operators have lower semantic ranks than the kind formation operation (Chierchia, 1998b; Dayal, 2004).

In Chierchia's theory, the operator for kind formation is presented as the 'down'-operator '$^\cap$'. The function of the 'down'-operator' is to nominalize. In other words, the major function of the operator '$^\cap$' is to map the extension of property (**P**) into a kind. For example, the kind reading of *'dogs'* with the down operator in the formula $^\cap\|dogs\| = \lambda w\iota P(w)$ expresses that in the world **w**, a dog kind is the maximal element of the extension of the property **P** of being a dog. The use of '$^\cap$' is to apply to [+pred] nominals to shift property to kind.

Another related operator is the 'up'-operator '$^\cup$'. The function of the up-operator is to predicativize (Jiang, 2012). If **k** is a kind, then $^\cup\mathbf{k} = \lambda w\lambda x[x\leq\mathbf{k}(w)]$. The use of '$^\cup$' is to apply it to [+arg] nominals such as English bare plurals to shift kind to property.

In conclusion, the principle of *Ranking of Meaning* in Chierchia's theory can therefore be illustrated as the following.

(24)   Chierchia (1998b): $^\cap > \{\iota, \exists\}$

This ranking is motivated by the empirical data that English bare plurals favour the kind interpretations over the indefinite readings (Chierchia, 1998b p. 373-374). Dayal (2004) revised Chierchia's analysis and proposed that since there is no adding quantification force of the ι operator, it is comparatively more capable of preserving meaning than the function of $\exists$; and therefore it is

plausible that the iota operator ranks over $f_\exists$ (the function $\exists$). Dayal's (2004) revised ranking is illustrated in (25).

(25)   Dayal (2004): $\{^\cap, \iota\} > f_\exists$

2.2   The Definite Reading of Mandarin Bare Nouns

2.2.1   The Krifka-Chierchia approach

The Krifka-Chierchia approach to the interpretations of Mandarin bare nouns assumes that Chinese bare nouns are fundamentally mass terms. The mass reading of bare nouns in Mandarin allows them to occur freely as arguments without the projection of D. All Chinese bare nominal arguments have the default reading of kinds. The definite reading is derived from the kind reading via a convert ι operator. This convert ι operator does not apply to languages like English, because the definite article in the language overtly performs the full function of the type-shifting operation of the ι.

The account successfully explains why bare arguments without determiners are allowed; as well as why classifiers are obligatory in Chinese. However, this assumption cannot provide a sufficient account for the asymmetry of the subject and object definiteness interpretations of Chinese bare noun arguments.

The asymmetry of readings can be briefly re-stated as that in subject positons, Chinese bare arguments tend to favour the definite reading over the indefinite one; and while taking the object positions, bare nominal arguments prefer an indefinite reading over a definite one as displayed in the following example.

(26)   a.   Huoche   lai   le.

                 Train   come   ASP

                 'The train has come' or 'Here comes the train'.

         b.   Lai   huoche   le.

Come   train   ASP

'Some trains (have)/ a train has come.'

The bare noun *huoche ('train')* in (26 a.) has a definite interpretation of *'the train or the trains'*. In contrast, the same bare noun in (26 b.) obtains an indefinite reading as *'some trains or a train'*. This asymmetry creates problem for the Krifka-Chierchia's approach of kind-denoting with type-shifted derivations. If follows Chierchia (1998), it is accepted that there is no *null D* projected in the syntax of Chinese bare nominal arguments; hence no syntax-based account is available for explaining the distributional asymmetry. Both definite and indefinite bare arguments are NPs; and if it is the case that in article languages, D takes the function of iota and distinguishes the definite phrases from the indefinite ones, the question raised here is what makes the distinction between the definite and indefinite bare NPs in Mandarin.

2.2.1 Yang's (1998, 2001) approach

Yang (1998) attempted to rescue the Krifka-Chierchia's hypothesis by probing into the problem of the subject-object asymmetry. First, she (1998, p.258) challenged the 'traditional assumption' of pre-verbal bare NPs with stage-level predicates obtain the definite reading only; but no other readings.

(27)   a.   Chuang-wai   gou   zai   jiao.

        outside-window dog   at   bark

        'Outside the window, dogs are barking.'

        ?* 'Outside the window, the dog is barking.'

      b.   Yuanchu   gou   zai   jiao.

         far-away   dog   at   bark

         'Far away, dogs are barking.'

* 'Far away, the dog is barking.'   *(Yang 1998, p.258 ex (21))*

The above examples demonstrate that with added context clues, the indefinite reading of the bare argument *gou ('dog')* becomes available; even if the bare argument locates in the pre-verbal position. Yang (1998) argues that the possibility of the indefinite reading suggests that the core issue of the asymmetry is a matter of saliency, rather than grammaticality. In principle, in a stage-level predicate situation, bare NPs in pre-verbal positions can have both definite and indefinite readings; with the definite one being more salient than the indefinite one. When bare NPs occur in a context where the definite reading is blocked, the less salient indefinite reading will 'peek-out' through context (Yang 1998, p. 258).

In support of the kind-term analysis of Chinese bare nouns, Yang (1998) introduced an independent account of how the definite reading is possible for bare noun nominals. According to Yang (1998), comparing with English bare plurals, the reason why Chinese bare nouns have the extra definite reading is because Chinese has richer topic-comment structures in the language.

The topic-comment versus subject-predicate characterization has been long-noted in the literature of Chinese linguistics. Yang (1998, 2001) argued that both structures are available in Chinese. Subjects and topics are distinctive linguistic elements that both occur in the language. The two elements both take pre-verbal positions, but they differentiate in terms of definiteness values. Topics are always definite; because there is a definiteness requirement capped on the topic constructions in syntax. In contrast, subjects can obtain be both definite and indefinite readings because subjects are not restricted to any definiteness obligatory.

(28)   a.   Yi -ge   xueshen   zai   zhao   ni.

             one-CL   student   at   look-for you

             'A student is looking for you.'

       b.   *Yi -ge   xueshen,   ta jian-guo.

one-CL   student   he see-Asp

* 'As for a student, he has seen (one).'

Yang (1998, p. 260 ex (27))

In (28 a.) the indefinite phrase *Yi -ge xueshen ('a student')* is available for the pre-verbal position because it is the subject of the sentence. No definiteness restrictions are applied to subjects. However, the usage of the same indefinite phrase is blocked for (28 b.) for the reason that it is marked as the topic constituent of the sentence. In (28b.), the subject is the pronoun *ta ('he').* The indefinite noun phrase takes up the left-periphery position to the subject of the sentence; which is a topic position for the aboutness of the sentence. Since topics must be definite, the indefinite phrase is considered as infelicitous in the situation.

Yang (1998) is not the only theorist who holds that the definite reading of Chinese bare nouns is closely connected with the frequently occurred topic constructions in the language. Li and Bisang (2011) provide a similar hypothesis for definite bare nouns in Mandarin. Both theories hold that the information structural concept of topics is realized as particular syntactic positons in the use of Chinese language. Both theories believe that the definiteness value of topics is attributed through the syntactic-semantic interference of the topic position[19].

2.2.3 Cheng and Sybesma (1999)

Cheng and Sybesma's (1999) also take the syntactic analysis of bare nouns into consideration and argue that the definite bare nouns project a *null D class* while the indefinite ones do not. Based on the typological analysis of Cantonese and Mandarin, Cheng and Sybesma (1999) argued that first, there is

---

[19] I disagree with Yang (1998) and Li&Bisang (2011) on the theory that topic features license definiteness. First of all, there is no decided definition for what can be counted as 'topics' or whether it is a semantic notion, a grammatical structural notion, or a notion of information structure. My view is that, as stated in later sessions, a topic is a notion that relates closely to the information structure conveyed. Secondly, there is a debate on the disctinction between a subject and a topic in Chinese. Therefore, it is not accurate to make the statement that the definite readings of subjects and topics are licensed by the topic feature.

a mass and count distinction in the semantics of Chinese nouns; and second, the definite reading of bare arguments is achieved through an unseen D in the syntax structure. Cheng and Sybesma (1999, 2004, 2012) propose that the Krifka-Chierchia approach incorrectly portrays the count and mass semantics of Chinese nouns. Chinese nouns are neither fundamentally mass; nor have the kind readings as the basic reading. Instead, there is a count and mass distinction in the noun denotation and the distinction is revealed at the level of classifiers.

Cheng and Sybesma (1999) suggest that there are two types of classifiers can be found in the language. The first type of classifiers can be comparable with the English measure words; such as *bottle* or *box*. These classifiers are originated from nouns and their lexical meanings are derived into a function of measuring units. Unlike the measure-word type of classifiers that creates the unit of measuring, the other type of classifiers simply names the unit indicated by the built-in semantic partitioning of nouns. This type of classifiers can be found in classifier languages only and does not contribute to the lexical meaning. Cheng and Sybesma (1999) refer the two types as mass classifiers (or massifiers) versus count classifiers respectively. Mass classifiers can be used with both count and mass nouns and the major function of a mass classifier is to create the measuring unit. Count classifiers can only occur with count nouns but not for mass nouns; for the reason that count nouns contain semantic in-built units of counting while mass nouns do not. Hence, the count and mass semantic distinction of Chinese nouns is revealed through what type of classifiers attached to the noun phrase. Under this assumption, Chinese nouns, just like English nouns, denote objects instead of kinds. The count and mass semantics is marked through number inflection in English and is revealed by the classifier in Chinese.

Based on the object-denoting analysis, Cheng and Sybesma (1999) avoid the derivation theory from the Krifka-Chierchia approach for the account of definiteness of bare noun arguments. They propose that the definite reading in Mandarin, just as it is in English, is licensed via D in syntax. Cheng and Sybesma (1999) assume that Chinese follows the Universal Grammar, which indicates that in the nominal domain, NP describes and D refers. For article languages, the articles convey the deictic function and in classifier languages like Chinese, the classifier carries out the D function. The count

classifier in the language takes up the individuation and deictic function as a definite article does in English. It is therefore can be comparable with an iota operator.

Based on the theory that Mandarin Cl is D, they proposed that bare nouns in Mandarin are never bare in syntax. Instead, there is a projection of Classifier Phrase (ClP) in the structure of definite bare nouns. For the indefinite reading of Mandarin bare nouns, Cheng and Sybesma propose that there is a Number Phrase (NumP) projected over the ClP and the NumP introduces indefiniteness.

(29)   Definite: $[_{ClP} Cl^0 [_{NP} N^0]]$

(Cheng and Sybesma, 2012, p. 635)

Cheng and Sybesma (1999, 2012) proposed that definite bare nouns in Mandarin have the structure as displayed in (30).

(30)   a.
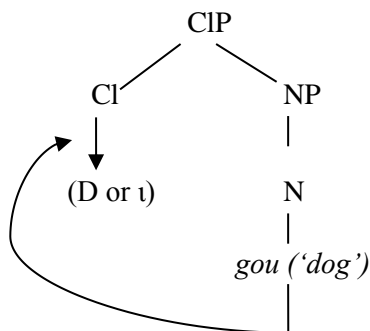
   b. Gou yao guo malu.

       Dog want cross road

   'The dog wants to cross the road.' or 'The dogs want to cross the road.'

The bare noun *gou ('dog')* projects a ClP in syntax. Because the classifier takes up D, even though it is unseen in the surface grammar, the bare nominal is converted from an NP into a DP by the N-to-Cl movement. Through the movement, the N move to the unseen Cl (D) position.

For indefinite bare noun phrases, the structure of (31) is proposed. A NumP is projected on top of the ClP. The indefinite reading of the noun phrase is henceforth guaranteed. In the indefinite phrases, the numeral can be overt or convert[20].

(31)   Indefinite: $[_{NumP} Num^0 [_{ClP} Cl^0 [_{NP} N^0]]]$

As displayed in the following example, even though there is no numeral involved in the following example, according to Cheng and Sybesma (1999), the Num^0 is projected. The syntactic structure of the NumP projected on top of the ClP secures the indefinite reading of the bare N *shu ('book')*.

(32)   a.   Hufei   mai   shu qu le.

            Hufei   buy   book go SFP

            'Hufei went to buy a book/books.'

b.   NumP
          /   \
      Num   ClP
                    /   \
                  Cl   NP
                             |
                             N
                             |

---
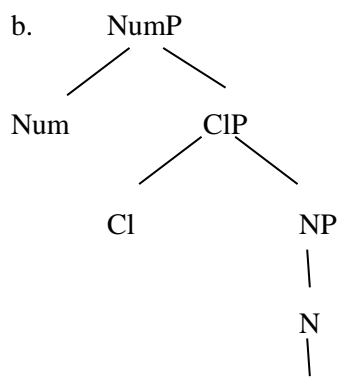
[20] As discussed in the previous chapter, the indefinite description in Chinese takes forms of both present-yi phrase [yi+ Cl+N] or unseen-yi phrase of [Cl+N].

shu ('book')

To sum up, in Cheng and Sybesma's framework, definite bare nouns in Chinese project a null D in the syntactic structure. Indefinite bare nouns are number phrases in the syntactic construction.

3.   A Unique Theory of Mandarin Definite Bare Noun Semantics

Bare nouns in Mandarin can be definite, meaning that they can be used in contexts where 'a definite article would be obligatory in English' (Jenks 2017, p. 5). The previous sessions discussed how the definite reading of Chinese bare noun arguments is possible in different theories. In this session, a unique theory of Mandarin definite bare nouns semantics is explored.

3.1   *Unique Definites versus Familiar Definites*

In terms of the characterization of definiteness in natural language uses, there are two competing theories that have been discussed extensively in the literature: the uniqueness theory and the familiarity theory. To make a précis, the uniqueness-based view holds that what contrast the use of a definite description and the use of an indefinite description is that the first entails or presupposes uniqueness; while the second does not. Familiarity theorists assume that whether the speaker chooses an indefinite description over a definite description is a matter of the new-old contrast of the description denotation. In a nutshell, in the familiar theory, the felicitous use of a definite description conventionally requires a contextually assigned function of pre-mention.

Both uniqueness theorists and familiarity theorists argue that their perspectives can account for the empirical data of definiteness across languages. The fact is that definite descriptions can both be used as anaphora which is licensed by pre-mentioned information; as well as they can be appropriate for introducing not previously mentioned but unique individuals into the context. Some uses of definite descriptions, such as the expressions, *the sun, the moon and the president of Taiwan*, can be easily

explained by a uniqueness theory of definiteness. Other uses, especially those that have explicit antecedents in the discourse, strongly reinforce the familiarity-based argument[21].

Schwarz (2009, 2012) distinguishes the two types of definites, namely, unique definites which do not require an antecedent and anaphoric definites which an antecedent is compulsory, and claims that the two types of definiteness are separated through morphological markers in the German language. In the article language, a weak definite article is used for unique definites and a strong definite article is applied for anaphoric definites. According to Schwarz (2009, 2012), both unique and anaphoric definites presuppose uniqueness within the restriction of the situational domain. The difference is that anaphoric definites demonstrate strong familiarity and take an index as an argument in their semantics. Schwarz's (2009, 2011) framework of unique and anaphoric definite articles can be summarized as the following.

(33)

    a. UNIQUE DEFINITE ARTICLE: (ι)

$[\text{the}_{\text{unique}} \iota] = \lambda s_r. \lambda P. : \exists! x P(x)(s_r). \iota x P(x)(s_r)$

    b. ANAPHORIC DEFINITE ARTICLE: (ι^x)

$[\text{the}_{\text{anaphoric}} \iota^x] = \lambda s_r. \lambda P. \lambda Q : \exists! x P(x)(s_r) \wedge Q(x). \iota^x[P(x)(s_r)]$

(Jenks 2017, p. 13)

Following Schwarz (2009, 2012), Jenks (2015, 2017) proposes that the syntactic distinction of unique and anaphoric definites can be found in Mandarin Chinese. Unique definites are expressed by bare nouns; and anaphoric definites are expressed by demonstrative phrases.

3.2   *Jenks' (2015, 2017) Unique Theory of Mandarin Bare Nouns*

---

[21] An ambiguous theory of definiteness is therefore developed and is growingly preferred by the theorists. Roberts (2003), for example, proposed a hybrid theory and assumed that uniqueness licensed definite phrases such as 'the sun' presuppose 'weak familiarity'.

Jenks (2017) departed from Schwarz (2009, 2012) in the analysis of anaphoric definites (marked as ι^x in (33)). Schwarz (2009) followed Elbourne (2005) and proposed that the anaphoric definite article introduces an extra individual argument plus an identity condition into the proposition. According to Schwarz (2009), the extra individual argument is introduced to the semantics of a strong German article by adding an index in the syntactic construction of the determiner phrase.

(34)

    a. $\lambda s_r \lambda P.\lambda y : \exists !x(P(x)(s_r) \,\&\, x = y).\iota x[P(x)(sr) \,\&\, x = y]$

    b. $[DP\ 1\ [[the\ s_r]NP]]^{\,g}$

    c. $\| (34b)\|^g = \iota x.NP(x)(sr\ ) \,\&\, x = g(1)$

Schwarz (2009, p.260 ex (295))

Schwarz (2009) assumes that the index inside the DP is parallel to a pronoun. If not bound, it is a free variable; and if it is introduced as in (34), a value is allocated via the assignment function *g*. Jenks (2017) takes the indexical argument to be of type *<e, t >* instead of type *<e>*. In Jenks (2017) theory, the index performs the function as a domain restriction. The domain restriction of an anaphoric definite can either be realized by an index as property or by any other properties that can perform the contextual domain restriction function.

3.2.1 *Situational uses of Mandarin definite bare nouns*

Jenks (2017) observes that in Mandarin, anaphoric definites are expressed by demonstrative phrases; and unique definites are expressed by bare nouns. Mandarin definite bare nouns can be used in three situations which are also observed by Schwarz (2009) in analogy with the use of the weak definite article in German. No explicit antecedent is required in the three situations; for the reason that the definiteness is licensed by uniqueness. The three unique definite uses are, in Hawkins' (1978) terms, *larger situational uses*, *immediate situational uses* and *part-whole bridging*.

Larger situation bare definites

In this usage, the unique existence of the intended referent of the definites is licensed either by the general world knowledge or some specific knowledge known by a community in larger situations that are shared between the interlocutors (Hawkins 1978). Larger situation definites reject demonstrative phrases in Chinese and are expressed by bare nouns only; therefore, I refer the them as *larger situation bare definites* in Chinese.

(35)　a.　Yueliang　　　sheng　shang　lai　　le.

　　　　　Moon　　　　　rise　　up　　　come　PERF

　　　　　'The moon has risen.'

　　　　　　　　　　　　　　(Jenks 2017, p.7 ex (11 a.) and Chen 2004, p.1165 ex (90))

　　　b.　# Na/zhe　　ge　　yueliang　　　sheng　shang　lai　　le.

　　　　　　That/this　Cl　　Moon　　　　rise　　up　　　come　PERF

　　　　　'That/this moon has risen.'

　　　c.　Zongtong　　　ye　　dao　　le.

　　　　　President　　　also　arrive　PERF

　　　　　'The president also arrived.'

　　　d.　Na　　wei　zongtong　　　ye　　dao　　le.

　　　　　That　Cl　　president　　　also　arrive　PERF.

　　　　　'That president also arrived.'

150

In (35 a.), the definite description of 'the moon' is expressed by the definite bare noun in Chinese and it is within the world knowledge that there is one and only one moon in the world. In contrast, the use of the demonstrative phrase in this situation is banned even though demonstrative phrases are equally able to express definiteness. What established the uniqueness condition in (35 c.) and (35 d.) is the specific knowledge shared by anyone who is aware of the presidency administrative system. Sentence (35 c.) has the reading of '*apart from other guests, the one and only one president arrived as well*'. This definite reading of '*one and only one president*' is not available in (35 d.). The felicitous utterance of (35 d.) is only possible in a situation that involves multiple presidents, likely from different countries, present in one occasion. The demonstrative phrase *na wei zongtong ('that president')* requires a contrastive interpretation to *zhe wei zongtong ('this president')* or *qita zongtong ('other president')*.

Immediate situation bare definites

(36)   a.   Hufei   he-wan-le   tang.

                Hufei   drink-finish-PERF   soup

                'Hufei finished the soup.'

       b.   Gou   yao   guo   malu.

                dog   want   cross   road

                'The dog(s) want to cross the road.'

(Jenks 2017, p. 7 ex (12))

The uniqueness conditions in the above utterances are satisfied by the shared knowledge between the speaker and the hearer. The statement in (36 a.), for example, is made about a specific person named Hufei and a specific meal that the person was having. Confusions would be raised if the hearer does not share the specific knowledge of who the person is or the hearer is not aware that the person named

Hufei is having a meal. Jenks (2017) observed that in (36 b.) the bare noun *gou ('dog')* would not be interpreted to obtain generic or kind reference because it is not regular for dogs to want to *'cross roads'*. The bare definite is felicitously used because the uniqueness is secured via the context of a specific dog with a specific intention.

However, problems occur when taking the number under-specification of Chinese bare nouns into consideration. Detailed discussion regarding this matter will be explored in later sessions. At this point, I agree with Jenks (2017) on that demonstrative phrases are not appropriate for the immediate situational uses. If a demonstrative is involved in (36), it would only be considered as felicitous if a contrast of an alternative dog that does not fit into the predicative description of '*wants to cross roads'* was at present.

According to Hawkins (1978, p. 123), the most frequent use of the definite article in English is, in his term, the 'associative anaphora' use. For example, if *a book* is mentioned in the discourse, an immediate comment of *the author is famous*, *the cover is worn* can be added by using the definite descriptions (Christophersen, 1939).

(37)   a.   The man drove past our house in a car. The exhaust fumes were terrible.

(Hawkins 1978, p.123 ex (3.61))

b.   I looked into the room. The ceiling was very high.

c.   John was murdered yesterday. The murderer got away.

(Jenks 2017, p. 8 ex (13); Clarks 1975, p. 171)

Schwarz (2009) observed that the associative uses of definite descriptions can be divided into two different types: the part-whole relationship and the producer-product associations. The part-whole relationship includes the bridging usage between *a room* and *the roof, the door, the ceiling* and etc. The producer-product relationship includes *author-book, painter-painting, poet-poem* and etc. (Schwarz 2009). In German, the two types of associative uses of definites are morphologically

distinguished by using different definite articles. For part-whole relationships, the weak article licensed by uniqueness is preferred and for producer-product relationships, the strong article demonstrates familiarity is often used (Schwarz, 2009; Jenks, 2017).

In Schwarz' (2009) theory, part-whole bridging introduces uniqueness presupposition because there is a containment relationship between the antecedent and the definite description. A room contains a ceiling and therefore in (37 b.), the existence of a room entails the uniqueness of a ceiling. In contrast, the containment relationship does not hold in the producer-product association. For example, the pre-mention of a poet does not license a unique poem into the content. Hence, Schwarz (2009) explained that in German, the producer-product bridging is expressed by strong articles because the definites it involves are in fact anaphors in which cases the concealed argument links to the antecedent noun phrases is embedded.

Jenks (2017) follows Schwarz (2009) in proposing that the similar distinction of part-whole association and producer-product association exists in Mandarin.

(38)   *Mandarin part-whole vs. producer-product bridging*

> a.   Chezi   bei   jingcha lanjie   le   yinwei mei   you   tiezhi   zai
>
>   Car   ADV.PAS   police intercept PRF   because NEG   have   sticker at
>
>   paizhao   shang
>
>   license plate   on
>
>   'The car was intercepted by the police because there wasn't a sticker on the license plate.'
>
> b.   Paul renwei   na   shou   shi   hen youmei,   jishi   ta   bu renshi
>
>   Paul think   that   CLF   poem very beautiful   although he   NEG know
>
>   #(na wei) shiren

that CLF poet

'Paul thinks that poem is very beautiful although he doesn't know of the poet.'

(Jenks 2017, p. 8 ex (15))

Jenks (2017) thinks that the bare noun *paizhao ('license plate')* is suitable for the part-whole relationship in (38 a.). In (38 b.), the producer-product relationship is better presented by demonstrative phrase *na wei shiren ('that poet').*

According to Jenks' (2017) observation, parallel to the German weak article phrases, Mandarin bare definites are appropriate for the definite uses in larger situations, immediate situations and in bridging cases, such as the part-whole relationship associative use.

3.2.2   The non-anaphoric feature of definite bare nouns

In Jenk's (2017) observation, bare nouns in non-subject positions are not good for anaphoric definites.

(39)

a.   Jiaoshi   li zuo-zhe   yi   ge   nansheng he yi ge   nüheng

Classroom   inside sit-PROG one   CLF   boy   and one CLF   girl

'There is a boy and a girl sitting in the classroom . . .

b.   Wo   zuotian   yudao #(na ge)   nansheng

I   yesterday   meet   that CLF   boy

'I met the boy yesterday.'

c.   Wo   dai   gei   #(na ge)   nansheng   yi   ge   liwu

I   bring   give   that CLF   boy   one   CLF   gift

'I'm bringing a gift for the boy.'

The above example contains an anaphoric chain, in which case, the pre-mentioned indefinite descriptions *yi ge nansheng ('a boy')* and *yi ge nüheng ('a girl')* serve as the antecedents for the anaphoric definites in the continuing clauses. In the above situations, as Jenks (2017) correctly pointed out, demonstratives instead of bare nouns are preferred in the continuing clauses. It needs to be noted here that if the anaphoric definites occur in the pre-verbal positions, the use of Mandarin bare definites becomes equally felicitous.

(40)

a. Jiaoshi   li zuo-zhe   yi   ge   nansheng he yi ge   nüheng

    Classroom   inside sit-PROG one   CLF   boy   and one CLF   girl

    'There is a boy and a girl sitting in the classroom . . .

b. Nansheng   wo   zuotian   jianguo .

    Boy   I   yesterday   meet

    'I met the boy yesterday.'

c. Nansheng shi   lanqiu   dui yuan,   nüheng shi   wangqiu   dui   yuan.

    Boy   be basketball team member, girl   be   tennis   team   member.

    'The boy is a member of the basketball team and the girl is the member of the tennis team.'

In (40), the bare noun definites in the continuing clauses denote the same boy and girl introduced by the indefinite descriptions. There are two nominals in the pre-verbal positions in (40 b.). The bare definites $_{DEF}boy$ takes the sentence initial position which is a typical position for topics. It is less obvious in (40 c.) in which case no double-normative structures can be found in the pre-verbal position. However, the combination of bare definites $_{DEF}boy$ and $_{DEF}girl$ functionally serves as the contrastive topic in the information structure of the sentence. The sentence is *about* the contrastive

statements between the properties of *the boy* and *the girl*. Both bare definites involved in (40 b.) and (40 c.) are topics. When Mandarin bare definites function as topics, they are possible for the anaphoric use in order to carry the same topic in further discourse.

3.2.3   Semantics of unique bare definites

According to Jenks (2017, p.15), the semantic contribution of the situation variable is an essential component of the meanings of unique definites. Mandarin bare definites in the unique situations have the following construction.

(41)   NP1

         ι   NP2
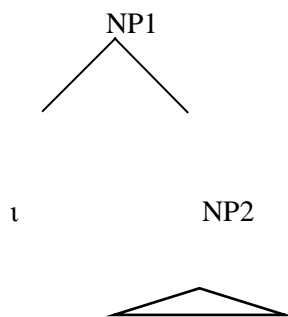
Noun denotation: *e.g. yueliang ('moon'), zongtong ('president')*

The convert ι operator shifts the readings of Mandarin bare nouns from kinds to the definite reading. The iota operator does not need any explicit antecedent; and it is able to pick up different individuals as references in different situations. Mandarin bare definites, therefore, are able to introduce co-varying or situation-dependent individuals as references.

(42)

    a.   Jin nian   zongtong lai   zi PFP

          this year   president come from PFP

          'This year [the president]$_i$ comes from the PFP.'

    b.   Ming nian   zongtong   jiang shi   DPP de dang yuan

next year   president   will be   DPP REL party member

'But next year [the president]??$_{i/j}$ will be from the DPP.'

c.   Ming nian   zhe wei zongtong   jiang shi   DPP de dang yuan

next year   this CLFpresident   will be   DPP REL party member

'But next year [the president]$_i$ will be from the DPP.'

(Jenks 2017, p. 15 ex (28))

The difference between the bare definite *zongtong ('president')* in (a.) and (b.); and the demonstrative definites *zhe wei zongtong ('this president')* in (c.) is that when a bare definite is used, the reference may vary according to different situational restrictions of *'this year'* and *'next year'*. The bare definite is allowed to pick up different individuals as *'the president'* for two separate sessions in time. In (42 c.), however, the reference of the demonstrative definite has to be bound with the same referent that of previous-mention. The bare definite allows multiple interpretations. The demonstrative definites only obtain one reading: the same person being the president as well as a member of PFP this year will continuously become the president next year and he or she will switch from PFP to DPP.

The Situation-based variant reference also applies to part-whole bridging uses and generates co-varying readings.

(43)   Mei   ge   mai le fangzi de   ren   dou xuyao xiuli wuding.

      Every   Cl   buy PRF house MOD people   all   need   fix   roof

   'Everyone that bought a house needed to fix the roof.'

(Jenks 2017, p. 16 ex (31))

The reading of *'the roof'* varies with the alternative houses in the context. The uniqueness is secured via the part-whole relationship of each house normally has one roof. Hence, a unique roof is referred to in each house-buying event.

According to Jenks (2017), the uniqueness is guaranteed by the topic situation which is a component of the common ground in the immediate situational uses. Jenks (2017) believes that in uttering (44), the bare definite *'dog'* receives either a singular or plural interpretation. A uniqueness presupposition secured for the singular reading and a maximality condition is obtained for the definite plural reading. Jenks (2017) emphasized that for the definite plural reading, in the case where among three dogs only one demonstrates the intention to cross the road, the utterance of the sentence would be infelicitous.

(44)　　*Repeated of (21)*

　　　　Gou　　yao　　guo　　malu.

　　　　dog　　want　　cross　　road

　　　　'The dog(s) want to cross the road.'

　　　　　　(Jenks 2017, p. 7 ex (12); Cheng and Sybesma, 1999, p. 510 ex (2 a.))

In conclusion, Jenks (2017) provides a unique account of bare definites in Mandarin. Under Jenks' (2017) analysis, Mandarin bare definites are used for the definite situations licensed by uniqueness. The uses include larger situational definites, immediate situational uses and bridging uses such as the part-whole relationship. Mandarin bare definites are not good for anaphoric uses and hence do not carry strong familiarity. The semantics of bare definites contains an iota operator that picks up an individual based on the situational variable in the structure. The bare definites in the immediate situational uses are ambiguous between a singular and a plural reading. However, in either reading, the uniqueness/maximality is secured via the iota operation.

3.3　　Problems of the Unique theory: the Anaphoric Bare Definites

One standing challenge for the uniqueness theory of Chinese bare definites is that it is possible for bare nouns to be used in the anaphoric definite situations. Jenks (2017) is aware of the possibility and provides a topic-oriented solution to answer the question.

(45)   a. Jiaoshi   li   zuo-zhe   yi ge nansheng he   yi ge   nusheng,

         classroom   inside sit Prog   one CLF boy   and   one CLF girl,

       'There is a boy and a girl sitting in the classroom . . .

       b. nansheng   ne,   wo   hen   bu xihuan.

          boy   CT,   I   really   not like

       'The boy, I really don't like.'

(Jenks 2017, p. 24-25 ex (52) and (53))

As displayed in (45), the use of the bare noun is possible in the anaphoric situation such that the bare noun *nasheng ('boy')* in (b.) indicates the same boy in (a.). According to Jenks, the bare noun *nansheng ('boy')* is acceptable only because there is an implicature arising from the contrastive of the boy and the girl in the context. Jenks' (2017) explanation is that first the bare noun used is in the topic position; and second the topic use is licensed by contrast, in which case that the speaker does like the girl.

Jenks (2017) extends theory and proposes that all anaphoric bare definites are in fact topics. The purpose of using a bare definite in an anaphoric situation; instead of using a demonstrative phrase (which is considered as a proper anaphoric definite), is to mark the topicality. Following Roberts (1996) and Büring (2003), Jenks believes that topics are salient members of QUD (Question Under Discussion).

(46)   Zuihou na   zhi   bei   xiao-hei   zua-dao de   lao-shu zenme   le?

         finally that   CLF   PASS   little-black   catch REL   mouse what.happened PFV

159

'What happened to the mouse that was caught by 'Blacky'?'

B: #(Na zhi)   mao   sha   le   (ta).

        That CLF   cat   killed PFV   it

B':   Ta   bei   #(na zhi)   mao   sha   le

        It   PASS   that CLF   cat   kill   PFV

(Jenks 2017, p. 24 ex (51))

The QUD in the above example is *'What happened to the mouse?'* In the question and answer pairs, the answer to the QUD is the topic of the answering clauses. In the above case, the topic is not the subject *cat* named *Blacky*, but the object NP *'the mouse caught by the cat'*. Therefore, bare nouns definites are not good to express the anti-topic subject of *'cat'* in the anaphoric situation. Jenks (2017) concluded that there are two features that anaphoric bare definites demonstrate. First, anaphoric bare definites occur only at the subject or the pre-verbal position. Second, they serve as topics and the topicality is marked pragmatically by either a contrastive implication or as the continuing topic through discourse.

Bare noun definites in object positions, in contrast, can never be anaphoric. The explanation Jenks (2017) provided is that since an object positon, by definition, is not a subject position, and only subject definite bare nouns can function as topics, it is hence impossible for the object definite bare nouns to be anaphoric.

Two problems can be found in Jenks's (2017) explanation. First, it is not true that only subjects can serve the function of topics. Cross-linguistic evidence shows that topics can be realized by either subject or object arguments; as well as through other distinctive syntactic constructions. In Chinese, for example, a topic NP can take a left-periphery positon to the subject and forms a double nominatives structure pre-verbally. Second, it is implausible for Jenks (2017) to connect anaphoricity to topics. It is not even clear if there is a definiteness constraint can be linked with topic structures in

the language. In the following section, the topic-related definiteness theory holding by the familiarity theories is explored. It is revealed that the assumption of topics involving obligatory definiteness is implausible. It is thus inadequate for Jenks (2017) to claim that definiteness with anaphoric features closely associates with subject- positioned topics in Chinese.

4.   A Familiarity Account of Bare Definites

The familiarity theory holds that the interpretation of bare nouns in Mandarin closely connect with the distributional status of the bare nominal arguments (Li and Bisang, 2012; Li, 2013). Based on the observation that bare definites occur in topic and canonical object positions, Li (2013) assumes that the definite reading of Chinese bare nouns is contextually determined.

'The definite readings of Chinese bare nouns are derived by intersecting a predicate derived from the kind term with a contextually determined predicate C, which expresses familiarity.'

(Li 2013, p. 116)

4.1   The Topic-comment Structures and the Definite Interpretation

Li (2013) associates the definite interpretation of bare nouns with the frequent-occurring topic-comment structures in the Chinese language. Li (2013) follows Li and Thompson (1976, 1981) and takes the topic-comment structure as a construction of syntax, which is comparable and at the same time independent from the subject-predicate structure of a sentence. Under this assumption, it is claimed that unlike English which only has subjects, the Chinese language system contains an extra element of topics. The division of topics and subjects in the language is not only situated at the level of information structure; but also at the level of syntactic structure (Li, 2013). Li (2011, 2013) assumes that Mandarin bare nouns obtain definiteness from their topic status. Instead of merely being the subject of the sentence, bare definites occurring in pre-verbal positions are in fact topics.

4.1.1   Double nominative structures and the matrix subject

(47)   *left-periphery topic in the double nominatives structure*

Shu   Mali   zhao-dao   le.

Book   Mary   find   PERF

' (As for) the book, Mary found it.'

The utterance containing a double nominative structure in the above example is considered as typical in Chinese[22]. There are two nominatives appearing at the pre-verbal level in the sentence. The sentence is read to have a topic-subject-predicate structure. Topics distinguish from subjects at the phase that there is no selective relation between a topic and the VP of the sentence; while the relation is obligatory between a subject and its VP (Li and Thompson, 1981). For example, in the above sentence of (47), *'Mary'* is the actor of the action verb *'find'* and therefore is the subject of the sentence. The bare noun *shu ('book')* preceding the subject is originally the object of the sentence. By moving to the sentence-initial position, the direct object is marked as what the sentence is *about*. The word order of the sentence is altered to OSV (Object-Subject-Verb). The movement of the direct object to the sentence-initial position is a common method of the topicalization applied in Chinese. In Li's (2013) theory, the bare noun obtains its definite reading through the process of the topicalization.

Not all topics take a distinct syntactic position in the sentence. In some set of circumstances, a sentence yields a typical SVO (Subject-Verb-Object) surface structure with the topic of the sentence overlays with the subject of the sentence.

(48)   *the matrix subject*

a.   Ke   lai   le.

Guest   come   PRF

---

[22] Double nominative structure is a typical topic construction in Mandarin Chinese. However, a single nominative structure can also function as a topic construction, such as, Shu (book) mai le (bought). The word order of the sentence is altered into the object-first structure. It is true that this double nominative structure forms a topic construction in Chinese. Again, linking with the previous question about the subject and topic definiteness, the author tried to avoid emphasizing that the notion of topics needs to be treated as purely grammatical constructions.

'The guest has come.'

Or'The guests have come.'

b.   Shu   zai   nar?

Book   at   where

'Where are the books? /where is the book?'

In XP Li's analysis (2013), even though there are no left-periphery topic structures in the above sentences, both the bare nouns *ke ('guest')* and *shu ('book')* are definite, because they are matrix subjects that perform the function of being both the subject and the topic of the sentence containing them.

As shown in the following example, the bare noun in the sentence initail position can obtain a definite as well as a generic reading; but not an indefinite reading.

(49)   *toplicalization of direct objects*

a.   *repeated of (45)*

Shu   Mali   zhao-dao   le.

Book   Mary   find   PERF

' (As for) the book, Mary found it.'

Or   '(As for) the books, Mary found them.'

b.   Gou   wo   kan   guo   le.

Dog   I   see   EXP   PRF

'The dog I have already seen.'

Or   'Dogs (generic) I have already seen.'

But not 'A dog I have already seen.'

English does not have the construction. The topic *gou ('dog')* in (b.) is originally the direct object of the verb *kan ('see')* and is moved to the left of the subject *I*. Both definite and generic readings are possible for the bare noun topic, but the indefinite reading is not allowed. Li and Thompson (1981, p.86) therefore assume that 'nouns are unmarked for definiteness are always interpreted as definite or generic when they are topics…' Hence, bare definites obtain their readings from the definiteness requirement of the positon.

4.1.2   Secondary topics

Li (2013) obverses that the definite readings of Chinese bare nouns are also available in the secondary topic positions; as demonstrated in the examples below.

(50)   a.   Wo   shu   yiing   kanwan   le.

        I   book   already read-finish   PRF

        'I have finished reading the book.'

       b.   Ta   yifu   yijing   maidao   le.

        She   clothes already buy   PRF

        'She has already bought the clothes'

       c.   Women   fan   yijing   zhubei hao   le.

        We   meal   already prepare well   PRF

        'We have already prepared the meal.'

Although the pronouns take the sentence initial positions, they are the subjects of the sentences; based on the selective relation between the pronouns and the VPs; i.e. *'I-read' 'she-bought'* and *'we-prepared'*. In the double nominative structure, it is the bare noun that immediately following the pronoun functions as the topic. The nominals are direct objects of the verbs and are topicalized through a movement from the base-generated post-verbal positions to the pre-verbal positions. Since they are not in the sentence initial positions, they are considered as, in Li's (2013, p. 119) terms, 'secondary topics'; which stands in a contrastive relation to the notion of 'primary topics'.

The BA-construction or the 'disposal construction' [23](Wang, 1943) is considered to indicate the secondary topics of the sentences. A brief outline of the BA-construction can be illustrated in a contrastive setting with a non-BA structure sentence in Chinese.

(51)

a.   Tangmu   chi   le   na   ge   pingguo. *non-BA construction*

       Tom   eat   PVF   that   Cl-GENERAL   apple.

       'Tom ate that/the apple.'

b.   Tangmu   ba   na   ge   pingguo chi   le.   *BA-construction*

       Tom   BA   that   Cl-GENERAL   apple   ate   PVF.

       'Tom ate that/the apple.' or 'That apple, Tome ate it.'

The non-BA sentence in (a.) follows the word order of SVO (Subject-Verb-Object). The BA-construction in (b.) altered the word order into SOV (Subject-Object-Verb). Marked by BA, the entity of NP denotation is believed to be affected, dealt with or disposed of by the action expressed by the main verb. It is generally agreed among theorists that the after-BA object NP must be definite or specific (Chao, 1968; Huang, 1982; Jiang, 2012; Li and Thompson, 1981; Li and Bisang, 2012; Mei, 1978; Paris, 1981; Sybesma, 1999; Wang, 1943).

---

[23] Which has no equivalent in English

(52) a. Ta   yijing ba   zuoye   zuowan   le.

          She   already OM   homework   finish   PRF.

          'She has finished her homework.'

     b. Ta   you   ba   yifu   mai   le.

          She   again OM   clothes sell   PRF

          'She sold her clothes again.'

     c. Women   yijing ba   fan   zuohao le.

          We   already OM   meal   make PRF

          'We have already made the meal.'

(Li 2013, p. 119 ex (52))

As demonstrated in (52), Li (2013) assumes that bare nouns following BA are definite; for the reason that BA-construction proposed object functions like a secondary topic of the sentence (Li and Thompson, 1981).

In conclusion, Li (2013) assumes that the pre-verbal bare nouns gain the definiteness from their topic status. Bare definites in strong positions are either first or secondary topics of the sentences. In a sentence that does not distinguish the topic and the subject in the construction, the bare definite in the pre-verbal position is treated as both the subject and the topic of the sentence.

4.1.3   *Bare definites in lexically restricted positions*

Li (2013, p. 120) thinks that post-verb definite objects refer to 'entities that are (perceptually) visible in an immediate situation or particularly salient or familiar in the discourse context.'

The following sentence illustrates the definite reading of bare noun objects in Mandarin.

(53)   Mei-ge   ren   dou   zai   kan   guanyu jiaxin   de   *xin.*

| Every-Cl | man | all | PROG | read | about | add-wage | Mod | *letter*. |

'Everybody is reading the letter about raising the salary.'

(Li 2013, p. 120 ex (53))

In Li's (2013) analysis, it is possible that the definite reading is achieved through two possible sources. First, the bare definite *xin ('letter')* is used as referential. It refers to a salient letter in the local context. Second, the bare definite functions as a continuing topic ascribed from previous discourse. The discourse topic is assigned as an anaphora that is comparable to the anaphoric use of the English complex demonstrative *that letter*.

(54) a.   Wo   yijing xie   le   xin   le.

           I   already write   PFV   letter   PRF

           'I wrote the letter already.'

    b.   Ta   he-wan   yao   le.

           He   drink-finish   medicine   PRF

           'He finished drinking the (Chinese herb) medicine.'

(Li 2013, p. 120 ex (54))

Under Li's (2013) framework, the above examples[24] further demonstrate that bare definites in object positons receive their definite interpretations via a contextually induced *familiarity*. Either the speaker uses the bare definite as a referential term or there is an implied anaphoricity that carries a topic status from the previous context to the continuing discourse.

4.1.4   *Familiarity*

---

[24] Note that if there is a sentence in the previous context explicitly mentioned 'xin (letter)' or 'yao (medicine)', then the nouns in the double normative structure would be redundant in these sentences. For example, (54 a.) would be: Wo yijing xie le. I already wrote. (54 b.) would become: ta he-wan le. He finished drinking. The original sentences of (54 a. and b.) would sounds very unnatural to a native speaker.

To summarize, Li (2013) claims that there two types of bare definites in Mandarin. The definiteness value in both types is licensed by the context ascribed familiarity. Topics are always definite for the reason that they convey shared background knowledge that is familiar to both the speaker and the hearer. Bare definites in pre-verbal positions automatically gain definiteness from the topic status. Definiteness in post-verbal bare nouns is triggered by strong familiarity such as referentiality or anaphoricity.

For the ranking of the bare noun meanings, Li (2013) followed Chierchia (1998) on proposing that there is an extra process involved for bare nouns to be definite. The individual level reading of bare nouns shifts from the kind denotation to an indefinite existential reading at first stage; and then the indefinite bare noun gains the definite reading through the familiarity constraint in the context.

4.2   The Problem of Topic-oriented Theory of Mandarin Bare Definites

4.2.1   Derived topics versus base-generated topics

Contrary to Li's (2011, 2013) view, Yang (2001) argues that not all topic status requires definiteness.

(55)   Beans$_1$, I ate t$_1$

(Yang 2001, p. 37 ex (40))

As shown in the above, the English bare plural '*Beans'* in the topic positon unambiguously receive an indefinite reading. The meaning of the sentence is read as '*I ate some of the beans (at a party or some contextually salient occasion)*'. Extending the discussion to Chinese, Yang (2001) found that for the bare noun *Gou ('dog')* in the topic position in the following example, both definite and indefinite readings should be possible for the bare noun subject.

(56)   Gou   zai-jiao.

        dog   be-barking

        i. 'The dog(s) is/are barking.'

ii. 'Dogs are barking.'

(57)   Structure-1: [TopP [IP Gou zai-jiao]]   - *definite & indefinite readings*

Structure-2: [TopP Gou_i [IP pro_i zai-jiao]]   - *definite readings only*

(Yang 2001, p. 34-35 ex (36) and (37))

Yang (2001) analysed the above sentence (56) to have ambiguous structures as displayed in (57). The analysis in Structure-1 takes the bare argument as the subject of the sentence. Subjects can be both definite and indefinite and hence the sentence is possible for an indefinite reading of '*some dogs are barking'*. In Structure-2, the bare noun is analysed as taking up the topic position. Since topics are considered to be subjected to a definiteness constraint, the indefinite reading is not available in the situation. If following a matrix subject analysis of the bare noun, it can be concluded that the indefinite reading is overwritten by the definiteness constraint links with the topic position.

To explain why there is a definiteness constraint to the Chinese topic but not to the English one, Yang (2001) introduced the notions of *derived topics* and *base-generated topics* into the discussion. The English topic in (55) is derived by the movement of the object argument to the pre-verbal position. Indefinite readings are possible for derived topics. In (57) Structure-2, the Chinese topic noun *gou* (*'dog'*) does not go through the process of topicaliztion. Instead, it is an independent element that is base-generated. Indefinite NPs cannot serve as base-generated topics[25].

According to Yang, it is important to distinguish the two types of topics grammatically and semantically.

---

[25] It is arguable whether the base-generated topic position is constrained with definiteness or the notion of specificity. I follow Yang (2001) here on taking the point of view that no indefiniteness can be associated with base-generated topics; but it needs to be cautious to be decided; for the reason that specific indefiniteness may be possible for the situation.

(58)	a.	Three students, I know.

	b.	As for the three students, I know them.

	c.	*As for three students, I know them.

<div align="right">*(Yang 2001, p. 38 ex (41))*</div>

As illustrated in the grammatical contrast of the two types of topics in (58), an indefinite NP can be used for the derived topic, but not suitable for the base-generated topic. Same distinction can be extended to Mandarin.

(59)	a.	Yisheng,	Yuehan zhaodao le.	*– derived topic*

		Doctor	John	find	Asp

		i. 'Doctors, John found.'	*Indefinite reading*

		ii. 'The doctor(s), John found (him/them).'	*Definite reading*

	b.	Yisheng, Yuehan	zhaodao-le	tamen.	*– base-generated topic*

		doctor	John	find-Asp	they

		*'Doctors, John found (some).'	*Indefinite reading*

		'As for the doctors, John found them.'	*Definite reading*

<div align="right">*(Yang 2001, p. 38 ex (42))*</div>

Base-generated topics such as in (b.) are independent elements of sentences[26]. Base-generated topics are basic elements in the constructions; just as that of subject in grammar structure (Li and Thompson,

---

[26] Aissen (1992) argues that there are two types of topics need to be differentiated in terms of their syntax: Internal Topics (I-Topics) and External Topics (E-Topics). E-Topics are base-generated outside of CP. This type of topics in Chinese can be described as E-topics for the

1976). Derived topics are topicalized through movement from the argument position in the sentence (Zhang, 2017). In (59a.), the topicalization of *yisheng ('doctor')* by movement leaves a gap in the object positon of the sentence. The contrastive interpretations of the bare nouns in (59 a.) and (59 b.) reflect the semantic distinction between a derived topic and a base-generated topic.

(60)   a.   i. [IP Yisheng, [IP Yuehan zhaodao   le   e]].

                Doctor   John   find   Asp

            ii. [TopP Yisheng, [IP Yuehan   zhaodao   le pro]].

                Doctor   John   find   Asp

    b.   [TopP Yisheng, [IP Yuehan   zhaodao   le   tamen]].

            Doctor   John   find   Asp   they

(Yang 2001, p. 38 ex (43))

It is noted that in (60 a.), there are two possible constructions for the derived topic sentences. The option of (i) treats the moved bare noun *yisheng ('doctor')* to be in an IP-adjoined position. As a result, the existential reading is allowed for the bare noun in this situation.

4.2.2   The problem

I argue that the topic-oriented definiteness theory of Mandarin bare nouns is unattainable for the following reasons.

First of all, the notion of topics is a universal phenomenon that applies to all languages (Von Heusinger, 1993). It is a comprehensive notion that covers the ranges of sentential, clausal and

---

reason that first, the syntactic distribution is outside a complete sentence; and second, it is unattached and hence not governed.

discourse information structure. For a topic-oriented theory of definiteness to be complete, it needs to be generally appropriate to account for the topic-definiteness relation in all languages.

The topic-comment construction can be found in a wide variety of languages (Comrie, 1981) and the features of this universal relationship are language-specific. The definition of topics is often related to the notion of subject in traditional grammar which traces back to Aristotle. Adopted in one form or another, it is received by the theorist that the topic of a sentence is what the sentence is *about* (Gundel, 1977; Chomsky, 1977; Reinhart,1981). The topic-comment relationship is the relation between the entity and the *aboutness* of the proposition. Topics are not necessarily grammatically distinguished and the grammatical subject may not necessarily be topics.

Chafe (1976, p. 50) defines topic as an element which sets 'a spatial, temporal or individual framework ...which limits the applicability of the main predication to a certain restricted domain.' According to Chafe (1976, p. 50), this definition applies mainly to what he called 'Chinese style topics' following the description of Li and Thompson (1976). I follow von Heusinger (1999, 2001) on emphasizing that the topic is a notion of the universal application that can be found in the information structures of all languages. For a topic-oriented theory of definiteness to be accountable, it needs to be based on the universal notion of topics; rather than confined to certain syntactic constructions in Chinese. The universal notion of topics is more related to the felicity conditions of sentences rather than to the truth conditions of propositions.

Second, among the large amount of literature on the discussion of language specific sentence topics, there is hardly any consensus on the definition of topics; as well as its standing relation to the subject.

The tradition of dividing the world languages into the dichotomy between *Topic-prominent* languages and *Subject-prominent* languages starts from Li and Thompson (1976). One radical assumption endorsing the distinction claims that in a typical topic-comment language, such as Chinese, the syntactic notions of subject and object have not been grammaticalized. The meaning of sentences is expressed via topic-comment structures rather than relying on the syntax in the language (LaPolla, 1990, 1993).

An opposite viewpoint from Chinese linguistics in the early effort of outlying the grammar descriptions of the language heavily relies on western linguistic research methods and principles. It is maintained that the relationship of subject-predicate is fundamental between NPs and VPs in all languages (Ma, 1898/1983; Lü, 1944). As for the phenomenon that more than one NP can occur in pre-verbal positions, the subject-predicate view argues that there could be as many subjects in a sentence in Chinese.

The third point of view, which is more accepted nowadays, holds that both topics and subjects exist in Chinese and they are syntactic-semantic distinguished (Li and Thomspon, 1976, 1981; Huang, 1982; Her, 1991; Shi, 2000; Tsao, 1979, 1990; Yang 2001). However, it is not agreed among the theorists on whether the distinction is purely syntactic or syntactic-semantic integrated. It is neither agreed on whether the effective distinguishing between the two notions is possible.

I will now provide a contrastive analysis on the syntactic structures that occur in Chinese and argue that the topic-definiteness relation assumed by the familiarity theorists is incomplete.

According to Chomsky's (1982) *Extended Projection Principle,* it is a prerequisite in English to have a structural subject in every sentence. In the case that there is no subject attached to the verb, a dummy subject is necessary; as illustrated in (61).

(61)   a.   *It* is nearly two o'clock in the morning.

        b.   *It* is important to wear a helmet whenever entering a construction site.

        c.   *There* is a cat on the road.

In the above examples, *it* and *there* serve as the dummy subjects of the sentences. In English, a subject is significant and always required in syntax whether or not it plays a real semantic role. For example, in (61 b.), the dummy subject *it* takes the adjective 'important' as its complement, but the real semantic subject in the sentence is '*wearing a helmet whenever entering a construction site*'.

Chinese sentences do not always require a syntactic subject in the sentence structure.

(62)   a.   Nei-zuo   fangzi xingkui   qu-nian mei   xia-xue.

                That CL   house   fortunate   last-year not   snow

                *'That house (topic), fortunately it didn't snow last year.'

      b.   You yi   zhi   mao   zai   huayuan-li.

                Exist one   Cl   cat   at   garden-inside

                'There is a cat in the garden.'

The sentence initial expression NP *'that house'* in (56 a.) is not the subject of the verb *'snow'*. In (62 b.), no dummy subject of *there* is needed in the sentence construction. The sentence starts with the verb *you ('exist')* and is considered as well-structured in Chinese.

In Li and Thompson's (1976, 1981) theory, the NPs of *'that house'* in (65 a.) and *'a cat'* in (65 b.) are topics. According to Huang (1984a, p. 550), the above sentences show that topic-comment sentences in Chinese 'must count as basic forms in that they cannot be plausibly derived from other 'more basic' forms'.

The above contrast between English and Chinese on the obligatory subject issues is considered as evidence for the argument that Chinese is a topic-prominent language.

Another difference found between English and Chinese is that Chinese allows double nominative structures to appear before the verb.

(63)   a.   Zhe   wei   lao   xiansheng   shenti hen   hao

                this   CL   old   man   health very   good

                'This old man, his health is very good.'

b.   Na   bu   dianying   xuesheng   kan-guo   le.

      That   Cl   film   student   see-PRF   PRT

      'That film, the student (s) has seen it.'

c.   Yu   mao   chi   le.

      Fish   cat   eat   PRF

      '(speaking of) The fish, the cat ate it.'

Different views on the topic or subject analysis can be found for the pre-verbal co-existing NPs. Li and Thompson (1976) analysed the sentences with double normative structures as distinctive subject and topic units of the sentence. In distinguishing the two, a subject has to have a selective relationship with the VP predication (Yuan, 1995) but it is not necessary for the topic and VP relation. For example, in (63 a.), the selective relationship is established with the NP *'health'* and the VP predicate of *'be good'*. Thus, the NP *'health'* is the subject of the sentence. The topic NP *'the old man'* does not hold the relation with the verb.

The topics in (63 b.) and (63 c.) are the semantic objects of the VP predicates. For example, the structure of (63 c.) can be reversed into the SVO word order as below.

(64)   Mao   chi   le   yu.

      Cat   eat   PRF   fish.

      'The cat ate the fish.'

As mentioned previously, the topics in (63b.) and (63 c.) are derived topics. They are created via a movement and the movement leaves a gap in the comment clause. In terms of definiteness, according to Yang (2001), there is no definiteness constraints can be linked with them.

The topics in the following example do not involve any movement process of topicalization.

(65) a. Zhongguo   de da chengshi,   wo   zhi   qu-guo Beijing.

          China   DE big city   I   only   go EXP Peking

          *'Big cities in China, I have only been t o Peking.'

          'As for the big cities in China, I have only been to Peking.'

     b.   Ta   jia   li de   ren,   wo   zhi   jian-guo   ta mama.

          Her   family in DE people   I   only   meet EXP   her mother

          *'People in her family, I have only met her mother.'

          'Speaking of her family members, I have only met her mother.'

(Yuan 1995, p. 570 ex (5) and (6))

The topic phrases *Zhongguo de da chengshi ('China's big cities')* and *Ta jia li de ren ('people in her family')* are base-generated topics. In English, base-generated topics have to be lexically introduced by expressions such as *as for*, or *speaking of*.

The contrast of derived topics and base-generated topics can be briefly re-introduced as the following.

i.   Derived topics are items moved from other argument positions in the same sentence.

ii.   The movement leaves a gap in the comment clause.

iii.   Base-generated topics do not involve any movement.

iv.   No gap corresponding to the topics can be found in the comment clause.

(66) a.   Xiaoming   wo   jiandao   le.

          Xiaoming   I   meet   ASP.

          'As for Xiaoming, I met (him).'

     b.   Xiaoming   wo   jiandao ta   le.

          Xiaoming   I   meet   him   ASP.

          'As for Xiaoming, I met *him.*'

The above example demonstrates a grammatical distinction of a derived topic sentence and a base-generated topic sentence. The minimum contrast between the two sentence structures is that in there is a personal pronoun taking the object positon in (b.) but not in (a.). The comment clause is in a complete structure with the pronoun taking up the space of the object position.

It is worth noting that the typological distinction between derived topics and base-generated topics is much more completed. On one hand, some theorists (Li and Thompson 1976, 1981; Cole, 1987; Xu, 1986) propose that all Chinese topics are base-generated; as they are in-built basic units in the language grammar. A topic is not necessarily an argument of a predicative constituent; it is therefore evident that no extra process of toplicalization is needed in the language. The gapped comment clause is a basic sentence type found in Chinese.

On the other hand, theorists (Huang, 1982, 1984, 1987; Yang, 2001) argued that all Chinese topics are derived topics. There are two possible ways to create a sentence topic in Chinese. The first is to by moving of an argument to the topic position as a *wh*-trace, which is same as the English topics are generated. Secondly, Huang (1982) argued for an empty D position for the topics without movement. In his theory, the topics without toplicalization process are licensed by an empty D category in the syntactic positons.

There is hardly any consensus on the typological distinction of topic structures in Chinese. Yang's (2001) theory of Chinese topics are grammatically distinguished and carry different semantic

components provides insightful thoughts in the inspection of the issue; however, it is not adequate for a complete account of topic-oriented theory of definiteness.

4.2.3   Conclusion

In general, I do not subscribe the view that topics mark referentiality or definiteness (as hold by Erteschik-Shir, 2006a, 2007; Li and Thompson, 1976; Reinhart, 1981). Sentence topics are what the sentence is *about* and can be considered constituents of sentences (von Heusinger, 1999, 2001). Discourse topics are the information that is carried though the discourse structure. More than one topic can occur in a sentence; and the distinction is based on the information structure of the discourse; rather than relies on the syntactic markers.

Languages mark topics through a variety of linguistic choices; including the topicalization through word-order movement, morphological markers or intonation shifts. In Chinese, it is claimed that topics are obligatory items and are syntactically distinguished from other elements in a sentence (since Li and Thompson 1976). I argue that this observation needs to be reviewed. First, it is not necessary for each sentence to contain a topic element. Second, it is not the case that all topics in Chinese have to be syntactically or morphologically marked. In terms of the double nominative structure (and morphological topic markers such as 'a' or 'ne'[27]), I follow von Heusinger (through personal communication) and propose that instead of referring them as topics or topic constructions, an independent terminology should be created for the distinctive syntactic elements.

In terms of definiteness, I follow Yang (2001) on that it is prototypical to link definiteness with the left-peripheral NPs in the double nominative structure in Chinese. However, for the objectives of the research, this noteworthy issue will not be discussed in this dissertation.

---

[27] There is no direct translation for 'a' and 'ne'. These are the sentence particles that are often used at the sentence final position to indicate mood or attitude. When used after an NP in the middle of a sentence, they are considered as topic markers.

In summary, the topic-oriented theory of definiteness holding by the familiarity theorists cannot be considered as sufficient. Therefore, the familiarity account based on the linkage between topics and definiteness in Chinese is not sustainable.

5.   A Non-Unique Theory of Chinese Definites

5.1   *Grammaticized definiteness, Non-grammaticized definiteness and the Uniqueness/maximality Semantics*

Partee (2006) examined the translation between Chinese possessive phrases and their English counter-parts and proposed that while English possessive phrases may be considered as carrying a presupposition of uniqueness/exhaustivity, the same cannot be said for the possessive phrases in Chinese. Based on this assumption, it is improbable to hold that in Mandarin definiteness is licensed by uniqueness.

Quoting Yang (2005), Partee (2006) listed the following structures of possessive phrases in Mandarin. The basic structure of a possessive phrase in Mandarin involves a Possessive Marker DE in the construction such as *Zhangsan DE maoxianyi ('Zhangsan's sweater')*. Partee (2006) followed Yang (2005) and classified the possessive phrases into two types: *High Possessor Phrases* and *Low Possessor Phrases*. The distinction is purely syntactic. A high possessor phrase allows the possessive modifier to occur in the higher hierarchy to other modifications of the head noun, such as demonstratives or classifiers. A low possessor phrase is a phrase that the possessive marker is closely attached to the modified noun; with other modifying elements taking higher positions in the NP construction.

An initial possessor phrase (PossessorP) in the language may come into three different forms, namely possessive plus a bare noun, with a number phrase, or with an embedded demonstrative phrase.

(67)   Possessor DE +Bare Noun

              Zhangsan   de   [maoxianyi]

Zhangsan   DE_{Poss}   sweater

'Zhangsan's sweater(s)'

(68)   Possessor DE + [Numeral + CL + N]

Zhangsan de   [san jian maoxianyi]

Zhangsan DE$_{Poss}$ three CL sweater

'Zhangsan's three sweaters'

(69)   a.   Possessor DE + [Dem + (Numeral) + CL + N]

Zhangsan de [na jian maoxianyi]

Zhangsan DE$_{Poss}$ that CL sweater

'lit. Zhangsan's that sweater'

        b.   Zhangsan de [na san jian maoxianyi]

Zhangsan DE$_{Poss}$ that three CL sweater

'lit. Zhangsan's those three sweaters'

(Partee 2006:2 ex (1,2 and 3))

In terms of definiteness and indefiniteness, all the above constructions are able to take pre-verbal

strong positions and generate definite readings as illustrated below.

(70)

a.	Zhangsan	de	maoxianyi	zai	zher.

Zhangsan	DE$_{Poss}$	sweater	at	here

'Zhangsan's sweater is here.'

b.	Zhangsan	de	san	jian	maoxianyi	zai	zher.

Zhangsan	DE$_{Poss}$	three	Cl	sweater	at	here

'Zhangsan's three sweaters are here.'

c.	Zhangsan	de	na	san	jian	maoxianyi	zai	zher.

Zhangsan	DE$_{Poss}$	that	three	Cl	sweater	at	here

'Those three sweaters of Zhangsan's are here.'

To further demonstrate the definite readings obtained by the PossessorP, Partee (2006) introduced the definiteness effect test which is considered as standard in defining the value of definiteness natural languages. The definiteness effect test involves embedding NPs with the existential construction of *you ('there-be')*. Since the existential construction obligatorily requires indefiniteness, only the indefinite NPs are appropriate for combing with the structure. Definite NPs, on the other hand, cannot be embedded with the existential construction.

(71)	a.	*You	Zhangsan	de	maoxianyi	zai	zher.

EXIST	Zhangsan	DE$_{Poss}$	sweater	at	here

'There are Zhangsan's sweater here.'

b.	*You	Zhangsan	de	san	jian	maoxianyi	zai	zher.

EXIST	Zhangsan	DE$_{Poss}$	three	Cl	sweater	at	here

'There are Zhangsan's three sweaters here.'

c.   *You   Zhangsan de   na   san   jian   maoxianyi   zai   zher.

EXIST Zhangsan DE_{Poss}   that   three   Cl   sweater   at   here

'There are those three sweaters of Zhangsan's here.'

The combination of high-attachment possessives with the existential construction in the above examples is considered as unnatural to the native speaker of Mandarin (the star symbol* signifies inappropriateness). It is, therefore, accurate for Partee (2006) to conclude that the high-attached possessives are definite in pre-verbal positions.

In cases where the expressive meaning of *'there-be'* plus possessive phrases, a 'low-attached' possessive construction is appropriate, as shown in the following example.

(72)   You   san   jian   Zhangsan   de   maoxianyi   zai   zher.

EXIST three   Cl   Zhangsan   DE_{Poss} sweater   at   here

'There are three sweaters here belonging to Zhangsan.'

(Partee 2006, p.2)

In Partee's (2006) terminology, the high-attachment possessives include all the possessive constructions with the possessive occur before the NPs. Low-attachment possessive phrases are the constructions with the possessive marker mediates between the modifications and the Ns; e.g. [Cl+[Possessor DE]+N], [Numeral+Cl+[Possessor DE]+N], [Dem+Cl+[Possessor DE]+N], and [Dem+ Numeral +Cl+[Possessor DE]+N].

The existential *you*-construction test demonstrates that there is a strong tendency that high-attachment possessives introduce definite readings only[28].

For the definite readings of English possessive NPs, it is hypothesized that English possessives are always definite for the reason that the possessor becomes a D-like element and attributes definiteness into the NP interpretations (Abbott, 2004)[29]. Mandarin possessives behave differently comparing with English possessives. High-attachment possessives and low-attachment possessives display different values of definiteness in contexts. The definiteness values of possessive phrases are also related to their syntactic distributions just as bare noun arguments. In (73), for example, if the possessive phrase takes the object-level position after the main verb, an existential construction can be generated to the high-attachment phrase *Zhangsan de san jian maoxianyi (Zhangsan's three sweaters).*

(73) Wo   kan-jian you   Zhangsan   de   san   jian   maoxianyi   zai zher

      I   see   EXIST three Cl   Zhangsan DE_{Poss} sweater   at   here

      'I saw (there are) three sweaters belonging to Zhangsan here.'

Partee (2006, p. 4) observed that the semantics of Mandarin definite possessive phrase in (74) is not identical to their 'similar-looking and near-translation in English' in (75).

(74) Zhangsan   de   san   jian   maoxianyi.

      Zhangsan DE_{Poss} three Cl   sweater

---

[28] Detailed discussions on the relation between possessive marker and demonstrative phrases will be explored in the next chapter that focuses on Chinese complex demonstratives.

[29] Extensive debate on whether English possessives should be categorized as proper definite descriptions can be found in both philosophical and linguistic literature (Kadom, 1987; Lyons, 1999; Luraghi, 1987; Roberts 2003, and many others). For the purpose of this dissertation, it is not necessary to completely illustrate the controversy of this issue. The intention of dealing with possessive definites in this session is to explore how the uniqueness/non-uniqueness symptoms of the Mandarin bare nouns with high-attached possessives can be analysed.

(75)   Translation of (74):   Zhangsan's three sweaters

The English phrase *'Zhangsan's three sweaters'* implies that Zhangsan has exactly three sweaters. The Mandarin phrase, in contrast, does not carry this presupposition (Partee, 2006).

(76)   three sweaters of Zhangsan's

If altered the translation into (76), it is possible to remove that the maximality reading in the original English possessive phrase; however, the definiteness value has been changed correspondingly. The phrase in (76) is unambiguously indefinite in English. But the Mandarin phrase in (74) introduces definiteness.

Partee (2006) hence stated that this imbalance between the English and Chinese definite possessives reveals the fundamental distinction of definiteness. Following Lyons (1999), Partee (2006) proposes that there is a typological distinction between grammaticized definiteness and non-grammaticized definiteness. English has grammaticized definiteness. The definite article *the* takes the D position and the corresponding function of grammaticization of the property of 'being definite' to the NP it c-commanded. Hence, a grammaticized definite phrase always projects a DP construction. Chinese does not have grammaticized definiteness. Lyons (1999) would argue that there is no DP projection in Chinese definite phrases and the definite reading presented is a semantic-pragmatic notion of definiteness as identifiablity. It fails to involve any presupposition of uniqueness/exhaustivity (which Lyons referred as inclusiveness) as their semantic ingredients.

Partee (2006) concluded that the contrast between English and Mandarin possessor phrases demonstrated that Lyons (1999) is correct to point out the different types of definiteness in natural language. The uniqueness/maximality condition is not a semantic obligatory to the Chinese definite NPs. Partee (2006) compared the Chinese style definiteness as similar to the non-unique definiteness found in English, which is expressed by using the demonstrative *that* and *those*.

(77)   a.   Those three books of yours are still in my office.

         b.   I really didn't like that one argument of his, and I told him so.

The above sentences contain a non-deictic and non-anaphoric use of English demonstratives. Unlike the special usage of the English proximal demonstratives of *this* and *these* that is mainly concerned with the specificity of indefiniteness, the distal demonstratives improvise definite readings into the modified NP. In contrast with *the*, the demonstrative phrases under this usage do not presume uniqueness or maximality (Partee, 2006).

Under this assumption, Partee (2006) proposes the correct translation of the Chinese high-attached possessive phrases with bare nouns or number phrases[30] is to use the non-deictic and non-anaphoric distal demonstratives in English.

(78) Ni-de   san   ben   shu   zai   wo-de   bangongshi   li.

　　　Your   three   Cl   book   at   my   office   inside.

Translation

　　　'Those three books of yours are in my office.'

Both the English and Chinese definite NPs *'three books'* denote three books that are contextually relevant. Neither of the sentences expresses the implication of *'you have only three books'* in their propositions. Partee (2006) argued that the cross-linguistic data support Lyons' (1999) typological distinction of definiteness in the natural language. There are two types of definiteness: the first type presupposes uniqueness in semantics; whereas the second type does not.

However, the issue of whether a definite phrase imposes uniqueness is more complicated than merely connecting any overt definiteness marker in grammar with the semantic notion of definiteness. In her

---

[30] The high-attachment possessive phrases also include the construction of possessive plus demonstrative phrases. Since the discussion centred on the definiteness introduced by non-deictic and non-anaphoric demonstratives in English, Partee's (2006) examples successfully avoid the complication and focused on the Chinese possessives without the interaction between demonstratives and relative clauses.

article, Partee (2006, p.6) indicated that 'I do not know how to find reliable tests to try to confirm or disconfirm this predication' since 'it will require sophisticated methods of probing to ascertain.'

5.2   The Issue of Under-Specification of Number

Partee's (2006) proposal that there is no uniqueness/maximality can be found in non-grammaticized definiteness undermines Jenks' (2017) unique theory of definite Mandarin bare nouns. Even it is supposed by theorists (e.g. as Neale (1990) adopted from incomplete descriptions) that the uniqueness of singular definites can be fixed though semantic methods, the maximality or exhaustiveness condition for the plural definites cannot be secured by the same approach. It is in fact a problem for both the unique and familiar accounts of definiteness.

Another issue relates closely to the non-uniqueness claim of Chinese definites and apparently contributes to a non-uniqueness account of Chinese definiteness is that definite bare nouns can remain number neutral in their interpretations.

It is obligatory to choose between singular and plural whenever a noun is used in English. English definite descriptions are therefore categorized into singular and plural definite descriptions accordingly. In Chinese, however, number is less dominant and a noun can be used without reference to number (Corbett, 2000). Corbett (2000, p.10) refers languages like Chinese as to have 'general number'; by which it means that the expression of noun phrases is independent from the number system. Rullmann and You (2003) following Corbett (2000) assumes that bare nouns in Mandarin is under-specified for number. Mandarin bare nouns are number neutral; but it is important to note that the under-specification does not postulate ambiguity between a singular and plural reading.

(79)   Zuotian   wo   ma   le   shu.

           Yesterday   I   buy   ASP   book

           'Yesterday, I bought one or more books.'

The above sentence, for instance, is not ambiguous between the reading *'Yesterday, I bought a book'* and '*Yesterday, I bought some books'*. As Rullmann and You (2003) pointed out, the proper translation of (79) in English, by means of circumlocution, is to paraphrase into *'Yesterday, I bought one or more books.'* The under-specification on number can be comparable to the under-specification of gender as in the English world *child*.

(80)   a. John saw a child and Mary did too.

         b. John saw a child and Mary saw one too.

Since the noun *child* is not ambiguous with respect to the boy/girl gender distinction, the above sentences with VP-deletions are considered as truth in either situation that both John and Mary saw a child of the same sex or opposite sex.

Rullmann and You (2003) compared the semantics of bare nouns with indefinite full DPs[31] and claimed that the number under-specification disappears in the indefinite phrases. A bare noun has neutral number but an indefinite full DP is either singular or plural. Rullmann and You (2003) did not extend the observation to definite bare nouns in Mandarin. I argue that, in terms of definite bare nouns, the denotations can be more complex. A definite bare noun can be singular or plural and can be numberless, just as the definite descriptions in English. However, in many circumstances, since bare nouns are not marked for number, bare definites in Chinese are ambiguous.

(81)   Shibing   xuyao   dacheng   huoche.

         Solider   need   travel-by   train

---

[31] The indefinite full DPs they described are constructions in the formation of [(Yi)+Cl+N], which has been discussed in Chapter 2 and are treated as indefinite descriptions in Chinese. Again, I view the indefinite descriptions as fundamentally number phrases but it is not intended here for a NP-DP debate for the formation.

'The solider needs to travel by train.'

'The soldiers need to travel by train.'

'$_{DEF}$ soldier, be one or more, needs to travel by train.'

As displayed in (81) the definite bare noun *shibing ('solider')* can be interpreted as either singular or plural, or have a number-less reading. The under-specification of number allows all these readings to be possible. For a complete account of bare definites in Chinese, it is necessary that the theory has to cover all the possible interpretations.

Partee's (2006) proposes that Chinese plural definites lack maximality and hence the language contains a separate type of definiteness. The number-less nature and the ambiguous number reading of bare definites makes the discussion of uniqueness claim more complicated.

My approach to resolve the seemingly non-uniqueness of bare definites is to unfold the problem into two layers. First, Partee's (2006) assumption is based on the predication that it is compulsory for English definite plural descriptions to carry maximality; but it is not the case for Chinese definite plurals. It is hence necessary to further the investigation to the carried-maximality prediction in both English and Chinese. I observe that regarding the maximality and non-maximality readings, it is equally complex for both English plural descriptions and Chinese definite plurals.

The second stage concerns with how a singular, plural or number-less bare definite description can be distinguished in the cases where no number marking is available. I argue that even though it is common for bare nouns to obtain the number-less reading as their primary readings, it is possible to identify singular and plural bare definites in the language. I will illustrate three types of bare definites taking various syntactic or semantic roles and provide a Russellian quantificational analysis on their semantics. I argue that the most appropriate method to analyse bare definites in Mandarin is to treat them as quantifiers.

It is generally believed that since the Russellian tradition maintains that singular definite descriptions assert uniqueness; the domain of entities can be enriched to include plural denotation such that the

sum of individuals is involved in the account of plural definites. I propose that Russell's theory of plural descriptions covers more ground than a mere maximality statement.

5.3 Definite Plural Descriptions

In English, propositions containing plural definite descriptions are often assumed to have a maximal or exhaustive interpretation, requiring the exact member of the set to have the properties described by the predicates. However, as Schwarz (2013) pointed out, the issue of carried-maximality in plural definites is complicated in the use of natural languages. It seems that non-maximality usages are possible in various situations.

For examples, the plural definite description *the boys* in the subject position can have two readings. In the sentence *The boys left*, it is typical that for the sentence to be true, all the contextually relevant boys must have left. In contrast, for the sentence *The boys are building a raft* to be true, it is possible for some of them to be engaged in something else (Bennett 1974, Schwarz 2013, p. 509).

5.3.1 Collective and Distributive

In both logic analysis and formal semantics, there is a large amount of theoretical literature on the *collective* versus *distributive* distinction of the plural predication. In philosophy, the distinction between the two has been remarked upon since Plato claim of 'whatever is true of two together is also true of each, and whatever is true of each is also true of the two together.' Aristotle later challenged Plato's claim and pointed out that statements contain plurals can be ambiguous. He proposed that *all* can be used in two ways: the collective *all* that means *'all together'* and the distributive *all* that means *'each separately.'*

(82)   a.   Mary and Tom are happy.

        b.   The children are asleep.   *distributive*

(83) a. Mary and Tom met in the garden.

b. The children gathered in the hallway. *collective*

(84) a. The boys lifted the piano.

b. The boys are building a raft. *ambiguous*

There are three ways to interpret a sentence containing a plural expression. In (82), the sentences containing plurals have individual-level distributive readings. Each member of the plural denotation is ascribed to the descriptions in the predicates. The sentences in (83) have group-level collective readings. It is indicated that all members of the plural denotation are involved in the predicative contents. The sentences in (84) are considered to be ambiguous between the distributive and collective readings.

There are two basic approaches to analyse the distributive versus collective interpretations[32]. The first approach is to assume that the subject plurals in (82) refer to individuals; whereas those in (83) refer to groups (Bennett, 1974). The second approach is to claim that plural NPs refer to groups only and the difference between the distributive and collective readings lies at the lexical-semantic level of predicates (Link, 1983, 1984; Roberts, 1986). The second view explains why the ambiguous readings are possible for the plural sentences in (84). The lexical meaning of the predicates such as *lift* and *build* are ambiguous between a distributive and collective reading.

In terms of the maximality of the plural definites, it is generally agreed from both sides that for a collective interpretation to be true, it is not necessary for the predicate to hold for every individual that

---

[32] As Dayal (1998) noted, the proposals on the distributive/collective ambiguity have been discussed and presented from four prospective, i.e. is the ambiguity a property of NP, VP, both or neither? Some holds that the distinction is a property of NPs (Bennett, 1976; Gllion, 1992). Some claims in VPs (Schwarzchild, 1991), in both (Landman, 1989; Link, 1983, 1984) and neither (Roberts, 1986).

is part of the relevant plural set. The collective interpretation provides a way of allowing the non-maximality reading of a definite plural.

5.3.2   *Non-maximality reading of distributive definite plurals*

Schwarz (2013) conducted an experiment for testing the maximal versus non-maximal readings of definite plurals in English; and the result shows that both maximal and non-maximal interpretations are possible for the distributive predicative. The design of the experiment involves the participants to decide the truth value to the statements about arrays of coloured shapes. The truth value judgement is based on checking against sets of visually- displayed shapes in colour. For example, when a mix of black and grey circles was shown, the participants would evaluate the truth of the statement *The circles were black*. To further investigate the pragmatic factors that can possibly affect the maximality versus non-maximality readings, a locational propositional phrase is added and the statement is amended as *the circles on the left were black*. The empirical data found in the results of the test demonstrates the fact that plural definites are used by the participants for both maximality and non-maximality conditions.

Schwarz (2013) further observed that through the data plus the responding time of the participants, it can be concluded that the maximality interpretation is the basic interpretation to the English definite plurals. The non-maximality reading, on the other hand, is realized through pragmatic factors.

The issue of the maximal and non-maximal judgement of plural definites has been extensively discussed. Two competing theories on the topic can be found in the literature. First, the strong account of plural definites (in Schwarz's term 2013, p 511) proposes that maximality is the basic ingredient of definite plural semantics. The non-maximality interpretations found in the distributive situations can be explained and fixed by three approaches. The first approach is to cap a domain restriction to the use of plural definites, along the lines of a standard domain restriction for noun phrases (Westerstahl, 1984; von Fintel, 1994). The second approach is to restrict the domain of the distributive operator for the universal quantification it attributes to the proposition (Brisson, 1998, 2003). Thirdly, there are pragmatic machineries that are responsible for the non-maximal interpretation. Lasersohn (1999)

implemented the notion of 'pragmatic slack', which allows a degree of imprecision in some situations. For example, in common situations, the sentence '*Mary arrived at 2pm'* is accepted as true even if she arrived a few seconds after 2 pm. Similarly, a plural definite sentence can be interpreted as true even if there are some exceptions for the predicate, as long as the exceptions do not matter for present purpose (Schwarz, 2013).

The second account for definite plurals, which is the weak account in Schwarz' (2013), argues that basic semantic meanings of the plural definite do not require maximality. The theory proses that the semantics of definite plurals involve existential quantification (Broggard, 2007; Ludlow and Segal, 2004; Szabó, 2000). The maximality is introduced through contextual factors, such as the 'interlocutor's goals' (Malamud, 2012).

5.4   Russell on Plural Descriptions

In 1903, in *The Principles of Mathematics*, Russell put plurals at the centre of his project through endorsing an account of *classes*. A *class* is fundamentally different with an *individual* for the reason that a *class* is to be considered as many things and not one. While an individual is represented by the form of singularity in grammar; a class is represented by plurality. Russell's early views on the distinction between *classes* and *individuals* come with an obvious intention to provide the logical justification for the grammatical distinction between singular and plural (Iida, 2007; Klement, 2014). The guiding principle for Russell's purpose of providing a separate account of plurals is the methodological thinking of grammar as an important guidance for logic, which is a claim he rejected later in *On Denoting*.

'On the whole, grammar seems to me to bring us much nearer to a correct logic than the current opinions of philosophers; and in what follows, grammar, though not our master, will yet be taken as our guide.'

(Russell, 1903, p. 42)

Later in *On Denoting*, Russell (1905) discovered that grammar as misleading and distinguished the logic structure of propositions from the surface structure of grammar. Even though plural and singular descriptions are in distinctive grammatical forms; Russell treated them as being the same logic type in the formal analysis. The analysis of *plural-the* in Russell's early works, nonetheless, is eliminated and reduced to the theory of descriptions of the *singular-the*. Attaining the model of quantificational logic, Russell proposes that both plural and singular descriptions are incomplete symbols. As explained by Broggard (2007), Russell's quantificational framework of a sentence containing a plural definites can be interpreted as the following.

(85)   The children in my school like sports.

    Interpretation: There are some children in my school that all of them like sports.

It is generally agreed that the standard Russellian analysis of plural definites obligates a unique sum or quantity which projects a quantification of maximality (Bach, 2004; Broggard, 2007; Ludlow and Segal, 2004; Szabó, 2000).

Oliver and Smiley (2013) hailed Russell as one of the pioneers on promoting a theory of plural logic. Based on the examination of a series of timeline logical postulations of Russell since 1903, Oliver and Smiley (2013) proposed that Russell's account for plural descriptions is in fact completely different with his theory of descriptions for the singulars. They argued that instead of reducing them into a cluster of quantifiers as the singular descriptions, Russell treated plural descriptions as predicates.

Oliver and Simley's argument can be briefly introduced as the following. In *Principles of Mathematics,* Russell (1903) associated plural definites with the symbol of *class*. By eliminating the class symbols in favour of propositional functions, the proposition containing plural descriptions in the form of *'the Fs are G'* is analysed as *'the Gs F'*; which turns a plural first-order predication $F{\uparrow}(a{\uparrow})$ into a singular, second-order predication that has the same truth conditions. Oliver and Simley (2013) proposed that since the arrows depict the raising of types, Russell's analysis of the plural definites as secondary-order predication is to treat plural definites as predicatives.

I follow Klement (2014) on arguing that first, what Russell's logic 'is concerned with the real world itself' (Russell, 1919, p.169) but not intentional entities, such as type raising logic forms of reasoning. Secondly, concerning the philosophical goals that Russell intended to establish during that time, one of the main motivations for the disappearance of plural descriptions in *On Denoting* is Russell's supposition that the logical form of a sentence needs to be distinguished sharply from its grammatical form (Klement, 2014, p. 8).

Russell's early theory endorses the distinction of the distributive and collective predications. He insisted that the semantics of the two types of predications need to be analysed differently. The form '*the Fs is G*' needs to be analysed as '*Every F is G*' in distributive contexts; but as '*All Fs are G*' in collective contexts. Although it is not explicitly explained by Russell (1903), it can be inferred that Russell reduced the singular versus plural distinction into the distinction of singular predication and plural predication. The denotation of '*all men*' can be interpreted as '*every man*' (which has the equal semantic analysis of '*any man*') for the reason that *distributive* plurals have the readings of '*Every F*'.

The grammatical difference of singularity and plurality disappeared in distributive context of plural descriptions. On the other hand, the collective reading of plural descriptions cannot be reduced to any form of singular sentences. The plurality is essential to the collective interpretation because it expresses *a class of many* which cannot be said to be one thing. However, in the scheme of *Principles of Mathematics*, Russell struggled to make sense of the idea of *a class as many*; therefore, a proper account of plural reference was not established (Iida, 2007).

In his 1905 paper, Russell disregarded the singular and plural distinction and classified the phrases of '*all men*', '*every man*' and '*any man*' into the same category of denoting phrases, which he later made a quantificational analysis on them. Russell discarded the singular-plural distinction he proposed in the earlier argument; and treated the singular and plural descriptions under the unified theory of quantifications.

6.   A Russellian Account of Mandarin Bare Definite Descriptions

Jenks' (2015, 2017) theory of definite Mandarin bare nouns argues for a typological distinction of unique and familiar definiteness in natural languages. In his theory, Mandarin bare nouns are typically used for unique definite situations, for the reason that there is a uniqueness presupposition[33] licensing the definiteness. Jenks' (2017) theory successfully captures the corresponding data found in the language use. However, there are two problems arising from the presupposed-uniqueness based account of Mandarin bare definites. First, the theory overlooks the fact that due to the under-specification of number, it is possible for Mandarin bare nouns to have multiple interpretations in terms of number in the definite context. Moreover, as Partee (2006) characterized, it is evident that the uniqueness presupposition found in the singular reading of definite bare nouns cannot be extended as a presupposition of maximality to the plural reading of the same form.

Jenks (2017) distinguished anaphoric bare nouns from the unique bare definites and categorized them as topics of the sentence or continuing topics of the discourse. In his theory, the topic positions license the anaphoric use via a pragmatic notion of familiarity. The different uses of definite bare nouns yield a dichotomy of uniqueness and familiarity on the analysis of Mandarin definites. Considering the factors that Mandarin has rich topic-comment structures plus that subjects are not obligatory in syntax, it seems that for Jenks's dichotomy proposal to be complete, the characteristic distinction of a definite bare noun as a subject versus as a topic is indispensable.

It is undeniable that Russell's theory of description played a significant role in philosophy. However, it seems that current studies of natural languages leave Russell's theory to the past; as an important but obsolete stepping stone (Henning, 2016). As Neale (1990, p. 44) pointed out, one of the explanations on why Russell's theory of description is suggested as 'too cumbersome' to merit a place in compositional semantics is because the formalism of theory is so over-emphasized that the semantical insights of the theory are mistreated. I follow Neale (1990) and Stevens (2011) on defending Russell's theory of descriptions as a powerful tool, which is as effective as a direct reference theory but captures more data in the language use.

---

[33] Based on the exchange of Sellars (1954) and Strawson (1952) on the notion of pragmatic versus semantic presupposition, I argue that Jenks' (2017) uniqueness is a semantic notion of presupposition.

6.1   Guidelines: Descriptions as Quantifiers Expressions in Natural Language

I adopt Neale's (1990) theory on the account of definite descriptions as natural language quantifiers; and together with his approach to present the logic structure and truth clause of sentences containing singular, plural and number-less descriptions in English as the guideline for the analysis of Mandarin bare definite descriptions.

Descriptions in the Russellian account are categorized as within the semantic category of 'denoting phrases' in the grammatical form of *Det+N* in English (Neale, 1990). Modern cross-linguistic data extends the grammatical forms of definite descriptions to encompass a vast variant of definite noun phrases, including the ones with or without overt determiners.

Following Russell's original proposal, the discussion on definite descriptions typically centres on the phrases having the grammar form of *'the so-and-so'* in English. However, the intention Russell has is to characterize them into the broad semantic category of quantifier phrases that embraces a group of NPs in various forms. Neale (1990, p. 35) described the theory of description to have '*enormous expressive power'* for the account of natural language. The theory facilitates the presentation and the predication of the truth conditions of the sentences containing all forms of denoting phrases.

In English, Neale (1990) characterized that Russell's definite descriptions as having the following NP forms.

(I) the'+ N'

(II) (NP+*poss*) +N'

Neale (1990, p.35)

The element of N in the above formula can be a simple or complex nominal expression such as *man, tall man, a man who owns a donkey* and *etc.* (Neale 1990, p. 34). The English grammar distinguishes definite descriptions into three types in terms of number: singular, plural and mass definite descriptions. Russell's theory of descriptions is a semantic theory that covers all three readings of

definite descriptions. Russell's essential semantic clams are that the logical structure of *the F is G* can be characterized as

(86)   [some *x*: F*x*] ([every *y: Fy*] (*y=x* & G*x*))

Neale (1990) reframed Russell's formalism and presented the logic structure of sentences containing singular, plural and number-less definite descriptions into the subsequent forms.

The F is G is true iff *all Fs are Gs* and there is exactly one *F*. The truth conditions of the proposition containing the quantifier *the* can be presented as

(87)   [the *x*: F*x*] (G*x*) is true iff |**F-G**|= 0 and |**F**|=1

<div align="right">(Neale 1990, p. 45)</div>

Based on Russell's essential logic analysis and Chomsky's truth clause in distinguishing the singular and plural descriptions, Neale (1990, p. 42) presented the framework of definite description in the natural language as the following.

(88)   a.   *singular descriptions*

        [the *x*: F*x*] (G*x*) is true iff |**F-G**|= 0 and |**F**|=1

        b.   *plural descriptions*

        [the *x*: F*x*] (G*x*) is true iff |**F-G**|= 0 and |**F**|>1

        c.   *number-less descriptions*

        [the *x*: F*x*] (G*x*) is true iff |**F-G**|= 0 and |**F**|≥1

Unlike English definite descriptions in which the number of the expression is overtly marked through grammatical elements, Mandarin bare definites do not reveal the number reading in syntax. Even though not marked by syntax, definite Mandarin bare nouns are able to obtain the singular, plural and numberless interpretations, just as English definite descriptions do.

Neale's (1990) natural language account for definite descriptions is capable of capturing the Mandarin data and therefore provides a Russellian guideline for treating Mandarin bare definites as quantifiers.

In the following sections, I will provide an analysis of Mandarin bare definites in relation to the number denotation, as well as the topic or subject status in the sentence. In terms of definiteness, I follow Yang (2001) and assume that topics may not be always definite. The definite reading of bare nouns in the topic position needs to be explained through a semantic method. In terms of number, as mentioned earlier, Mandarin bare nouns are not obligatory to number marking. However, the number interpretation of a definite bare noun as base-generated topics may be revealed through lexical items in the construction of the comment clause. I argue that base-generated topic bare definites can be captured by Neale's (1990) account of singular and plural descriptions.

Bare definites in derived topic positions do not have overt singular or plural indications. Moreover, no uniqueness can be said to be postulated by the derived-topic bare definite. I argue that the semantics of these bare definites can be comparable to the readings of English weak definites.

Finally, I provide an analysis of the so-called matrix subjects of definite bare nouns. I follow Neale's (1990) analysis of numberless descriptions and assume that these bare definites can be analysed accordingly.

6.2   Left-periphery Bare Definites

It is evident that Chinese contains a rich variety of topic-comment structures that it is often accepted that major distinction between English and Chinese is how the notion of topics play a role in grammar. In the literature of Chinese linguistics, there is an inconsistency of using the term 'topics' as referring to a pure syntactic item or a semantic-syntactic constituent in the information structure. I assume that the notion of topics is best described as a concept that relates closely to the information structure. The discussion of topics needs to be characterized under the framework of the information structure, which rests at the higher order of language use that involves the lexical meanings of expressions, semantics, pragmatics as well as the surface structure of sentences.

To avoid the problem, I will adopt the term of 'left-periphery position' as a purely syntactic notion. Bare nouns in this position normally take the function as topics. Bare nouns taking the left-periphery position in a double nominative structure are always definite[34]. The base-generated topic sentences that I chose contain a singular or plural pronoun in object position in the comment clause. The pronouns function as the anaphora to the definite bare noun in the left-periphery position and hence directly revealed the number status of the definite bare noun. A referentialist may argue that the anaphoric relationship between the bare noun and the pronoun demonstrate the referential nature of the bare noun phrase. I follow Neale (1990) on claiming that the pronoun anaphora can be analysed as unpacking the complex of quantifications with variables in semantics.

6.2.1   Singular and plural bare definites in left-periphery positions

Base-generated topics are identified as basic elements in a sentence that no movement from other argument positions is involved in creating the topichood. The clear contrast between a base-generated topic and a derived topic can be displayed by the following example.

(89)   a.   *the base-generated topic*

        Gou   wo   zhaodao   ta   le.

        Dog   I   find   it   PERF

        '(as for) the dog, I found it.'

    b.   *the derived topic*

        Gou   wo   zhaodao   le.

        Dog   I   find   PERF

---

[34] But the relationship between the syntactic positon and topic marking is beyond the research of this dissertation.

'(as for) the dog, I found.'

The minimal contrast between sentence (89 a.) and (89 b.) is that in (a.) a pronoun *it* is involved in the sentence structure and takes the object position. Sentence (89 a.) is a complete sentence in the word order of SVO; with the left-peripheral bare definite functions as an extra element. The sentence hence contains the construction of the following.

(89 a.')   [*Gou ('dog')*]_{TOPIC} [*wo ('I')*]_{SUBJECT} [*zhaodao('find')*]_{VP} [*ta ('it')*]_{OBJECT}

In contrast, in the sentence (89 b.) there is a gap in the object position that is corresponding to the left-peripheral bare definite *Gou ('dog').* The bare definite is the semantic object of the VP *zhaodao('find')* and is topicalized via movement from the object position to the sentence-initial position. The sentence has the structure of the following.

(89 b.')   [*Gou ('dog')*] _{TOPIC} [*wo ('I')*]_{SUBJECT} [*zhaodao('find')*]_{VP} [___]_{OBJECT}

There is a gap in the VP restricted object position. The bare argument in the position is moved to the sentence-initial position and takes the function as a *derived-topic* of the sentence.

The second contrast between the two sentence is that (89 a.) contains a singular definite bare noun with the singularity revealed through the anaphoric pronoun in the comment structure. In (89 b.), the bare noun is not marked for number. Base-generated topics, with the topic and the object related, can have the determined number.

(90)   a.   Milu   de   youke Mali   zhaodao   ta   le.

          Lost-way   MOD   tourist Mary   find   he   PERF.

          '(as for) The lost tourist, Mary found him.'

      b.   Milu   de   youke Mali   zhaodao   tamen le.

          Lost   MOD   tourist Mary   find   them   PERF.

'(as for) The lost tourists, Mary found them.'

Both the above sentences contain base-generated topics. The contrast is that while the first sentence contains a singular definite bare noun, the second contains a plural one. The singularity and plurality of bare definites are revealed through the anaphoric pronouns in the sentence. I treat these bare definites have determined number readings. The uniqueness/maximality quantification can be found their semantics; comparable with singular and plural definite descriptions in English.

I argue that bare definites in the base-generated positions display ambiguities of scopes such that they need to be analysed as quantifier phrases. Before moving on to the scope analysis, it is imported to note that there are various sub-types of base-generated topics baring the same form of double nominative structures in Chinese. The above examples displayed base-generated topics that are considered as the semantic objects of the VP. Apart from the semantic object topics, a few sub-types of base-generated topics can be found in the language. I will follow Shi (2000) and list three specific sub-types and then provide the reasons why the semantic objects topics are considered as typical.

(91)   *Possessive relation between topics and subjects*

Lao xiansheng   shenti   hen   hao.

Old gentleman   physical-health very   good.

'The old gentleman's physical health is very good'

In the double nominatives structure, there is a possessive relation between the topic noun and the subject of the VP.

(92)   *Part-whole relations between topics and subjects*

Wode   pengyou   yiban   zhuzai niuyue.

My   friend   half   live   New York

'Half of my friends live in New York.'

The subject in the original sentence is the notion 'half'. There is a part-whole relationship between the reading of the subject and the topic structure of 'my friends'.

(93)   *Part-whole relatios between topics and objects*

        Tade   laoshi wo   zhi   jianguo tade   banzhuren

        His   teacher I   only   meet   his   class-tutor

        '(Among) his teachers, I only met his class-tutor.'

The translation of the above sentence would use the word 'among' in English. The object 'his class-tutor' is a member of the whole set of 'his teachers'.

(94)   *Kind-union relations between topics and subjects*

        Pinguo yi   gongji   san   kuai   qian.

        Apple one   kilogram   three   monetary-unit money

        'Apples are three Yuan per kilo.'

The topic in the sentence-initial position is a kind term and there is a kind-union relationship between the topic and the subject term of the sentence.

There is a clear singular or plural interpretation of the definite bare nouns in the base-generated position.

6.2.2   Scopes

As Neale (1990) pointed out, the theory of descriptions, when applied to natural language, can be viewed as a general theory of natural language quantification, a theory in which the definite descriptions are classified as members of quantificational phrases such as '*some men*', '*all men*', '*no man*' and '*most men*'. Descriptions are quantifiers in natural language. One of the features of quantifiers is that they interact with each other when two or more are captured in one sentence.

English definite descriptions demonstrate scope interactions with other quantifiers without changing the truth conditions of the proposition. Definite bare nouns in Mandarin also display the scope ambiguity in the sentences with the quantifiers as well as with the operator in the propositional attitude reports.

(95)   *Scope interaction with other quantifiers*

a.   Zoushi de   haizi   quanbu gongzuorenyuan dou qu zhao   ta   le.

        Lost   MOD child   entire-range   staff   all go look-for him   PERF

'(as for) The lost kid, all the staff went to look for him.'

b.   Lili   song   de   shoubiao   Mali   meitian   dai-zhe ta.

        Lily   give   MOD watch   Mary   everyday   wear   it.

'The watch that Lili gives her as a present, Mary wears it everyday.'

c.   Song-xin ren   Mali   meiyou   jiandao ta.

        Send-letter person   Mary   not   see   him.

'(as for) The person who left the message, Mary did not see him.'

All the sentences in the above example contain a definite bare noun in the left-peripheral position and a quantifier or operator in the structure. The sentences can be analysed respectively as the following.

(96)   Bare definites with *all*

a.   Zoushi de   haizi   quanbu gongzuorenyuan dou qu zhao   ta   le.

        Lost   MOD child   entire-range   staff   all go look-for him   PERF

'(as for) The lost kid, all the staff went to look for him.'

(a1)   [All x: ('Staff') x]

[DEF *y*: ('lost kid') *y*] (*x* ('look for') *y*)

(a2)　　[DEF *y*: ('lost kid') *y*]

[All x: ('Staff') *x*] (*x* ('look for') *y*)

Bare definites with *everyday*

b.　　Lili　　song　　de　　shoubiao　　Mali　　meitian　　dai-zhe　ta.

Lily　　give　　MOD　　watch　　Mary　　everyday　　wear　　it.

'The watch that Lily gives her as a present, Mary wears it everyday.'

(b1)　　[('everyday')]

[DEF *x*: ('watch-given-by-Lily') *x*] (Mary wear *x*)

(b2)　　[DEF *x*: ('watch-given-by-Lily') *x*]

[('everyday')] (Mary wear *x*)

Bare definites with the negator

c.　　Song-xin ren　　Mali　　meiyou　　jiandao ta.

Send-letter person　　Mary　　not　　see　　him.

'The person who sent the letter, Mary did not see him.'

(In this sentence, the noun phrase in the topic position can be read as an appositive clause to the object 'him'.)

(c1)　　¬ [DEF *x*: ('Send-letter person') *x*] (Mary see *x*)

It is not the case that Mary saw him, the person who sent the letter.

(c2)　　[DEF *x*: ('Send-letter person') *x*] ¬ (Mary see *x*)

As for the person who sent the letter, Mary did not see him.

As illustrated above, bare nouns with definite readings in the left-peripheral potions do not always take a wide scope. Similar scope ambiguities can be found in propositional attitude reports sentences.

(97)   Zhangsan   renwei songxin   ren   Mali   kandao ta   le.

        Zhangsan   think   send-letter person   Mary   see   him   PERF.

        'Zhangsan thinks that (as for) the person who left the message, Mary saw him.'

(R1) Zhangsan thinks that ([DEF x: ('Send-letter person') x] (Mary see x))

(R2) [DEF x: ('Send-letter person') x] (Zhangsan thinks that (Mary see x))

6.2.3   Conclusion

Bare nouns in the above examples demonstrate the following features. First, in terms of number, it is possible for the bare noun to be interpreted as singular or plural. The anaphoric pronoun contained in the sentence structure reveals the singular or plural denotation of the bare noun. In terms of definiteness, the bare noun in the sentence-initial positions obtains a definite reading. Second, the definite bare noun can be analysed as quantifiers and interact with other quantifiers in terms of scopes. Finally, even it is not illustrated in this section; it is evident that Russell-Neale's quantificational account is able to explain the behaviour of bare definites in Mandarin. Mandarin bare definites can be comparable with the definite descriptions in English in semantics.

6.3   Definite Bare Nouns as Weak Definites

In contrast with a base-generated topic which is considered as a basic element of a sentence, the topicalization of a derived topic is realized through a movement in the structure and leaves a corresponding gap in the comment clause. The structural difference between the sentences containing the two types can be illustrated in the following example.

(98)   *Derived topics*

a.   Shu   Mali   du   le.

       Book   Mary   read   PERF.

       '(as for) The book, Mary read (it).'

b.   Zuoye   Lili   xie-wan   le.

       Homework   Lily   write-finish   PERF.

       '(as for) The homework, Lily finished (it).'

Base-generated topics   repeated of (90)

c.   Milu   de   youke Mali   zhaodao   ta   le.

       Lost-way   MOD   tourist Mary find   he   PERF.

       '(as for) The lost tourist, Mary found him.'

d.   Milu   de   youke Mali   zhaodao   tamen le.

       Lost   MOD tourist Mary find   them PERF.

       '(as for) The lost tourists, Mary found them.'

As illustrated above, the bare nouns *'book'* and *'homework'* are originally the objects of the verb *'read'* and *'finish'*. Moving to the sentence-initial positions, the object arguments become the topics of the sentences; leaving a gap correspondingly in the object positions of the sentences. In contrast with derived-topic sentences, in (98 c.) and (98 d.), both types of sentences contain a double nominative structure. Both sentences have the left-peripheral position taken by a bare noun and the bare nouns function as the topic of the sentence. The difference is that a derived-topic sentence has the structure of *Topic-SV*; and a sentence with the base-generated topic has the structure of *Topic-SVO*. The comment clause remains complete in terms of having both subjects and objects with the

base-generated topics as independent elements from arguments of the sentences. Unlike base-generated topics whose number interpretation can be reflected through the anaphoric pronouns in the object position, in the semantic denotation, the definite bare nouns at the position have a numberless interpretation.

A number-less definite bare noun phrase does not have the ambiguity between a singular and plural reading. It is neutral in number and therefore, unlike the marked singular or plural definite bare nouns, the bare definite in the derived-topic position does not entail uniqueness or maximality.

6.3.1 Non-uniqueness

There is no uniqueness or maximality entailment can be said as the semantic component of the number-less bare definites.

(99)   Xiongshou   jingfang   yijing   zhua-dao   le.

         Murderer   police   already catch   PERF.

         'The murderer, the police have already caught (him/ them).'

As Rullanmm and You (2003) pointed out, a number neutral term does not have a singular and plural ambiguity in their interpretations. The translation of the phrase *xiongshou ('murderer')* in terms of number would be '*the one or more murderer, whoever they are or whatever the number of them, has been caught by the police.*' There is no uniqueness claim can be found in the numberless bare definites.

This type of bare definites can be comparable to the use of the weak definites in English.

 (100)   Lily is reading the newspaper.

The definite description *'the newspaper'* in the sentence does not denote a particular newspaper. For example, in a situation that Lily reads more than one copies of the newspaper, it is still suitable for sentence (100) to describe Lily's reading status. Carlson and Sussman (2005) used the elliptical

sentences to diagnose the non-unique reference of weak definites in English. It is evident that bare definites in derived-topic positions display similar possibility of sloppy identity in elliptical contexts.

6.3.2   Sloppy identity

The contrast of English weak definites and regular definites can be displayed in the following example of (101 a.) and (101 b.).

(101)   a.   Lily went to the hospital and Mary did too.

           b.   Lily went to the hotel and Mary did too.

The interpretation of (101 b.), which contains a regular definite description, implies that Lily and Mary went to the same hotel. In (101 a.), the definite description *'the hospital'* receives a weak reading and it is not necessary for Lily and Mary went to the one and same hospital for the sentence to be true.

(102)   Shu   Mali   du   le,   Zhangsan   ye   du   le.

           Book   Mary   read   ASP,   Zhangsan   also   read   ASP.

           '_DEF book, Mary read and so did Zhangsan'

The interpretation of the Mandarin sentence (102), which contains the bare definite *shu ('book')*, is similar to the weak reading of (101 a.). It does not imply that Mary and Zhangsan necessarily read the same book.

(103)   Zuoye   Mali   xie-wan   le,   Lili   ye   xie-wan   le.

           Homework   Mary   write-finish   ASP,   Lily   also   write-finish   ASP.

           'As for the homework, Mary finished hers and Lily also finished hers.'

The sentence (102) also characterizes the sloppy identity of the bare definite in the derived-topic position. The most natural reading of (102) is that Mary and Lily separately finished the homework assigned to them. It is common that each student supposing to finish the homework assigned to them independently. Therefore, the reading of Lily and Mary handed in one piece of homework is less accepted than the reading that they in fact handed in two independent homework.

6.3.3   Narrow scope

The non-uniqueness weak definites in English are able to take the narrow scope with interact with quantifier expressions.

(104)   Every student listened to the radio.

For the sentence to be true, it is not necessary for the students to listen to the same radio. It is possible that some of them listened to the radio at school; while others did at home. The weak definite *'the radio'* is able to obtain the distributive reading via taking the narrower scope than the quantifier *'every'*.

Mandarin bare definites in derived-topic positions can also take narrow scope when combining with other quantifiers such as *'every'*.

(104)   Guanyu maomaochong de   shu   mei   ge   haizi   dou   du-guo.

         About   caterpillar   MOD   book   every   Cl   child   all   read-ASP

         'DEF book about caterpillar, every child has read.'

One possible reading of (105) is that all the children read a different book about caterpillar. The topic-position bare definite can be read as distributive because it is able to take a narrow scope.

6.3.4   VP-restriction positions

As Aguilar-Guevara and Zwarts (2011) observed, weak definites in English typically occur in object positions.

(106)   a.   The hospital closed at five o'clock.

        b.   The hospital is the place where most children are born.

(Aguilar-Guevara and Zwarts 2011:182)

When the weak definites are used as subjects of episodic sentences, as illustrated above, they either received a regular definite reading as in (106 a.); or a generic reading in (106 b.).

(107)   Jingcha   Yuehan   zhaodao   le.

         Police   John   find   PERF.

        'The police, John found (them).'

Comparable to weak definites in English, bare definites in derived-topic positions are originally objects of the VP. There is a selection relationship between the bare definites and the VP in the sentence structure. In (107), the topic position bare noun 'police' is the semantic object of the verb *'find'*.

As discussed above, Mandarin bare definites in derived-topic positions introduce weak readings as the weak definites in English do. They do not have a unique reference, obtain possible sloppy identity in elliptical contexts and are restricted to VP selection relationship.

Weak definites in English often have enriched meanings. For example, the stereotypical reading of the sentence *Mary went to the hospital* is that she went to the hospital seeking for medical assistance. Bare definites in derived-topic position do not universally carry the meaning enrichment. I follow Aguilar-Guevara and Zwarts (2011) on observing that the stereotypical meanings found in English weak definites are idiomatic and the idiomatic reading is compositionally determined by the meaning contributions of all parts. For example, the meaning of the expression *'go to the hospital'* is

determined by the contributions of the verb phrase *go to* and the noun phrase *the hospital*. Changing the verb into *build*, for instance, will change the idiomatic reading of the whole expression. I assume that the combination of idiomatic expressions is language specific. Even though not all derived topic bare definites have meaning enrichment, they are semantically comparable to the weak definites in English. The uniqueness claim within the bare definites can be fixed by the same approach adopted in fixing the uniqueness in the weak definites in English.

6.3.5   *The solution: kinds of events*

There are two theoretical proposals on the analysis the compositional semantics of weak definites as maintaining the uniqueness as well as the weak readings. Aguilar-Guevara and Zwarts (2011) assume that weak definites refer to kinds and the uniqueness condition is secured from the kind-term reading of weak definites. Schwarz (2014) proposed an analysis of weak definites as regular definites that occur within the VPs that denote kinds of events.

Aguilar-Guevara and Zwarts (2011) take the shift meaning of the verb allows it to take a kind term as its argument. The definite function of a weak definite is the same with the generic definite and therefore the uniqueness is satisfied at the abstract level reference: a definite unique kind. Schwarz (2014) thinks that weak definites are regular definites that appear in verb phrases denoting kinds of events (or states) where the uniqueness come in the atomic instantiations of the event-kind. The reading of weak definites is weakened by semantic operations in the context of the verb phrase they appear in.

The semantics of Mandarin definite bare nouns in derived topic positions can be comparable with weak definites in achieving the kinds of events reading. Schwarz's (2014) analysis of weak definites can be briefly explained as the following. First, Schwarz (2014) took Chierchia's (2010) definition of kinds as intensions of maximal homogeneous pluralities that map the world into the relevant maximal plurality. The kind of event reading of a verb can be interpreted as in a world *w*, for a given *P*, the maximal event-plurality of *P* events.

As illustrated in the following example, the verb *reading* can have both a normal transitive verb interpretation as well as an event-kind reading.

(108)   *the verb 'read'*

a. $\|read_{TV}\| = \lambda x.\lambda e.\ [read(e)\ \&\ T\ h(e) = x]$

b. $\|read_{KIND}\| = \lambda Pe,st.\lambda s.\iota *\{e|\ read(e)\ \&\ \exists x[P(x)(e)\ \&\ T\ h(e) = x]\ \&\ e \leq s\}$

The kind of event denotation of the verb in reading-P is interpreted as for a given P in a world *w*, the maximal event-plurality of P-reading events.

(109)   type-shifting of *the newspaper* into a predicative

a. $\|the\ newspaper\| = \lambda s.\ \iota\ [P(s)]$

b. $ident = \lambda l_{<s,e>}.\lambda y.\ \lambda s.[y=l(s)]$

c. $ident\ (\|the\ newspaper\|) = \lambda y.\ \lambda s[y = \iota[newpaper\ (s)]]$

As illustrated in (109), the weak definite *'the newspaper'* originally has the normal definite reading of with an iota operator[35]. Definite descriptions under this analysis fall into the categorization of type *<e>*. Schwarz (2014) then adopted an intentional format of relevant type-shift *ident* to formulate the regular definite reading of type *<e>* into the predicative reading of type *<e, t>*. Once the definite description is shifted to property-denoting, it becomes possible for applying the event-kind of verb reading to it.

(110) $\| read_{kind}\ ident(the\ newspaper)\ \| = $ **[k]read-the-newspaper**

$= \lambda s.\iota *\{e|\ \textbf{read}(e)\ \&\ \exists x[\ x = \iota[\textbf{newspaper}(e)]\ \&\ T\ h(e) = x]\ \&\ e \leq s\}$

---

[35] It needs to be pointed out here that Schwarz's analysis on the definite descriptions argues for a uniqueness presupposition rather than the uniqueness quantification.

Apply the Ag function which is defined as the following and the up operator $^{\cup}$ from Chierchia (1998b):

$\|Ag\| = \lambda p<s,t>.\lambda x.\lambda e. \ [p(e) \ \& Ag(e) = x]$

The weak definite expression 'read the newspaper' yields the denotation of (110).

(111) $\lambda x.\lambda e. \ [Ag(^{\cup}k_{read\text{-}the\text{-}newspaper})(x)(e)]$

$= \lambda x.\lambda e.[Ag(\lambda e'' \exists e'[e' \leq k_{read\text{-}the\text{-}newspaper}(s_{e''})] \ \& e'' \leq e') \ (x)(e)]$

$= \lambda x.\lambda e \ \exists e'[e' \leq_{k read\text{-}the\text{-}newspaper}(s_e) \ \& \ e \leq e' \& Ag(e) = x]$

$= \lambda x.\lambda e \ \exists e'[e' \leq \iota *\{e''read(e'') \ \& \ \exists x[\ x = \iota[newspaper(e'')] \ \& \ Th(e'') = x] \ \& \ e'' \leq s_e\}$

$\& \ e \leq e' \ \& \ Ag(e) = x]$

The uniqueness is relativized to the events *e* that forms the basis of the kind and therefore is trivially satisfied.

The combination of the definite description with the variant verb can be applied to the readings of Mandarin bare nouns in the derived-topic positions. The difference is that there is no need for the bare noun to go through an extra step of predicativization for the reason that the basic reading of bare nouns in the language is kind-denoting.

(112) Shu   Mali   na-zou   le.

Book   Mary   take-away   PERF

'DEF book, Mary took away.'

The above sentence can be interpreted as *'there is a unique kind of book-taking event performed by the agent Mary.'* The uniqueness claim is satisfied through the instantiations of the event-kind.

6.4   Mandarin Bare Definites in Subject Positons

The third type of bare definites found in Mandarin is the bare definites in the subject positions. Sentences containing a bare definite in the subject position has the structure of SVO. It is argued by the topic-prominent theorists that the subject position of the sentence in Chinese is not purely a subject but also the topic of the sentence.

Li (2013) analysed the noun phrases in the subject position in the following sentences as performing both the subject and topic functions. I take the view that both subjects and topics exist in Chinese as separate elements although there is hardly any determined syntactic distinction apart from the double nominative structures. I maintain that the bare nouns in the following sentences are definite irrelevant to the subject-predicate or topic-comment structure of the sentence. Therefore, I apply the term 'subject' undiscriminating the subject, topic or matrix-subject distinction to the element in the pre-verbal position in (113 a.).

I argue that bare definites in this position have general number and can be comparable with the numberless descriptions in English involving the expressions of *'whoever'* or *'whatever'*.

(113)   *repeated of 48 (a.)*

a.   Ke   lai   le.

Guest   come   PRF

'The guest has come.'

b.   Lai   ke   le.

Come   guest   PRF

'Here come some guests.'

The bare noun *ke ('guest')* in (113 a.) obtains the definite reading; in contrast to the indefinite reading

it obtains in (113 b.)   The bare definite in (113 a.) is number-less. The contrast can be illustrated by

setting the examples of sentences containing double nominative structures in the following.

(114)   a.   Ke   ta   lai   le.

Guest   he   come   PRF

'The guest, he has come.'

b.   Ke   tamen   lai   le.

Guest   they   come   PRF

'The guests, they have come.'

The bare noun *ke ('guest')* in the left-peripheral position has the specific number in the interpretation.

The number interpretation is stated through the secondary topic position pronouns correspondingly. In

(114 a.), a singular pronoun is used; indicating that there is only one guest that was expecting to

arrive. In (114 b.), in order for the sentence to be true, it is required that the maximal of the relevant

guests all arrive in the situation. The minimal contrast between (113 a.) and (114 a.) is that there is no

pronoun available in the first sentence and therefore the definite bare noun in the subject position

remains number neutral. I will adopt Neale's (1990) account for numberless descriptions for the

analysis of Mandarin bare definites in the subject position. I hold that Mandarin bare definites can be

analysed as the definite descriptions that are in fact quantifiers.

6.4.1   Numberless descriptions

It needs to be noted here that the number-less bare definites is not the same with a definite mass description. The definite mass descriptions, in Sharvy's (1980) term, involves a mass noun to be modified by the determiner *the*, such as *the wine*, *the rice* or *the furniture*. A possible solution to fix the uniqueness condition for the mass term definite descriptions is to employ a relevant unit of measuring as maintaining the uniqueness quantification. For example, the sentence '*The wine is on the table.*' can be interpreted as there is a unique bottle or glass of wine on the table. Sharvy (1980, p. 621) pointed out that when *'F'* is a mass noun instead of a count one, the identity relation can be replaced by a relation of *'is part of'* or *'is some of'*. Russell's theory of description can be presented as the following that can get to the desired result for both count and mass definite descriptions.

(115) $\exists x(Fx \ \& \ \forall y(Fy \rightarrow y \leq x) \ \& \ Gx)$

Neale (1990, p. 46) defined the descriptions containing *'whoever'* or '*whatever'* as number-less descriptions. Numberless descriptions do not carry specific number implications as the normal singular or plural descriptions would do.

(116)   Whoever shot J.F. Kennedy has committed an unforgivable crime.

The above sentence is true *iff* that all the people who involved in the shooting action, be there one or more, and has committed the crime as unforgivable. Neale (1990, p. 46) adopted *'whe'* to represent the number-neutral descriptive determiner and the numberless descriptions can be analysed as the following.

(117)   '[whe x: F x] (Gx)' is true iff |F-G| =0 and |F| ≥1

(Neale 1990, p. 46)

Mandarin bare definites display the same semantics of *'be there one or more'* as the numberless definite descriptions.

(118)   Gou   yao   guo   malu.

             Dog   want   cross   road.

'_{DEF}dog wants to cross the road.'

Sentence (117) is true, in the case where one or more dog in the relevant domain wants to cross the road.

6.4.2   Scope ambiguities

Taking sentence (118) as an example, it is evident that the bare definite in the subject position demonstrate truth-conditional independent scope ambiguities when embedded with propositional attitude reports.

(119)   Wo   cai   gou   yao   guo   malu.

        I   guess   dog   want   cross   road.

        'I guess the dog/dogs want to cross the road.'

There are two readings can be generated from the above sentence. The first involves the definite noun phrase *gou ('dog')* taking a wider scope than *wo cai ('I guess')*; and in the second reading, the bare noun denotation takes the narrow scope.

(120)   a. the wide-scope interpretation of (118)

        [DEF *x*: ('dog') *x*] (I guess ('want-to- cross-road') *x*)

        b. the narrow-scope interpretation of (118)

        I guess that ([DEF *x*: ('dog') *x*] ('want-to- cross-road') *x*)

7.   Conclusion

Jenks (2017) adopted a presupposed-uniqueness approach to the explanation of the unique situational uses of definite bare nouns in Mandarin. The theory successfully captured the typological usage of bare nouns but fails to provide a unitary explanation to the bare definites in topic positions. The

familiarity theory assumes that bare nominal arguments in topic positions automatically gain the definite reading through syntactic requirements. However, the theory fails to provide an explanation of a syntactic-semantic analysis of how the link is established. Relying on a topic-oriented definiteness theory, it argues that the definiteness value is gained through the pragmatic realization of familiarity.

On the other hand, Partee's (2006) typological distinction theory of definiteness in natural language assumes that the non-grammaticalized definiteness in Chinese contains different semantic ingredients comparing with the grammaticalized definiteness found in article languages. The uniqueness/maximality found in the semantics of grammaticalized definiteness cannot be located in the interpretation of non-grammaticalized definiteness, such as definite bare nouns in Chinese. I demonstrated that definite bare nouns in Chinese are able to obtain singular, plural and numberless readings. The uniqueness and maximality quantification can be established in the analysis of singular and plural bare definites. The Sharvy-Neale analysis on numberless and mass descriptions can be applied to the definite bare nouns with neutral number. Also, Mandarin bare definites display scope interactions when positioned with other quantifiers or operators.

I adopted the Russellian analysis and treated definite bare nouns in Mandarin as disguised quantifiers such that the formal analysis of them falls into the same semantic category of descriptions in English. A sentence containing a bare definite in Chinese expresses a descriptive proposition, which is independent of objects and whether or not anything satisfies the bare definite denotation.

CHAPTER FOUR　　　　　　DEMONSTRATIVE DESCRIPTIONS

1.　　Introduction

Although this chapter is entitled with the term *'demonstrative descriptions'*, it should be noted that this chapter contains the least intention to stress an ambiguous account of complex demonstratives in Chinese. The ambiguous theory of complex demonstratives holds that demonstrative expressions are ambiguous in their underlying semantics; and the ambiguity gives rises to two distinct types of representations: bona fide demonstrative phrases and definite-description-like demonstrative phrases[36].

The term is selected for the purpose of carrying consistency for treating both demonstrative phrases and definite bare nouns as in the same category of expressions of definiteness in the article-less language. The term 'demonstrative descriptions' initially appeared in the literature investigating English complex demonstratives and it has been used in both a broad and narrow sense by the theorists. In the broad sense, the term 'demonstrative descriptions' refers to all demonstrative noun phrases in the form of *that F* (Wolter, 2006); and in the narrow sense, it is used to label what have been called 'non-deictic' or 'non-referential' demonstratives in the literature (Nowak, 2016, p.27).

It is distinguished in the literature that English complex demonstratives can have both deictic and non-deictic uses. The non-deictic demonstrative does not pick out an individual from the context of utterance as it does in the deictic usage. Some philosophers take such data to show the traditional view of treating demonstratives as the direct reference needs to be reviewed (King, 2001; Roberts, 2002; Stevens, 2011; Nowak, 2016). Others maintain that complex demonstratives are fundamentally referential and hold that non-deictic demonstratives are not really demonstratives at all (Braun, 2008; Dever, 2001; Georgi, 2012; Salmon 2002, 2006, 2008).

---

[36] Theorists who hold the idea include Braun (2008), Dever (2001), Corrazza (2003), and Georgi (2012).

The behaviour of Mandarin demonstratives seemingly provides straightforward cross-linguistic evidence for the ambiguous account of complex demonstratives. The logic seems simple. Since there is no article in the language; some other linguistic elements have to pick up the function of being the definite determiner. Mandarin demonstratives are found to take up some functions of the definite article in the language (Chen, 2004; Huang, 1999; Tao, 1999). Therefore, it seems apparent that based on the different lexical functions of the demonstrative determiners, complex demonstratives in Mandarin can be sub-categorized into two types. The first includes a bona fide demonstrative and the phrase equipped with the bona fide demonstrative picks out an individual in context as its referent. The second type of Mandarin complex demonstrative has a similar semantic profile as an English definite description. The demonstrative determiner involved is nothing but a definite article. Intuitively, the conclusion is plausible for the reason that: if the demonstrative determiner functions like a definite article in the article-less language, then some of the demonstrative phrases are not real demonstrative expressions but are demonstrative descriptions that bear the same LF as the English definite descriptions. However, when inspected closely, it can be found that the empirical data in Mandarin prescribe no such parameter.

In terms of expressing definiteness, Jenks (2017) focused on the anaphoric uses of demonstratives in Mandarin and took the point of view that anaphoric demonstratives reveal the anaphoric nature of familiarity definites in the natural language. Following Nowak (2016), Jenks (2017, p. 4) used the term 'demonstrative descriptions' in the narrow sense. In his article, the felicitous use of anaphoric demonstratives is licensed by strong familiarity, which requires an explicit antecedent in the utterance sequence.

In this chapter, I use the term 'demonstrative descriptions' in its broader sense that denotes to all complex demonstratives of the form *that F*.

My view is that demonstratives in Mandarin display contrastive properties with their counter-parts in English. Mandarin demonstratives do not derive; neither in syntax nor in semantics, to become a

definite-article like element. In fact, it is the one of the basic uses of demonstratives in the article-less language to introduce the definiteness.

I argue that the anaphoric demonstratives can be explained via a D-type theory of anaphora following Neale (1990, 2004). The unbound anaphoric demonstratives are definite descriptions that can be understood as quantifiers along the Russellian lines. The deictic and non-deictic complex demonstratives both take two hidden arguments with the second one function as the restrictor to the first (Nowak, 2016). Mandarin complex demonstratives, including the deictic and non-deictic ones, are quantificational expressions that denote sets of sets.

This chapter is organized as the following. In section 2, the basic issues of demonstratives and demonstrative phrase constructions in Mandarin will be illustrated; with a contrastive analysis of the English demonstratives. Section 3 focuses on the comparison between bare definites (analysed in the previous chapter) and demonstrative phrases that have definite references. Jenks' (2017) theory of anaphoric demonstrative definites will be explored; together with my attempt to account for the semantics of Mandarin anaphoric demonstratives in line with the English ones. Section 4 introduces the hidden argument theory and its application to the Mandarin data. In Section 5, a loose-end found in the theories of Mandarin demonstratives is stated. The issue concerns the indefinite uses of demonstratives in Chinese such that it raised questions to a unified account of demonstrative semantics in the language. Further research is needed for the better characterization of the demonstrative used in indefinite environments.

2.   Demonstratives and Demonstrative Descriptions

In English, one of the major difference between a demonstrative and the definite article is that the demonstrative encodes a sense of pointing which locate entities with reference to the distance in relation to the speaker's ego; whereas the definite article does not have such deictic function with spatio-temporal concerns (Diessel,1999; Fillmore, 1982, 1997; Himmelmann,1996). The reference of the demonstrative is the demonstratum intended by the speaker. The detonation of a definite description, in contrast, is the unique entity that is relevant to the context.

221

Mandarin Chinese lacks the article system. There is no article-like determiner can be found in the language. It has been noted in the literature that demonstratives are considered to be the closest to the function of the definite article in the language (Chao, 1968; Chen, 2004; Huang, 1999; Tao, 1999). It is assumed that due to the lack of the definite article, Mandarin demonstratives take up some of the functions of the definite article and are able to introduce deictic-neutral definite reference (Gundel et al., 1993, 2003; Lin, 2003; Wu, 2004). Theorists in Chinese linguistics have also argued that Mandarin demonstratives are developing towards the grammatical category of the definite article although the full process of grammaticization has not yet been completed (Chen, 2004; Huang, 1999; Tao, 1999 and many others). For example, Li and Thompson (1981, p. 131-132) take the position and state that 'the demonstrative *nei*[37] 'that'…is beginning to function as *the* if it is not stressed.'

Following Li and Thompson's (1981) demonstrative-as-article assumption, it seems that the lexical functions of the Chinese distal demonstrative can be split into two sub-categorizations: the demonstrative determiner $THAT_{DEM}$ and the definite article $THAT_{ART}$. When combining with the NP, the demonstrative determiner $THAT_{DEM}$ forms a demonstrative expression whose reference is the intended demonstratum; and the definite article $THAT_{ART}$ forms a demonstrative description which denotes a deictic-neutral unique entity. Henceforth, there are two possible semantic categories bearing the same surface structure of a demonstrative noun phrase that can be found in Mandarin. The deictic demonstrative expressions with $THAT_{DEM}$ are direct referring terms. The non-deictic demonstrative descriptions with $THAT_{ART}$ have similar semantic values as the definite description in English.

In Jenks' (2017) article, he pointed out the frequent use of demonstrative description with $THAT_{ART}$ can be found in the environments where anaphoric definites are expressed. In Jenks' (2017) theory, the primary function for the demonstrative description is to express familiarity based definiteness; and the semantic nature of the Mandarin demonstrative description is the crux of anaphoricity.

---

[37] I treat the distinction between the variation of *na* and *nei* as purely pronunciational. There is a tendency that in northern dialects, *nei* is preferred than *na*. Brøseth & Jin (2008) explicitly stated that the distinction should be clarified as that the distal demonstrative in Chinese 那 should be read as *na* as its citation pronunciation in the dictionary when combining directly with N; however, if followed by whichever classifier or the cluster of a number and a classifier, the word should be pronounced as *nei*, such as in *nei Cl+N* .

I argue that both the ambiguity approach to the Mandarin demonstrative determiner and the anaphoric analysis to the semantics of the demonstrative description in the language underestimated the complexity and the extent of *deixis* in the natural language. The distinction between the Mandarin THAT$_{DEM}$ and THAT$_{ART}$ as patterned with the distinction of English demonstratives and the definite article overlooked the comprehensive functions that a demonstrative determiner can perform in the article-less language. There is no consensus on whether the demonstrative has developed as a grammatical category of the definite determiner in the language; nor is there any agreement on which demonstrative takes the actual function of the definite article.

Before turning to more detailed discussion, in this section the basic uses of simple and complex demonstratives in Mandarin is illustrated, together with an investigation of the grammaticization issue of the demonstrative.

2.1   Simple and Complex demonstratives in Chinese

2.1.1   A contrastive analysis of demonstratives in English and Chinese

English Demonstratives

Simple and complex demonstratives are distinguished as following in English. Demonstrative noun phrases containing *this*, *that, these* or *those* plus a nominal construction are known as *complex demonstratives* as in (1c.) and (1d.). Demonstrative pronouns are considered as *simple demonstratives* as in (1a.) and (1 b.).

(1)   a.   I like *this* but not *that*.

         b.   She took *these* and left *those* to you.

         c.   I like *this watch* better than *that watch*.

         d.   I like *these beautiful paintings*.

Simple and complex demonstratives are of interest to philosophers of language because their semantics connect closely with the speaker's intentions. The interpretation of demonstrative noun

phrases therefore sheds light on the roles of speaker's intention and spatio-temporal context in the natural language semantics (Wolter, 2009).

The orthodox view of demonstratives is to treat simple and complex demonstratives as equally in terms of taking the intended demonstratum as their direct reference. The basic deictic use of demonstratives can be compared to the use of indexicals (Wolter, 2009). The use of indexicals displays a special sensitivity to the context. A sentence containing an indexical expresses an open proposition and appears to make different assertions in various contexts of utterances.

(2)   I am a student.

For example, the sentence (2) contains an indexical *I* and the referent of *I* is the speaker of the context. The sentence, therefore, yields different truth conditions based on the speaker and the context of utterance. So if *I*, the writer of this dissertation, uttered (2), the sentence expresses a true proposition. If (2) is uttered by my supervisor, *Dr. Stevens*, then the proposition would have a false reading.

In the classic work of Kaplan (1977), sentences containing indexicals (including first and second pronouns, *here*, *now* and demonstratives) are characterized to have both *character* and *content* under a possible-worlds framework. The *content* of a sentence is the proposition it expresses in a context, and the content of an indexical is the thing it refers to in that context. For example, the *content* of the indexical '*I*' in a context c is the individual who uttered the sentence in c. The *character* of 'I' is the function from a context of utterance to the agent who performed the utterance. In other words characters are functions from contexts to contents.

The orthodox view of demonstratives is to categorize them as indexicals. The referent of a demonstrative noun phrase, including demonstrative pronouns, is the parameter it refers to in the context. An utterance with a demonstrative paradigmatically contains a gesture or an intended gesture of demonstrating. The referent of the demonstrative noun phrase is hence fixed by this demonstration. For example, the utterance of (3) is felicitous in a shop because intuitively, the speaker fixed the reference of the demonstratives by the action of pointing. However, the utterance of (4) is

unacceptable because the English definite article does not normally co-occur with extra-linguistic demonstrating gestures.

(3)   I like this watch better than that watch. I will buy this one.

(4)   *I like the watch better than the watch. I will buy the one.

Philosophical debate on the semantics of demonstratives divided on the phase of treating simple and complex demonstratives as a unified kind. Much of the literature subsequent to Kaplan's (1977) 'Demonstratives' focused on the talk of complex demonstratives and the contribution of the nominal complement (or the head noun) to the interpretation of demonstrative phrases. Kaplan (1977) himself assumes that complex demonstratives, just like simple demonstratives, are directly referring terms. Lepore and Ludwig (2000) adopted an ambiguous view, arguing that simple demonstratives refer directly, but that the interpretation of complex demonstrative can be ambiguous because the nominal complement of a complex demonstrative interacts with the compositional semantics at the level of the content. King (2001) and Stevens (2011) hold that complex demonstratives are not devices for direct reference but need to be characterized as quantificational expressions.

Chinese demonstratives

Mandarin Chinese, like English, has a two-term system of demonstratives to refer to proximal and distal objects. Demonstratives in Chinese can be briefly introduced as the following.

(5)

	Singular	Plural	Adverbial
Proximal	Zhe/zhe-ge	zhe-xie	Zhe-li/zher
Distal	Na/tha-ge	na-xie	Na-li /nar

In Mandarin, *zhe ('this')* and its related compounds (*zhe-ge ('this+Cl'), zhe-xie ('these'), zhe-li ('here')*) are proximal demonstratives. Na ('that')[38] and its related phrases (*na-ge ('that+Cl'), na-xie ('those'), na-li ('there')*) are distal demonstratives. It needs to be noted that in terms of number, *zhe-xie ('these')* and *na-xie('those')* are the most typical forms of plural denotation. But the singular versus plural distinction on the use of simple demonstratives is not strictly observed in the use of Chinese demonstratives. The singular form of *zhe ('this')* and *na-xie('those')* can also be used to introduce plural reference when proceeded by quantifiers or plural-denoting classifiers, as shown in the following examples.

(6) a. Zhe   san   ben   shu   shi   Zhangsan   de.

This   three   Cl   book   be   Zhangsan   POSS

Lit: *This* three Cl books are Zhangsan's.

'These three books are Zhangsan's.'

b. Na   wu   ben   shu   shi   nide.

That   five   Cl   book   be   yours.

Lit: *That* five Cl books are yours.

'Those five books are yours.'

(7) Zhe/na   dui   shu   dou   shi   xuexiao   de.

This/that   pile (Cl)   book   all   be   school   POSS

'This/that pile of books all belong to the school.'

Also in contrast with English, the use of simple demonstratives allows the combination of the classifier to indicate the singular or plural reference of the demonstratum. The structure of the

---

[38] or pronounced as *nei* as mentioned in the previous content

demonstrative plus a classifier in the form of [DEM+Cl] is still considered as a standardized usage of simple demonstratives for the reason that no nominal element is involved in the semantic references.

(8) Wo   xihuan   zhe-ge,   ye   xihuan na-ge.

     I   like   this-Cl$_{GENERAL}$,   also   like   that-Cl$_{GENERAL}$.

     'I like this and also like that.'

(9) Ta   xihuan   zhe-xie   bu   xihuan   na-xie.

     She   like   this-Cl$_{PLURAL}$ not   like   that- Cl$_{PLURAL.}$

     'She likes these but not those.'

Both (8) and (9) are felicitous when uttered in a shop by the speaker with a pointing gesturer. Even if the simple demonstratives come in a compound form of [DEM+Cl], since there is no nominal element contributing to the modification of the demonstratum, the compound forms of the demonstrative with the classifier are still counted as simple demonstratives in Chinese. Comparable to the English simple demonstratives, the reference of Chinese simple demonstratives is intuitively the direct reference of the intended demonstratum.

The complex demonstrative comes into more combination possibilities in Chinese syntax, compared with their counterparts in English. In English, complex demonstratives are demonstrative noun phrases starting with the demonstrative *this*, *that*, *these* and *those*.

(10)

     a. this book

     b. that woman

     c. that man wearing the polka dot trousers

     d. those rocks

     e. these apples

     f. these three apples

227

g. those three apples of Zhangsan's

h. those apples that you left on those rocks beside that man wearing polka dot trousers

(Stevens 2011, p. 117 with slight modification)

The above determiner phrases are complex demonstratives in English. In syntax, the demonstratives take the initial position of the demonstrative phrases.

The demonstrative determiners in the formation of Chinese complex demonstratives, as Partee (2006) described for the possessive phrases are possible for both high and low attached positions when interacting with other prenominal modification elements.

(11)

    a.   zhe shu *('this book')*   [Dem+N]

    b.   na ben shu *('that book')*   [Dem+Cl+N]

    c.   zhe xie pingguo *('these apples')*   [Dem+Cl+N]

    d.   na san ben shu *(those three books)*   [Dem+Num+Cl+N]

    e.   Zhangsan de na san ben shu   [Poss+Dem+Num+Cl+N]

          ('those three books of Zhangsan')

    f.   na san ben Zhangsan de shu   [Dem+Num+Cl+Poss+N]

          ('those three books of Zhangsan')

    g.   dai yanjing de na ge nanhai   [Mod+Dem+Cl+N]

          ('the/that boy who is wearing glasses')

    h.   na ge dai yangjing de nanhai   [Dem+Cl+Mod+N]

          ('the/that boy who is wearing glasses')

As illustrated above, in terms of syntactic constructions, Chinese demonstratives do not necessarily take the initial position of a demonstrative phrase when interacting with possessives or other pre-nominal modifications. Phrases (e.) and (f.) are what Partee (2006) described as the distinction of a high-attached possessive phrase and a low-attached possessive phrase. In the high-attached possessive phrase, the possessive (marked with the possessive marker DE) take the initial position and other prenominal elements such as numerals or demonstratives occur after the possessive marking; as in (e.). In the low-attached possessive phrase, it is allowed that elements such as demonstratives or numbers taking the initial positions of the phrasal structure. According to Partee (2006), the semantic readings of the two types of possessive phrases vary in terms of the carried presupposing of maximality.

Since both (e.) and (f.) contain a demonstrative, the phrases can be viewed as demonstrative phrases as well as possessive phrases. In terms of terminology, borrowing Partee's (2006) term, phrases in the structure of (e.) can be defined as low-attached demonstrative phrases for the reason that the pre-nominal elements other than demonstratives are taking the initial position. Phrases in the structure of (f.) can be considered as high-attached demonstrative phrases. In the high-attached demonstrative phrases, the demonstratives take the initial positon in forming the complex demonstratives. The question raised here is whether the high-attached versus low-attached demonstrative phrases have different semantic readings; as the possessive phrases do. The answer to this question concerns the core understanding of demonstratives in the use of natural language.

The structures of (g.) and (h.) have been central to the debate on the proper analysis of Chinese demonstrative phrases for decades among Chinese linguists. The structures in (g.) and (h.) are considered as the typical formations of Chinese relative clauses. It is argued that the two constructions generate different types of relative clauses; with one being restrictive, the other being descriptive or non-restrictive. However, opinion on the distinction of restrictive and descriptive clauses with respect to the syntactic distinction is not unified among theorists.

For example, in the first discussion on the two syntactic forms found in Chao's (1968) classic work on the grammar of spoken Chinese, he distinguished the construction in the form of (g.) as the relative clause preceding the Determiner-Numeral-Classifier (DNC) sequence. The construction (f.) is the construction of relative clause proceeding the DNC element. For the convenience of representation, I use CONSTRUCTION$_1$ and CONSTRUCTION$_2$ respectively to indicate the distinction.

(12)   CONSTRUCTION$_1$ = *(pre-DNC) relative clause* in the form of **[RC + DNC]**

         CONSTRUCTION$_2$ = *(post-DNC) relative clause* in the form of **[DNC + RC]**

(13)   *CONSTRUCTION$_1$:*   *the restrictive relative clause*

         a.   Dai   yangjing   de   na-ge   xiansheng

                wear   glasses   Mod   that-Cl gentleman

                Lit: 'wearing glasses that gentleman'

                'that gentleman who is wearing glasses'

         CONSTRUCTION$_2$:   *the descriptive relative clause*

         b.   Na   ge   dai   yanjing de   xiansheng

                that   Cl   wear   glasses Mod   gentleman

                Lit: 'that wearing glasses gentleman'

                'the gentleman who is wearing glasses'

(Chao 1968, p.201 ex (2))

Chao (1968), followed by Hashimoto (1971, p. 24-25), observed that post-DNC relatives are descriptive; while pre-DNC relatives are restrictive, as in (13). However, this claim is refuted by Tang (1981) and Teng (1981) (the view is also shared by Tsao (1986)). Tang (1981) argues that native speakers do not subscribe Chao's restrictive versus descriptive descriptions of the relative clauses and

proposed that the interactive position between the relative clause and DNC sequence is determined by the grammatical function (such as subject or object) of the head NP in the sentence; as well as its grammatical function in the matric sentence.

Huang (1982, p. 68) supported Chao's (1968) distinction with a scope theory and argued that no matter how small the difference is to a native ear the different does exist. Tsai (1994) argues that the reading is in fact in an opposite interpretation: the pre-DNC relatives as in CONSTRUCTION$_1$ are non-restrictive, while the post-DNC relatives as in CONSTRUCTION$_2$ are restrictive. Lin (1997) argues that both types are pre-nominal and hence are both restrictive; while Del Gobbo (2001) and Yang (2001) subscribed the view that there are not any non-restrictive relative clauses can be found in Chinese.

The issue of the relative clauses in Chinese is essential in finding the domain restriction for the anaphoric definite uses of demonstrative phrases in Mandarin. Therefore, a separate section on the matter will be conducted later together with the discussion of the semantics of demonstrative descriptions.

2.1.2   *Basic uses of Chinese simple and complex demonstratives*

Himmelmann (1996) outlined four uses of demonstratives that are attested cross-linguistically as the basic discourse functions of demonstratives. The four basic uses include *situational use*, *discourse deictic use, tracking use* and *recognitional use*. Tao (1999) investigated the use of Mandarin demonstratives in a conversational case study and pointed out that Himmelmann's (1996) classification applies to the use of Mandarin demonstratives in natural discourse.

The situational use of the demonstrative involves the demonstrative referring to an entity which is present in the utterance situation (Tao, 1999). This use is also known as the exophoric use. The essential characteristic of the exophoric use of demonstrative is that the reference of the demonstrative needs to be analysed as anchored in the speech situation.

(14)   a.   You sit *here*.

b. Ta   dangshi   zhan   zai   na-li.

He   at that time   stand   at   there.

'He was standing *there* at that time.'

(15)   Zhangsan   shuo: 'qing   zuo   zai   denghouqu   zheli. '

Zhangsan   say: 'please sit   at   waiting-area   here

'Zhangsan said, 'Please sit *here* in the waiting area.''

(16)   a.   John moved to Melbourne in 1959 and lived *here* [if the speaker is situated in

Melbourne]/*there* [if the speaker situated elsewhere] for the next ten years.

(Dixon, 2003:84)

b.   Yuehan 1959   nian   ban dao   Moerben   ranhou

John   1959   year   move to   Melbouren   after

ta   jiu   changzhu   zai   *zhe-li/ na-li*   le.

he   then   settle   at   *here/there*   PERF.

'John moved to Melbourne in 1959 and settled here/there.'

As illustrated in (14) and (15), there are two sub-categorical uses of exophoric demonstratives. Both

the English and Chinese examples in (14) are the cases of *the simple exophoric use*. The referent of

the demonstrative phrase is the object picked out in space; relative to the distance to the speaker as the

deictic center (Diessel, 1999 and Himmelmann, 1996). The reference is fixed in the situation of

utterance. The Chinese sentence in (15) is an example of the second subtype of exophoric

demonstratives: *the 'imaginary deixis'* (Himmelmann, 1996, p. 222). The deictic centre in (15) may

not be the actual speaker Zhangsan; but rather a shift of perspective in the speech. Suppose Zhangsan

is the staff working in the reception center of a hospital, it is felicitous for him to utter (15) to a patient

waiting to be seen by a doctor; together with a pointing gesture t to the waiting area nearby. It is assumed that for a typical exophoric use of demonstratives, a co-occurring gesture of demonstration is often involved (Himmelmann, 1996).

The sentence (16 a.) cited from Dixon (2003) indicates how the primary function of exophoric use can influence the choice of anaphoric demonstratives in natural language. In the English example, the choice between a proximal or distal demonstrative the speaker would make is based on the actual situation of the speaker during the utterance. The tendency is that the speaker would use a proximal demonstrative if he is situated in Melbourne; and a distal demonstrative if he is not. The same situational choice of anaphoric demonstratives can also be found in Chinese as illustrated in (16 b.). The situational use of exophoric demonstratives involves both the immediate situations where the speech happens and the non-immediate situation, such as that in a reported speech as in (15).

Demonstratives have *the discourse deictic use* in both English and Chinese. The discourse or textual use of demonstratives includes the use of demonstrative to make references to a proposition or an event (Cleary-Kemp, 2007; Diessel, 1999; Himmelmann, 1996; Tao, 1999). In a discourse deictic use, the demonstrative does not refer to an entity or location, but to the meaning content of a discourse segment. The discourse segment can either occur before (anaphoric use of demonstratives) or after (cataphoric use) the use of the demonstrative.

(17) Ta   yao   zou.   Zhe   ke   bu   xing.

      He   want   leave.   This   can   not   all-right

      'He wants to leave. This cannot happen (It is not ok for him to leave).'

(18) Zhengchang   gongzuo   liucheng   shi   zhe-yang.   Shenqingren   xian

      Normal   work   procedure be   this-like. Applicant   first

      shumian   tichu   shenqing…

      in-written   propose   application

'The normal working procedures are like this. The applicant first submits the application in written… '

The proximal demonstrative in both cases has the text reference or extend reference (terms from Halliday & Hasan, 1976) of a proposition. In (17), the demonstrative is used anaphorically to refer back to the proposition of 'he wants to leave' in the previous discourse. The demonstrative is used cataphorically in (18) and the text following the demonstrative supposed to be the explanation of what the demonstrative is referring to.

The so-called *tracking use* of the demonstrative is the typical anaphoric use that can be found in many world languages. The tracking demonstratives differ from the discourse deictic demonstratives in the way that they co-refer with an NP in the discourse (Himmelmann, 1996). Consequently, it follows the orthodox view of direct reference, the references of the tracking demonstratives are of the type <e>, rather than a proposition or an event as can be found in *the discourse deictic use*.

(19)	You	yi	wei	xiansheng	zuotian	lai	zhao	ni.
	There-be	one	Cl	gentleman	yesterday	come	look-for	you
	Zhe	wei	xiansheng	mei	liuxia	xingming.		
	This	Cl	gentleman	not	leave	name		

'Yesterday, there was a gentleman came and looked for you. This gentleman did not leave his name.'

'Yesterday, there was a gentleman came and looked for you. The gentleman did not leave his name.'

The reference of the demonstrative phrase *'this gentleman'* refers back to an already introduced specific person by the indefinite description *'a gentleman'* in the preceding clause. However, it is worth noting here that it is possible to use the definite article in the English translations of (19). In English, both demonstratives and the definite article overlaps in the usage to introduce anaphora in the language. Chinese does not have an article system and therefore, it is argued that demonstratives are used to taking some functions of the definite article to introduce definite references.

If one follows Jenks' (2017) theory about demonstrative descriptions and definiteness interpretations in Mandarin, the above example serves as the typical use of a demonstrative description in introducing familiarity definites. Following Schwarz (2009), Jenks (2017) assumed that there are two types of definiteness in the use of natural language: the unique definites and the familiarity definites. The unique definites are situational and licensed by the uniqueness condition in the situation. The familiarity definites involves an explicit antecedent in the discourse; just as displayed in example (19). The demonstrative determiners in Chinese display strong distributional similarities as the strong definite article in German. The anaphoric use of the demonstrative in (19) is in fact a definite use that can be comparable with the use of the definite article in an article language. Detailed discussions on Jenks' (2017) theory will be explicated and analysed in later sections. The data illustrated here is to demonstrate the point that the use of the Chinese demonstratives is consistent with Himmelmann's (1996) claim of universal tracking use of demonstratives in world languages.

The recognitional use of the demonstrative does not completely rely on the context of the utterance as the exophoric or anaphoric use of demonstrative often do. Instead, the recognitional use of demonstratives relies on the shared knowledge between the interlocutors (Cleary-Kemp, 2007). In Chinese, the typical recognitional uses involve the speaker introducing a demonstrative to show some degree of uncertainty; either about the hearer's ability of locating the referent or about the appropriate way to present the intended referent (Tao, 1999). It is also possible that in the recognitional use, the referent introduced by the demonstrative expression is low in identifiablity but the reference can be secured though shared knowledge between the participants.

(20)   Y: ... ta shuo,

          3SG say

         'He said,

         <Q women shi anzhao [^zhengchang gongzuo cheng]---

         1PL COP base normal work proce-

"We are based on normal working procedures-

T: [Zhengchang ao].

normal PRT

That's "normal".

Y: Zhe ge chengxu lai wen Q>.

This CLF procedure come ask

The normal procedures to question people.'''

(Tao 1999, p. 76 ex (3))

The above example cited from Tao (1999, p.76) is a piece of the conversational discourse in the data she used for the case study of the grammatical use of demonstratives in Mandarin. In the above spoken discourse, speaker Y used a proximal demonstrative in the respond to speaker T. According to Tao (1999), the choice of the demonstrative is to show the speaker's uncertainty in how to present the referent in the conversation.

In the recognitional uses, it is also possible that the referent introduced by the demonstrative is low in identifiablity but licensed by the shared knowledge of the interlocutors (Fang, 2012).

(21)   Yiqian wo   zai   xuexiao   de   shihou,

Before I   at   school   MOD   time

you   na   zhima binggan,   xianzai hai   you   ma?

have   that   sesame biscuit,   now   still   have   SFP

'When I was in school, there were those sesame biscuits (for sale in the school shop), do you still have them now?'

The reading of the demonstrative phrase *na zhima binggan (that sesame biscuit)* is generic; meaning that the phrase is used to refer to the particular kind of biscuit that was sold by the school shop, not a particular piece of biscuit. The referred type of biscuit is introduced into the discourse as having a lower degree of identifiablity. However, even in the case that the hearer is not able to identify the referent, the recognitional use of the demonstrative phrase represented that there is shared knowledge between the participants of the conversation that can possibly help the hearer to identify the referent.

The above mentioned four uses of demonstratives, originally outlined by Himmelmann (1996), can be found as the basic uses for the Chinese demonstratives as well. As pointed out by Diessel (1999), it is debatable on how this universal claim can be supported by empirical evidence across linguistically; and even if the four uses are proven to be universal, it is necessarily to confirm that the situational use (the exophoric use) is the primary use of demonstratives.

2.2   Demonstratives as emerged definite articles in Mandarin

2.2.1   The definite article uses of Mandarin demonstratives

A noticeable difference between Chinese and English is that there is no article in Chinese. Chinese demonstratives are often found to occur in the situations where a definite article in English would be more suitable (Chen, 2004).

According to Chen (2004), there are three major differences between the definite article and demonstratives in English. First, unlike demonstratives that have lexical meanings, the definite article is a pure functional element without any lexical contribution to the nominal phrase. Second, the definite article in English has adjectival uses, but demonstratives in the language can have adjectival and adverbial uses. Third, the primary function of demonstratives in English is that of deixis. They serve to locate entities with reference to their distance in relation to the speakers in the spatio-temporal space of discourse (Diessel, 1999; Fillmore 1982, 1997; Himmelmann,1996). In contrast, the definite article is deictically neutral (Chen 2004, p.1145).

Comparable to the use of the definite article, Chinese demonstratives can be used in deictic neutral context. In contrast with the demonstrative in English, Chinese demonstratives are less restricted in the environments of non-exophoric uses.

Chen (2004) concluded that there are four situations that Chinese demonstratives are used as the definite article, namely, the non-contrastive anaphoric use, the shared general knowledge use, frame-based association, and the self-containing association with accompanying restrictive clauses.

The anaphoric (non-contrastive) use

(22)   You   yi   ge   ren   yang   zhe   yi zhi   guo.

       There-be   one   Cl   person keep   DUR   one Cl dog.

       Zhe/na   zhi   gou hen dongshi.

       This/that   Cl   dog very intelligent.

                                                        (Chen 2004, p. 1153 with modification)

The utterance of the above sentence (22) is common in the narrative sequence of a story. The demonstrative in the above example indicates that the referred *'dog'* is the same *'dog'* introduced by the indefinite description in the previous clause. Both the demonstrative and the definite article can be used for anaphora in English. But if uttered in the non-contrastive context, in English, a definite article would be considered as more suitable. In Chinese, since there is no *the*-like determiner, both proximal and distal demonstrative can be used for the anaphoric references. In comparison with *zhe* and *na*, Chen (2004) thinks that the proximity of *zhe* is a better anaphoric device than the distal *na* in referring to an antecedent recently introduced into the discourse.

The shared general knowledge use

(23)   Zhe tianqi   zhen   guai,   shier   yue   le, ke   yidian   bu leng.

       This weather   really strange, twelve month CRS, but bit   not cold.

'The weather is really strange. It is December now, but it is not cold at all.'

The above utterance as a comment on the weather is felicitous if both the speaker and the hearer share the same spatial-temporal location and context of the utterance. By uttering (23) the speaker is making a comment about the weather there at the moment. Both the proximal *zhe* and the distal demonstrative *na* can be used as a determiner to *tianqi ('weather')* in Chinese. The Chinese demonstrative description *zhe tianqi ('this weather')* can be considered as equivalent to the English phrase *the weather here*; but the phrase *na tianqi ('that weather')* can obtain two readings, namely, *the weather there* (spatial) and *the weather then* (temporal) and the temporal reference comes more natural.

Frame-based association

(24) Ta   mai   le   yi   liang jiu che, na   luntai dou   mo   ping   le.

He   buy   PFV   one   CL   old car, that   tire   even   wear   flat   CRS.

'He bought an old car. All the tires are worn out.'

The demonstrative expression *na luntai ('that tire')* is used as an associative anaphora which links to the reference of the indefinite description *an old car* in the previous clause. In English, the definite article would be used in the associative anaphora situations. In Chinese, the distal demonstrative *na ('that')* is preferred to take up the definite article function for the bridging uses in the language.

Self-containing association with accompanying restrictive clauses

(25) Shang ge   yue   lai   kan   ni   de   na   ge   ren ,

Last   CL   month come   see   you   DE   that   CL   person

wo   jintian you   jian   dao   ta   le.

I   today again see   to   he   CRS.

'The person who came to see you last month, I saw him again today.'

The above sentence contains a relative clause. Unlike English, the relative clause is able to take the pre-nominal (instead of the post-nominal) positions and interact with other pre-nominal modifications or determiners in syntax. As mentioned previously, the scope interaction between the relative clause and the demonstrative determiner may yield different readings of the sentence. Detailed discussion on this issue will be conducted in later sections.

Chen (2004, p.1155) pointed out that in Chinese the distal demonstrative *na* is the preferred determiner compared with the proximal demonstrative *zhe* in the use with a restrictive clause. According to Chen (2004), there are two possible explanations of why the distal *na* is more appropriate for the restrictive clauses. The first explanation is that, compared with the proximal *zhe*, *na* is the more grammaticalized determiner to mark the definite referents which is neutral in terms of the deictically based distinctions. The second explanation Chen (2004) assumed is, considering the inherent deictic distinctions of the two demonstratives, if the identifiablity of the referent largely relies on the descriptive content of the relative clause, it is likely that the entity is further away from the speaker; and therefore, the distal demonstrative is more appropriate in the situation than a proximal one.

2. 2.2   On the demonstrative-to-article grammaticization

A widely shared perspective on Chinese is that it is a language in which the grammatical category of determiners does not exist. For example, Norman (1988, p. 160) made the following statement to the effect.

'Chinese lacks articles, but there is surprisingly little ambiguity as a result. Definite elements may be overtly marked by modifiers that themselves are inherently definite, such as demonstratives and possessive pronouns…'

As mentioned previously, it is observed by the theorists that demonstrative in Chinese has developed some of the functions of the definite article in uses (Lü, 1968; Li and Thompson, 1976, 1981, 1989; Chen, 2004; Huang, 1999; Tao, 1999; Fang 2002).

(26)   Ni   renshi bu   renshi nei   ge   ren?

        You   know   not   know   that   Cl   person?

        'Do you know the/that person?'

Li and Thompson (1981, 1989) made the well-known claim such that the Mandarin distal demonstrative *na* is beginning to function as the English definite article *the* in the encoding of the definiteness in the language. Li and Thompson (1981, p. 131-132) asserted that the utterance of (26), which contains the distal demonstrative, can be translated not only as 'do you know that person?' but also 'do you know the person?'

The contrast of *that person* and *the person* in this simple question in English is straightforward.

(27)   a.   Do you know *that* person?

        b.   Do you know *the* person?

Suppose the above two utterances are made in a situation where a police officer is inquiring about an incident with a witness. The choice of *that* over *the* requires a pointing gesture or intention to be involved in the context; *i.e.* (27 a.) is uttered if the indicated person is visible to both the officer and the witness. In contrast, the use of (27 b.) does not require such a condition. If back-translated the two utterances into Chinese, since there is no definite article in the language, a demonstrative has to be involved for translating both questions.

It is widely accepted that in world languages, demonstratives are the most common sources from which definite articles are derived through the process of grammaticalization (Greenberg, 1978). Chen (2004) argues that even though the Chinese demonstratives are used in deictically neutral contexts to introduce definite references as an English definite description would do, neither of them has developed fully as a definite article like the English *the*.

There are three reasons in Chen's (2004, p. 1154) theory that *zhe* and *na* has started on the path of grammaticalization towards the definite article; but are still 'far from reaching the endpoint'.

First, it is evidenced that demonstratives in Chinese preserved their deictic force to a certain extent. The weakened deictic demonstratives, in most of the instances, are found in the anaphoric and recognitional uses (Huang 1999, Tao, 1999). These uses are considered as typical for the beginning or transitional stages of demonstrative-to-definite article grammaticalization (Greenberg, 1978; Himmelmann, 1996). In the prototypical definite article uses, however, Chen (2004) observed that the Chinese demonstrative is not allowed for the situation.

(28)　　Anjing dianr,　bie　　ba　　na　　haizi　chaoxing　　le.

　　　　Quiet　bit　　don't　BA　　that　baby　wake:up　　CRS

　　　　'Be quiet. Don't wake up that baby.'

(Chen 2004, p.1155 ex (57))

Chen (2004) pointed out that the reading of the demonstrative expression *na haizi ('that baby')* in this case is deictic; similar to the reading of the corresponding demonstrative phrase in English. The utterance of (28) is infelicitous in the situation that the baby mentioned is not visible to the hearer, or the hearer is not aware that there is a baby in the room.

Another reason Chen (2004) provided for why at the current stage of grammaticization, both demonstratives in Chinese have not fully complete the process is that they fail to satisfy what Greenberg (1978, p. 61) considered as the curial criterion: 'being compulsory and indispensable in marking the definiteness grammatically'. As stated before, both bare nominals and demonstratives can express definiteness in Mandarin. It is not the case that the demonstrative is the 'compulsory' or 'indispensable' marking device for definiteness in the language. Therefore, it can be concluded that in Chen's (2004) theory, Chinese demonstratives have developed some of the functions of the definite article uses but the grammaticzaion of the demonstrative into the definite article has not been completed yet.

2.2.3   The asymmetry between the proximal and distal demonstrative in the definite article uses

Huang (1999) observed that in spoken discourse, the distal demonstrative *nage ('that+Cl')* has notably become the definite marker in the non-subject position of the sentence. Huang's (1999) database consists of ten tape-recorded face-to-face conversations and radio interviews. Based on the analysis of the spoken language data, Huang (1999) concluded that it is undisputable that the distal demonstrative in the language has developed typical definite article uses.

(29)   …shengyin   hen   qiguai, you mei you.

         …sound   very   strange, right

         Haoxiang   niezhe bizi   nazhong   shengyin.

         Seem   pinch nose   that kind   sound.

         '(sometimes in earlier times they made) very funny sounds, right? It seems like the sounds you make when you pinch your nose.'

(30)   …jiushi you   yidian nazhong   bu   fangqi de   nazhong piqi   o.

          namely have some   that kind   NEG   give up DE   that kind mindset   FP.

         '(I) had the kind of never-say-never-give-up mindset.'

(Huang 1999, p. 81-82 ex (4) and (5))

Following Clark (1992), Huang (1999) termed the use of the demonstratives in the above examples as *the unavailable use* of demonstrative expressions. The idea is to suggest that without the accompanying relative clause or complement clause, the signalled referent would be *unavailable* to the addressee. In the above two sentences, the hearer would not be able to identify the referents of *nazhong shengyin ('the sound')* and *nazhong piqi ('the mindset')* if the relative clauses attributing the properties to them are not available.

Besides, both demonstrative expressions occur in non-subject positions in the utterances. In Huang's (1999) analysis, the reason why the definite-article-like demonstrative primarily appears in the non-subject position is as a result of the subject-object asymmetry of the referential-related properties of the NP.

First, NPs that introduce familiar but unused references typically occur in the object position. The object NP is normally considered as least likely to be identifiable according to its grammatical role (Huang and Chui, 1997). When a demonstrative is in effect functioning as a definite article, it is more likely to pick up the reference based on the non-deictic criteria in the object position. In contrast, the sentence subject position is generally assumed as the most topical and continuous position; and henceforth, it is typically reserved for anaphoric expressions.

The contrast between the anaphoric use and the unavailable use of the demonstrative can be briefly illustrated as the following. First, in the anaphoric use, an NP referent must first be activated in the previous discourse to function as the antecedent for the anaphoric demonstrative. In contrast, in the unavailable use, an antecedent is not obligatory. Moreover, even though the subject position is often considered as typical for the anaphoric expression, if a demonstrative expression is used anaphorically; the choice of the syntactic position of the expression is based on the proposition expressed by the sentence, not by the anaphoric feature of the expression. The demonstrative phrase in unavailable uses, however, regularly occurs in the non-subject position of the utterance. Thirdly, both the proximal and distal demonstrative can be used for the anaphoric situations. For the unavailable use, it is typical that the distal *nage* or its variations (such as *nazhong*) is used to introduce the familiar but unused information (Huang, 1999). Since the distal demonstrative is preferred for the available use, it is concluded by Huang (1999) that the distal *nage,* but not the proximal demonstrative *zhege,* is the candidate for the grammatical category of the definite determiner in the language.

In the contrastive analysis between the proximal and distal demonstratives in taking up the definite article functions, many theorists (Lü, 1990 [1968]; Li and Thompson, 1981, 1989; Chen, 2004) hold

similar views to Huang (1999) on assuming the distal *na* is the better candidate to develop as the grammaticized version of the definite article in Chinese.

Fang (2002 and 2012) argued otherwise. In her theory, it is the proximal demonstrative *zhe*, instead of the distal *na*, that is developing the functions of the definite article. Based on the data investigation of the Beijing dialect, Fang (2002 and 2012) proposed that the definite article in Beijing Mandarin is an emerging grammatical category derived from *zhe* through its recognitional use as a demonstrative.

Himmelmann (1996) summarized two major different uses between the demonstrative and the definite article. First, the demonstrative cannot be used to determine unique entities, or following Hawkins' (1987) term, the demonstrative is not good for larger situational uses; i.e., the demonstrative cannot be used in the phrases such as *'this/that sun'* or *'this/that king'* [39]. Second, in English, the definite article is preferred for frame-based associative uses. For example, if an antecedent of *a tree* is activated, the definite article phrase *the branch* is preferred for the associative anaphora in comparing with the demonstrative phrase of this *branch* or *that branch* (Himmelmann, 1996). Fang (2002 and 2012) observed that the Chinese proximal demonstrative *zhe* can be suitable for both larger situational uses and associative anaphora cases.

(31) Zhe   guowang   ke   bushi hao   dang   de.

      This   king   Emph[40]   not   good   be   SFP.

      'It is really not easy to be the king.' Not: 'It is really not easy to be this (particular) king.'

(32) Congqian   you   yi   wei   guowang.   Zhe   guowang hen   yingyong.

      Before   have   one   Cl   king.   This   king   very   brave.

      'Once upon a time, there is a king. The king was very brave.'

---

[39] Unless there are more than one sun or king in the context and the demonstrative is used to indicate the contrast.

[40] Particle used for emphasis

Zhe in (31) is used in a completely different way comparing to the anaphoric role it performed in (32).

In (32), the only possible translation for demonstrative phrase *zhe guowang ('this king')* in English is *'the king.* The definite article, instead of the demonstrative, must be used in English for the reason that the expression has a predicative reading. The sentence is not about *this king* or *the king* as an object but to express the proposition that it is not easy to perform the duties of being a king. It is the definite description, but not the complex demonstrative, that is observed to be able to regularly introduce predicative readings (Fara, 2001; Coppock and Beaver, 2015).

Due to the lack of the definite article, the proximal *zhe* is used for the predicative reading of the definite noun phrase. It is impossible for the distal *na* to take up the function. For example, if the proximal *zhe* is replaced by *na* in (31), the predicative reading will become unavailable and at the same time, the sentence fails to express any significance.

Furthermore, *Zhe* can also combine with a non-anaphoric nominal phrase.

(33)　…ni　yao　zuo　zhajiang　mian, ba　zhe　rou　ge　limian …

　　　you　want　cook　soy paste　noodles, BA　this　meat　put　inside…

' …you want to cook the soy-paste-noodles (properly), (you need) to put the meat in (the wok)'…'

(Fang 2002, p. 348 ex (37))

In the above example, it is not necessary for the reference of the demonstrative phrase *zhe rou ('this meat')* to have any antecedent in the preceding discourse. It is not necessary for the addressee to have previous knowledge that the meat is required in the recipe of soy paste noodles. Again, the distal *na* is not possible in this situation. Fang (2012, p. 80) argued that the function of *zhe* in the above case is to 'make the indefinite noun phrase definite' and compared with the distal *na*, only *zhe* has this definiteness marking function.

Fang (2002 and 2012) observed that *zhe* and *na* developed asymmetry in the process of the emergence as the grammaticized definite article in the language. Contrary to the idea that the distal *na* or *nage* has developed functions as the definite article in Chinese, Fang (2002 and 2012) argued that only *zhe* can be viewed as the definite article based on the data of Beijing Mandarin. First, with its function of coherence in discourse, *zhe* is more likely to introduce a new topic or hold the topic chain than *na*; and second, *zhe* is preferred when introducing definite references. Tao (1999) observed that 93% of the textual uses of demonstratives involve the proximal *zhe*. Follow Tao (1999), Fang (2002, 2012) argued that when *na* is used to introduce a topic, it often indicates the contrast and the comparison with the referent in previous discourse.

(34) Meiguoren   jiu   he   yi   bei   kafei, kao   liang   kuai   mianbao.

American   just   drink   one   cup   coffee, toast   two   slice   bread.

Zhongguoren   zhuyao   jiangjiu   he   zhou.

Chinese   particular   take seriously   drink   porridge.

'[for breakfast] The American would just have a cup of coffee with two slices of toast. The

Chinese (in contrast) is particularly serious about porridge.'

(Fang 2002, p. 350 ex (40) 2012, p. 78 ex (37))

In Fang's (2002 and 2012) analysis, the distal *na* cannot be replaced by *zhe* for the reason that it indicates the contrast between the attitudes of the Chinese and the American towards breakfast. It is not only the case that the American and the Chinese prefer different food for breakfast; but also the Chinese tends to be more serious about breakfast while the American seems to care less about it. The major function of *na* is to indicate the contrast but not to keep the continuity of the topic. According to Fang (2002 and 2012), the indication of the contrast reveals that the distal demonstrative *na* preserves more of the deictic nature as a demonstrative. In comparison with *na*, *zhe* is further developed towards the deictic-neutral and non-indexical use of a definite article.

In some situations, *na* can be found in the non-anaphoric recognitional uses, but according to Fang (2012), the phrase in the form of [*na*+NP] never introduces the definite reference.

(35) You   de   ren   ta   shi   ba   baishu   zhu   shu   le

Have   NOM   people 3SG   COP   BA   sweet-potato boil   well   PERF

yihou,   fenggan   nongcheng   baishuganr

after,   dry make   become   dried sweet-potato

wo   hen   xinhuan   chi   nei   ge   wanyir

1SG   very   like   eat   Dist-Dem   Cl   stuff

yi   yao   jiu   gen   **na**   **xiangpijinr**   yiyang.

one   chew   just   like   Dist-Dem rubber   same.

'Some people like to boil sweet potatoes and hang them in the air to dry. I like that stuff very much. When you chew it, it feels like rubber.'

(Fang 2012, p. 62-63 ex (13))

In the above sentence, the demonstrative in *na xiangpijinr ('that rubber')* makes reference to a statement rather than an established referent in the discourse.

Based on the investigation of Beijing Mandarin in spoken discourse, Fang (2012) compared the proximal *zhe* and distal *na* in Contemporary Beijing Mandarin and observed that the two demonstratives serve different discourse and pragmatic functions. Only *zhe,* through its recognitional use, shifts its function and becomes the definite article emerging in the spoken form of the language. With the grammaticization of *zhe* as the definite article and the numeral one (*yi*) shifting its function into an indefinite article, Fang (2012) argued that even though these patterns are not observed in the

written form of the language, it can be concluded that definiteness, as a new grammatical category, has emerged in the spoken language.

2.3   Conclusion

As discussed in this section, both English and Chinese complex demonstratives can have non-deictic and non-referential (NDNR) uses. Most philosophers treat the English NDNR demonstratives as marginal and find that the applying of standard direct reference semantics to the analysis of the NDNR demonstratives yield inconsistent truth-conditional results with the deictic cases. Since there is no definite article in Chinese, it is conceivable that the demonstrative is able to pick up some of the functions of the definite article in facilitating the speakers' perception and reference to definite entities. In the language data, the NDNR uses of Mandarin complex demonstratives plus the instances of demonstrative descriptions as anaphoric expressions can be found widespread. However, there is no consensus among the theorists on the claim that the Mandarin demonstrative has developed an independent grammatical function as the definite article in the language.

Chen (2004) assumed that the Chinese demonstrative has started the grammaticization towards the definite article although the full process has not been completed yet. Huang (1999) observed that in the spoken discourse, the grammatical category of definite determiner has already been established and the distal demonstrative *na* and its variant fulfil the function. Tao (1999) and Fang (2002, 2012) argued that instead of the distal demonstrative *na*, it is the proximal *zhe* that shifts its function to the definite article through its recognitional uses. My view is that the dispute on this matter exposes the problem of the dichotomy approach attempting to separate the non-deictic demonstratives as applicable to a distinct semantic mechanism.

There is no doubt that complex demonstratives are able to take up the definite-description like functions in propositions in Mandarin. The question raised here is whether the proxy definite descriptions represented in the form of complex demonstratives should be treated as having a separate semantics to the deictic demonstrative noun phrases. In this dissertation, I argue that the so-called demonstrative definites must be analysed under the same semantic framework of normal

demonstrative (deictic) expressions. In the next section, Jenks' (2017) semantic theory on the description uses of demonstrative phrases in Mandarin will be reviewed and in the subsequent section of the literature review, a quantificational account of Mandarin complex demonstratives in the definite uses will be explored. I argue that the quantificational account is as effective as the direct reference account for complex demonstratives and at the same time captures a wider range of data.

3.   Demonstrative Descriptions as definites in Mandarin

3.1   Bare definites versus Demonstrative descriptions

Jenks (2015, 2017) observed that the environments where the English definite article is used must either be realized with bare nouns or demonstrative phrases in the article-less language of Mandarin. Both bare nouns and demonstrative phrases in Mandarin can therefore be considered as the semantic equivalents of definite descriptions in English. Comparing the uses of definite bare nouns and the demonstrative-introduced definite descriptions, it can be concluded that Mandarin bare definites and demonstrative definite descriptions differ at the level of syntatic distributions and number markings.

Distributional

First, as exemplified in the previous Chapter, there is a distributional asymmetry in terms of definite and indefinite readings of bare nouns in Mandarin.

(36)   a.   Lai   ke   le.   Indefinite

        Come   *guest*   LE

        '*Guests* have come.'

        b.   Ke   lai   le   Definite

        Guest   come   LE

        '*The/certain guest(s)* have come.'

(Chao 1968, p. 76)

As illustrated in the above, there is a tendency for the bare nouns to obtain the definite reading in the pre-verbal position, as in (36 b.); but an indefinite reading in the post-verbal position as in (36 a.)

Demonstrative definites in Mandarin do not display such subject-object asymmetry in terms of definite versus indefinite readings.

(37)   --Fangjian li   you   yi   wei   xiansheng   he   yi   wei   nushi.

   Room inside   have   one   Cl   gentleman   and   one   Cl   lady.

   'There is a gentleman and a lady in the room.'

   a. Na   wei   xiansheng   shi   wo-de   laoshi.
      That   Cl   gentleman   be   my   teacher.
      'The gentleman is my teacher.'

   b. Wo   renshi   na   wei   xiansheng.
      I   know   that   Cl   gentleman.
      'I know the gentleman.'

As illustrated in the above example, the demonstrative phrase *na wei xiansheng ('that Cl gentleman')* in both of the following clauses denotes the same gentleman mentioned in the previous discourse. Both uses of demonstrative expressions are definite, regardless their syntactic positons either as a subject in (a.) or an object in (b.).

Number

Demonstrative descriptions differ from bare definites in terms of number marking. As explained in the previous chapter, Mandarin bare definites in general do not have overt number marking in syntax. Bare definites in Mandarin are fundamentally quantificational and have general number. In the referential uses of bare definites, the singular or plural number interpretation is fixed according to the ontological facts of the referents being singular or plural; which is implied by the number status of other linguistic devices such as pronouns.

Demonstrative phrases in Mandarin, on the other hand, take either the singular or plural forms. The basic syntactic constructions of Mandarin demonstrative phrases come into the form of

[Demonstrative +Cl+N]. The classifier involved takes up the function of distinguishing generic and individual readings as well as singular and plural references of the phrase.

(38) a. zhe/na   liang   che

          This/that   Cl-individual   car

          'this/that car'

     b. zhe/na   zhong   che

          this/that   Cl-kind   car

          'this/that kind of car'

     c. zhe/na   xie   che

          this/that   Cl-plural   car

          'these cars/those cars'

Compared with the numberless bare nouns, demonstrative descriptions are more specific for number for the reason that the inserted classifiers reveal the number of the description denotation.

3.2   Demonstrative definites as anaphoric definites

Jenks (2017) assumed that Mandarin distinguishes unique and anaphoric definites by using different morphological and syntactical structures. Bare nouns are only allowed for anaphoric situations in which cases are licensed by topic marking. While bare nouns are used for unique definites, demonstrative phrases are used for anaphoric definites. What distinguished the two types of definites is that an explicit linguistic antecedent in the discourse is always required in the anaphoric definites.

According to Jenks (2017), the demonstrative determiners in Chinese display strong distributional similarities to the strong definite article in German. Both the strong definite article and Chinese

demonstrative determiners are not able to express unique definites in the environments of larger situational uses, immediate situational uses, and the part-whole bridging.

However, as illustrated in the examples in previous sessions, the empirical data shows that Mandarin demonstratives can be used in all the above situations[41].

Jenks (2017) observed that the anaphoric definites can be found in two environments in Mandarin. The first contains narrative sequences as illustrated in (39). The anaphoric definites pick up the antecedent in the previous discourse and take the index as a syntactic argument in the semantics. The second typical environment for the use of anaphoric definites is the case of donkey sentences[42].

(39) Jiaoshi li   zuo-zhe   yi ge nansheng he   yi   ge   nusheng,

      Classroom inside   sit-PROG   one Cl boy   and   one   Cl   girl

      'There is a boy and a girl sitting int the classroom…'

      Wo   zuotian   yudao   na   ge   nansheng .

       I   yesterday   meet   that Cl   boy

      'I met the boy yesterday.'

      Wo   gei   na   ge   nansheng   yi   ge   liwu.

---

[41] Sentences (23) and (31) as the examples of the larger situational use of the demonstrative and the demonstrative introducing a unique referent. Example (24) as bridging uses.

[42] The donkey anaphora in Chinese is pervasive for the analysis of pronominal anaphora in the language and thereby deserves to be studied in its own right. The issue is deliberately excluded in this dissertation for several reasons. First, the direct translation of an English donkey sentence into Chinese will not generate the exact semantic effect in the language. In terms of performing as a bound variable, as pointed out by Pan and Jiang (2015), wh-phrases and reflexives are preferred in a higher hierarchy than pronouns and demonstratives. That is to say for a pronoun or a demonstrative to be involved in a bound variable situation, such as to be used in a donkey sentence, both the pronoun and the demonstrative require some contexts to do so. Consequently, the contemporary studies in Chinese donkey anaphora centre on three surface structures: bare conditionals involving repetition of wh-phrases, dou ('all')-conditionals and ruguo ('if')-conditionals (Cheng and Huang, 1996). Finally, considering the main research goals of this dissertation, I will focus more on the issue of definite readings and demonstrative phrases, rather than pronominal interpretations of anaphora in the language.

I		bring	give	that	Cl	boy		one	Cl	gift

'I'm bringing a gift for the boy.'

(Jenks 2017, p. 9 ex (16))

In terms of expressing definiteness, Jenks (2017) observed that the demonstrative description is able to express *de dicto* references. For example, even if the hearer may not have previous knowledge about the reference introduced by the demonstrative description, it is still felicitous for the speaker to utter (40 b.) to convey the idea of an anaphoric entity in the narrative sequence. In contrast, bare nouns (in 40 c.) cannot be used to express the anaphoric definites.

(40) a. You ge nuren sha le Lisi.

Have CLF woman kill PRF Lisi.

'A woman killed Lisi.'

b. Jingcha huaiyi na ge nuren nashihou shou le shang

Police suspect that CLF woman at-that-moment suffer PRF injury

'Police suspect that the woman suffered an injury.'

c. Jingcha huaiyi nuren nashihou shou le shang.

Police suspect woman at-that-moment suffer PRF injury.

'Police suspect that a woman suffered an injury.'

(Jenks 2017, p. 10 ex (17))

The demonstrative phrase *na ge nuren ('that Cl woman')* in sentence (b.), together with the indefinite description *yi ge nuren ('one Cl woman')* in the preceding clause, creates an anaphoric chain denoting the same woman as the referred entity. If a bare noun is used for this situation, as shown in (40 c.), the anaphoric link fails between the bare noun and the indefinite description. I agree with Jenks (2017) on

the contrastive readings obtained by using the bare noun *woman* and the demonstrative phrase *that woman*. I argue, however, that the utterance of (c.) is unacceptable, even if the bare noun is treated as introducing indefiniteness. The problem is that the hearer will not be able to follow the logical connection between the two sentences if (c.) is uttered as a continuing clause to (a.). This is mainly attributable to the fact that bare nominals are not good cohesive devices.

3.3   Demonstrative Descriptions as Indexical Expressions in Semantics

Schwarz (2009, 2012) proposed that what distinguishes the anaphoric definites (ι^x) from the unique definites (ι) in natural language is that only the anaphoric definites takes a pronominal index as an argument in the dynamic function of definiteness. Jenks (2017) assumes that the indexical argument is a property that functions as a domain restriction for the definite determiner.

The difference between the anaphoric definites and the unique definites is that the anaphoric definites require an explicit linguistic antecedent in the discourse. In Mandarin, only the demonstrative noun phrases can take up the function to express the anaphoric definites, for the reason that the antecedent provides a restricted domain to the overt definite determiner.

Huang et al. (2009) observed that unlike English demonstratives, the Chinese demonstrative is able to combine directly with pronouns or proper names. Jenks (2017) believes that the syntactic combinations of the pronoun and proper name preceding the demonstrative support the idea that the demonstrative description is able to take the pronominal index as the domain restriction.

(41)   *The [Prounun + Demonstrative] construction*

     a.   Wo   xihuan [nimen zhe-xie guai   haizi].

            I   like   [you.PLthese   good   children].

            'I like you/those good kids.'

     b.   Wo   dui   tamen naxie   liulanghan   meiyou yinxiang.

            I   to   they   those   vagrant   not-have impression.

'I do not have impressions of them/those vagrants.'

(Jenks 2017, p. 17 ex (33))

(42)   *The [Proper Name+ Demonstrative] construction*

a.   Wo   xihuan [Zhangsan,   Lisi   na   ji-ge   guai   haizi].

I   like   Zhangsan   Lisi   that   several-CLF   good   children.

'I like Zhangsan, Lisi those several good kids.'

b.   Wo   dui   [Zhangsan   zhe-ge xuesheng]   meiyou shenm yinxiang.

I   to   Zhangsan   this-CLF student   not-have what   impression.

'I do not have much (of an) impression of Zhangsan this student.'

(Jenks 2017, p. 17 ex (34))

Jenks (2017) analysed that the pronouns and the proper names occurred before the demonstrative expressions function as the domain restriction for the demonstrative determiner through type-shifting.

(43)   a.   *Pred*(*x*)=

(i) $\lambda y[y = x]$ if *x in* D*e*

(ii) Otherwise, undefined

b.   *Pred*([[tamen$_4$]]^g) = $\lambda y[y = g(4)]$

c.   *Pred*([[Zhangsan]]) = $\lambda y[y = \mathbf{z}]$ $\mathbf{z}$ = Zhangsan

(Jenks 2017, p.18 ex (37))

According to Jenks (2017), the pronouns in (41) and the proper names in (42) shift their types from type <e> to the property type of <e, t>. The predicative interpretations of the pronoun and the proper name supply a domain restriction to the index of the demonstrative determiner.

Besides, the phrasal formation containing pre-demonstrative modifications also provides evidence for the specific idea that the domain restriction of anaphoric definites is predicative.

(44)   [MOD+DEM+N]

mai   le   ditan   de   na   san   ge   ren

buy   PFV   MOD   that   Cl   three   person

'those three people who bought a carpet'

(Jenks 2017, p. 19 ex (39))

There are two restrictions for pre-demonstrative modifiers, first, according to Constant (2011), the modifiers have to be restrictive; and second, based on Zhang's (2015) analysis, they have to be predicative. Jenks (2017) then proposed that the restricted clause, which is predicative, fulfils the semantic role of an index for ι^x by supplying the demonstrative determiner with a domain restriction.

In conclusion, Jenks (2017) proposed that Mandarin complex demonstratives, when used as definite descriptions, only occur in two environments, namely, the discourse anaphoric use and the donkey sentences. For the main purpose of this dissertation, Jenks' (2015, 2017) theory of the anaphoric use of the demonstrative description will be analyzed. Taking a dynamic view, Jenks (2015, 2017) argued that the demonstrative description takes up the explicit antecedent in the previous discourse as an indexical property that functions as the domain restriction to secure the reference of the phrase.

Jenks (2015, 2017) assumes that Mandarin anaphoric complex demonstratives expresses familiarity triggered definiteness in semantics and hence in the article-less language, the demonstrative determiner in anaphoric uses can be comparable to the strong definite article in German. Adopting a dynamic approach, Jenks (2017) analysed Mandarin anaphoric complex demonstratives as demonstrative descriptions and treated them as variables.

3.4   Anaphoric Complex Demonstrative as D-type Anaphora

In this section, I will adopt a Russellian approach to anaphora for the explanation of anaphoric complex demonstratives in Mandarin. In later sessions, together with the analysis of the non-deictic and deictic complex demonstratives, a fuller account of the Mandarin complex demonstratives will be attempted.

The anaphoric demonstrative differs from a bonda fide demonstrative in the sense that it does not involve any pointing gesture or intention in its uses. On the other hand, the anaphoric demonstrative does not appear to be equivalent to the use of a definite description in the sense that it does not solely denote a unique identifiable entity. The talk of this issue hence concerns two important topics: namely, the semantic profile of complex demonstratives and the issue of anaphora as a phenomenon in natural language.

Jenks (2017) is correct to point out that demonstrative phrases are better devices for anaphora in comparing with bare nominals in Mandarin. If taking a traditional view on the semantics of demonstratives, the phenomenon causes trouble for the Russellian account of descriptions.

The orthodox view takes it that demonstratives are devices of direct reference (Kaplan, 1977, 1989). If used anaphorically, the demonstrative phrase becomes a referentially dependent expression that gets its reference from the antecedent phrase in the previous discourse.

(45)   a.   Lieren yang le   yi   zhi   gou.

        Hunter keep ASP one Cl   dog.

      b.   Na   zhi   gou   hen   congming.

        That Cl   dog   very intelligent.

        'The hunter kept a dog. That/The dog was very intelligent. '

In the above example, the demonstrative phrase *that dog* co-refers to the same dog denoted by the indefinite description *a dog* in the preceding clause. If following the direct reference theory of demonstratives, the demonstrative phrase *that dog* is a referring term. Since the semantic value of the

258

anaphoric phrase equals to the semantic value of its antecedent, it can be inferred that the indefinite description *a dog* is direct referential. This analysis opposed to the Russellian quantificational account of descriptions and in this case, also leads to a referential interpretation of the indefinite noun phrase *a dog* in the context. An indefinite noun phrase can be referential if the speaker has a particular referent in mind and use the phrase to refer to the specific entity. However, it is obvious that in this situation, the speaker's intention is redundant; meaning whether the speaker is being specific or not does not affect the understanding of the narrative sequence.

In dealing with the problem of demonstrative anaphora, I follow Neale's (1990) theory in treating the demonstrative phrase as the proxy of definite descriptions.

Neale's (1990) discussions on anaphora focus on the English data of anaphoric pronouns. The gist of Neale's (1990) theory is that the syntactic representation of the anaphoric pronoun is in fact a definite description that can be analysed via the quantificational account.

'If x is a pronoun that is anaphroci on, but not c-commanded by, a quantifier '[Dx:Fx]' that occurs in an antecedent clause '[Dx:Fx] (Gx)', then x is interpreted as the most 'impoverished' definite description directly recoverable from the antecedent clause that denotes everything that is both F and G.'

(Neale, 1990, p. 182)

 (46)   The cat fell of the roof. I took it to the vet.

In (46), the anaphoric pronoun *'it'* is tied to the antecedent in the definite description *'the cat'*. According to Neale, the pronoun *'it'* goes proxy for the definite description *'the cat that fell of the roof'*. The second sentence in (46) can be interpreted as *'I took the cat that fell of the roof to the vet.'* It expresses a true proposition if there is a unique cat that fell of the roof and the speaker took the unique cat to the vet. The uniqueness claim imposed on the definite description secures the denotation of both the antecedent and the pronoun.

Following Neale (1990), I propose that the proxy account can be extended to the case of demonstrative anaphora in Mandarin.

(47)   Zuotian you   ge   jingcha lai   zhao   guo   ni.

Yesterday have Cl   police come   look-for ASP   you.

Jintai   ni   chumen de   shihou na   ge   jingcha you   lai   le.

Today you   out   Mod   time   that   Cl   police again come   ASP.

'Yesterday, there was a police officer came and looked for you. Today when you were out, that police office came again.'

The demonstrative phrase *na ge jincha ('that+Cl+ police officer')* functions as a demonstrative anaphora to the mentioned police officer in the antecedent clause. The interpretation of the demonstrative phrase can be analysed as equivalent to '*the police officer who came yesterday*'.

The semantics of the demonstrative description can be interpreted as the following. English is used in this case for the convenience of representation.

(48) That officer came again. = *'The officer who came and looked for your yesterday'* came again.

[The *x*: officer *x* & came-and-looked-for-you-yesterday *x*] (*x* came again)

Demonstrative anaphora can also occur in preceding a quantificational antecedent in Mandarin.

(49)   You   xie   ren   tiqian likai   le   juchang.

Have   some   people early   leave   ASP   theatre.

Tiqian li-chang   de   na   xie   ren   bu   shi

Early   leave-thearte   Mod   that   some   people not   be

zhenzheng   de   xiju   ai-hao-zhe.

real   Mod   drama   fan.

'There were some people left the theatre before (the drama was finished). Those people who left early were not real fans. / The people who left early were not real fans.'

In the above example, the demonstrative phrase *tiqian lichang de na xie ren ('those who left early')* has the linked denotation to the quantificational phrase *you-xie ren ('some people')* in the antecedent clause. The way Neale (1990) understands the anaphora to a quantificational expression is to treat such pronouns that are 'anaphoric on the form 'every F', 'all Fs', and 'each F' as semantically numberless' (Neale, 1990, p. 235).

The demonstrative description in the second clause of (47), even if it takes the form of a demonstrative phrase, is semantically a numberless definite description that has the interpretation of *'the people who left early'*.

(50) Those people who left early are not real fans. = *'The people who left early'* are not real fans.

[**whe** *x*: left-early *x*] (*x* not real fans)

Neale's (1990) philosophical perspective on the matter relates directly to his Russellian view of propositional functions.

In this section, only the Mandarin demonstrative anaphora is concerned and in such a case, I propose Neale's (1990) proxy account applies to the understanding of the anaphoric demonstrative description in the language.

The semantic value of the anaphoric demonstrative description in Mandarin is comparable with the semantic value of the English definite description which are quantifiers according to the Russellian line endorsed by Neale.

4. A Hidden Argument Account of Mandarin Complex Demonstratives as Quantifiers

*4.1 The distinction of non-deictic and deictic complex demonstratives*

As discussed in the above section, the interpretation of the anaphoric demonstrative is quantificational. The anaphoric demonstrative distinguishes with a bona fide demonstrative in the sense that no pointing gesture is needed for the anaphoric use; and it is distinct with a non-deictic demonstrative with respect to the capability of denoting a unique entity without bonding. In this section, I first propose that the deictic and non-deictic complex demonstratives are syntactically distinguished in Mandarin. Subsequently, I will provide a hidden argument analysis on both the non-deictic and deictic complex demonstratives. In the final section, a unified account of Mandarin complex demonstratives including the deictic, non-deictic and anaphoric environments will be attempted.

In English, the syntactic formation of a typical restrictive clause involving a determiner phrase has a fixed structure in which the relative clause attaches low in the syntactic relation to the determiner phrase.

(51)   a.   That author who wrote *Waverley* also wrote *Ivanhoe*.

(Nowak 2015, p. 2 ex (4))

b.
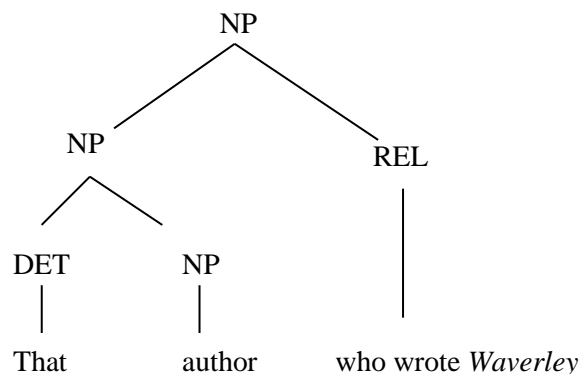
In Mandarin, as mentioned in previous sessions, the relative clause in combination with the demonstrative phrase generates more structures than the English restrictive clauses.

(52)   *repeated of (12)*

CONSTRUCTION$_1$ = *(pre-DNC) relative clause* in the form of **[RC + DNC]**

CONSTRUCTION$_2$ = *(post-DNC) relative clause* in the form of **[DNC + RC]**

(53)   *repeated of (13)*

CONSTRUCTION$_1$:   the restrictive relative clause

a.   Dai   yangjing   de   na-ge   xiansheng

       wear   glasses   Mod   that-Cl   gentleman

       Lit: 'wearing glasses that gentleman'

       'that gentleman who is wearing glasses'

CONSTRUCTION$_2$:   the descriptive relative clause

b.   Na   ge   dai   yanjing de   xiansheng

       that   Cl   wear   glasses Mod   gentleman

       Lit: 'that wearing glasses gentleman'

        'the gentleman who is wearing glasses'

(Chao 1968, p.201 ex (2))

As mentioned above, in the literature there is no consensus on whether the relative clauses appearing in the variant constructions should be analysed as the restrictive versus non-restrictive distinction to the nominal modification. Huang (1982) argued that even though the distinction between restrictive and non-restrictive interpretations can be hard to detect, the division shows up in the grammar under certain circumstance. For example, if the relative clause appears within a noun phrase used as the appositive nominal expression to a proper name, in this circumstance, the relative clause must follow the demonstrative as in CONSTRUCTION$_2$.

(54) a.   Manchesite,   zhe   zuo   xibei   dique   de   gongye   chengshi

              Manchester,   this   Cl   north-west region Mod   industrial city

              'Manchester, the industrial city in North-West'

But not: b.   #Manchesite,   xibei   dique   de   zhe   zuo   gongye   chengshi

              Manchester,   north-west region Mod   this   Cl   industrial city

              '#Manchester, in North-west the industrial city'

Huang's (1982) explanation is that if the demonstrative occurs before the relative clause, as in CONSTRUCTION$_2$, the demonstrative scopes over the relative clause. In contrast, if the demonstrative occurs after the relative clause, as in CONSTRUCTION$_1$, the referential value of the demonstrative 'is subject to the modification of the c-commanding relative clause' (Huang, 1982, p. 69-70).

In (54 a.), the proper name *'Manchester'* is a rigid designator whose reference is fixed. The reference of the demonstrative plus the relative clause in the appositive nominal expression does not depend on the modification content of the relative clause. Therefore, it is possible for the relative clause to function as an appositive to the proper name. In (54 b.), however, the demonstrative plus relative clause cannot be viewed as the appositive for the reason that the referent of the relative clause is not determined by the deictic use of the demonstrative; instead, it is determined within the range of the modification in the relative clause. In short, CONSTRUCTION2 contains a deictic/referential demonstrative; while CONSTRUCTION$_1$ contains a non-deictic or non-referential demonstrative.

(55) a.   Na   ge   dai   yanjing de   xiansheng   shi   wo-de   laoshi.

              That   Cl   wear   glasses Mod   gentleman   be   my   teacher.

              'That gentleman who is wearing glasses is my teacher.'

       b.   CONSTRUCTION$_2$ = THAT [Relative Clause]

c. *the core meaning of (a.) can be roughly resented as:*

Na   ge   shi   wo-de laoshi.

That   Cl   be   my   teacher.

'That is my teacher.'

CONSTRUCTION$_2$ in (55) can be interpreted as the deictic use of complex demonstrative that contains a pointing indication. What the sentence truly expressed is the proposition that is about the demonstratum of the demonstrative as in *That is my teacher*. The modification of the relative clause can be viewed as the complementary element to the determiner phrase[43].

In contrast, (56 a.) contains CONSTRUCTION$_1$ in which situation the demonstrative is used non-deictically and the reference of the phrase needs to be determined based on the descriptive content contributed by the relative clause.

(56)   a.   Dai   yanjing   de   na   ge xiansheng shi   wo-de laoshi.

              Wear   glasses   Mod   that   Cl gentleman be   my   teacher.

              'That gentleman who is wearing glasses is my teacher.'

        b.   CONSTRUCTION$_1$ = (Relative Clause) [THAT]

        c.   *the core meaning of (a.) can be roughly resented as:*

              Xiansheng shi   wo-de   laoshi.

              Gentleman be   my   teacher.

              'The gentleman is my teacher.'

---

[43] The complementary versus adjunct debate is not considered as essential and relevant at this point. The idea of this example is to show that when a demonstrative scope over the relative clause, the complex demonstrative can be replaced by a simple demonstrative for the reason that the reference of the phrase is the demonstratum.

The meaning of (56 a.) needs to be read as 'there is one and only one gentleman who is wearing glasses in the context and the gentleman who fits into the description is my teacher.'

Following Huang (1982), I propose that the syntactic variations of the demonstrative interacting with the relative clause distinguish the deictic versus non-deictic uses of complex demonstratives in Mandarin. If the demonstrative precedes the relative clause, the phrase it forms is a bona fide demonstrative phrase; and if the demonstrative follows the relative clause, it is a non-deictic complex demonstrative whose reference is determined within the compositionality of the construction.

More evidence from the empirical data supporting the distinction based on the syntactic variation can be found in Mandarin, as illustrated in the following examples.

(57)   Nei-zhi huangse-de gou he nei-zhi huangse-de gou dou tai ke'ai le

         DEM1 yellow-DE dog and DEM1 yellow-DE dog both too cute LE

         (pointing towards the tree) (pointing towards the fountain)

         'That dog and that dog are just too cute.'

But not in (58)

(58)   # Huangse-de nei-zhi gou he huangse-de nei-zhi gou dou tai ke'ai le

         Yellow-DE DEM1 dog and yellow-DE DEM1 dog both too cute LE

         # 'The yellow dog and the yellow dog are just too cute.'

                                                              (Williams 1999, p.411 ex (14))

In (57) the formation of the complex demonstrative is in the syntactic formation of CONSTRUCTION$_2$, in which case, the demonstrative takes the wider scope than the pre-nominal modification. The phrase can be used deictically. In (58), however, the demonstrative occurs after the relative clause and the interpretation of the phrase becomes *'the yellow dog'* instead of *'that yellow*

dog'. The sentence contains the definite description with the demonstration is considered as infelicitous.

I am aware that this deictic versus non-deictic distinction based on word order is not flawless. The word order provides us a simple way of determining the high and low attachment of the relative clause in syntax; however, it does not guarantee the semantic interpretation promoted. First, CONSTRUCTION$_2$ is structurally analogous to the standard analysis of the English relative clause. It is evident that the English relative clause in the case it combines with a demonstrative instead of the definite article can still have non-deictic readings.

(59)   *repeated of (51)*

        That author who wrote *Waverley* also wrote *Ivanhoe*.

(Nowak 2015, p. 2 ex (4))

The complex demonstrative in the above example is considered as typical for the non-deictic reading. To some native speakers, the same Mandarin phrasal structure can have the same reading as the English non-deictic interpretation of the phrase. As pointed out by Huang (1982), the distinction between the interpretations of the two constructions is indeed hard to detect in daily uses.

Secondly, the non-deictic use of complex demonstratives in the form of CONSTRUCTION1 does not automatically guarantee a definite-description analysis understood as quantifiers in the Russellian lines. In the following sections, I will provide an analysis of the complex demonstrative in Mandarin.

I adopt Nowak's hidden argument account and follows King's (2001) and Stevens' (2011) quantificational theory; I treat the Mandarin demonstrative determiner as combining with two arguments to make a generalized quantifier. Mandarin complex demonstratives thus denote a set of sets.

The hidden argument framework comes in different versions but in general, the theory describes complex demonstratives as containing hidden arguments in their semantic structure.

(60)   that F= the x: [F(x) & G (x)]

Nowak (2015, p. 5 ex (9))

King (2001) puts forward the Russellian account of the hidden argument theory. In King's (2001) theory, *'F'* in the form of *'that F'* is a predicate that expresses the property of being *'F'* and the speaker's intention further assists the reference by restricting the domain of the quantification of *that F* (Corazza, 2003).

In King's (2001) analysis, in the cases where *that* is used deictically, the *G* property is fulfilled by a hidden argument that corresponds to an identification property determined by the speaker's intention. When *that* is used non-deictically, the *G* argument position is saturated by a trivial property of being self-identical.

(61)   That writer wins the Nobel Prize.

For example, if someone was pointing at Kazuo Ishiguro and uttered (61), according to King (2001), the demonstrative is used deictically and the semantics of the demonstrative phrase contains two hidden arguments; as represented in the following[44].

(62)   That writer = [THAT$_{=b, \text{J}wt}$ writer-identical-to-Kazuo-Ishiguro (x)] & [win-the-Nobel-Prize (x)]

In the case in which the demonstrative is used non-deictically the second argument position is fulfilled by a trivial property of being self-identical as in (63) and (64).

(63)   That guy who invented chopsticks was a genius.

---

[44] It needs to be noted that King (2001) uses the notation '$_{=b, \text{J}wt}$' to represent the hidden argument element and therefore no explicit identifications as in (62) and (64) are expressed in King's original representation. The author chooses to overtly state the identification properties for the convenience to the development of the argument.

(64)   That guy= [THAT$_{=b, \text{J}wt}$ guy-who-invented-chopsticks & self-identical (x)] & [genius (x)]

Since everything is self-identical, the second argument can therefore drop out of the concern and the demonstrative phrase is interpreted as equivalent to the definite description.

(65)   That guy= the x: guy-who-invented-chopsticks (x)

The demonstrative determiner will take one of the two arguments and yield a function as a generalized quantifier.

Elbourne (2005) develops a similar theory with King (2001) but follows the Fregean lines; he assumes that the value of complex demonstratives is the unique entity that satisfies the descriptions of the two arguments.

Following King (2001) and Elbourne (2005), Nowak (2015) argued for a hidden argument thesis to account the semantics of complex demonstratives. However, Nowak (2015, 2016) pointed out that a problem caused by King's (2001) and Elbourne's (2005) theories is that the hidden argument framework over-generates the possible uses of complex demonstrative in English.

(66)   #That author of *Waverley* also wrote *Ivanhoe*.   *(Nowak 2015, p. 2 ex (5))*

The above sentence is considered as grammatically unacceptable. If the hidden argument theory of King's (2001) and Elbourne's (2005) were accurate, the above occurrence of the demonstrative instead of the definite article would be predicted as felicitous in English. The infelicity of (66) shows that the interpretations of complex demonstrative requires more than fitting the second argument with a trivial property of self-identification. Nowak (2015) hence extends the hidden argument theory by place a restriction relation between the first and second argument.

In Nowak's (2015) theory, the *G* property in the second argument is a restrictor on the *F* property; and the intersected properties of the two arguments need to be a subset of *F*.

(67)
    that F   = $\begin{cases} [\text{the } x: [F(x) \ \& \ G(x)]] \text{ iff } (F \cap G) \subset F \\ \\ \text{otherwise undefinied} \end{cases}$

When we apply his analysis to the deictic demonstrative, it yields following results which institutively fit into the prediction.

(68)   *repeated of (61)*

    That writer wins the Nobel Prize.

(69)

That writer = the x: [writer (x) & identical-to-Kazuo-Ishiguro (x)]

that writer   =

$({writer} \cap {Kazuo\ Ishiguro}) \subset {writer}$

The demonstrative expression denotes a set of sets within the domain of property F.

In the analysis of non-deictic complex demonstrative, Nowak (2015) observed that English non-deictic demonstratives are derived in the same method as the Chinese high-attached restrictive clause, by means of taking the modified noun as the first argument and the relative clause as the second argument. The reference of the non-deictic demonstrative can be comparable with the reference of the definite description.

(70) That guy who invented chopsticks was a genius.

(71)

That guy = the $x:$ [guy (x) & invent-chopsticks (x)]

that guy   =

$({guy} \cap {chopsticks\text{-}inventing}) \subset {guy}$

By taking out the trivial property of self-identification as the second argument and by adding the restriction relation between the first and second argument, Nowak's (2015) hidden argument theory

ruled out the possibility of (66) occurring in English. The problem of (66) can be briefly explained as that there is only a single argument involved. In English, the grammatical element *the* is a better device for the representation of the definite phrase with the single argument.

4.3   The Mandarin Data

Based on Nowak's (2015) theory, Mandarin complex demonstratives can be analysed as taking two arguments and yield a quantificational function of denoting the set of subsets within a domain that contains the property.

(72)   *repeated of (55 a.)*

Na   ge   dai   yanjing de   xiansheng   shi   wo-de laoshi.

That   Cl   wear   glasses Mod   gentleman   be   my   teacher.

'That gentleman who is wearing glasses is my teacher.'

The demonstrative in the above example is used deictically. In the semantics, the first argument position is saturated by the descriptive contents of *'wearing glasses'* and the second argument involves the speaker's identification of the intended referent. The sentence will have a true interpretation if the identified referent is indeed a gentleman who has the property of wearing glasses and at the same time being the teacher of the speaker. The analysis explained why it is allowed for more than one gentleman who is wearing glasses to be present in the context of utterance. The speaker's demonstration pragmatically assigned the value of the argument in which case the reference of the complex demonstrative is determined by both the demonstration and the description.

In the non-deictic uses, the speaker's intention is irrelevant to the interpretation of the utterance. The noun modified by the determiner takes up the first argument place and restrict the predicative part of the relative clause.

(73)   *repeated of (56 a.)*

271

Dai	yanjing	de	na	ge	xiansheng	shi	wo-de	laoshi.
Wear	glasses	Mod	that	Cl	gentleman	be	my	teacher.

'That gentleman who is wearing glasses is my teacher.'

In contrast with the deictic demonstratives, the second argument in the non-deictic demonstrative is overtly presented in the linguistic forms of the sentence. In the above case, the relative clause preceding the demonstrative determiner provides a domain for the selected referent of being a gentleman. For the utterance to be felicitous, in the context, there has to be one and only one gentleman who fits into the description of wearing glasses.

As analysed above, Mandarin demonstrative descriptions in a broad sense have similar semantic profiles to English complex demonstratives. Mandarin complex demonstratives take two arguments of type$<e, t>$ and yield the quantificational expression within propositions of type $(<e, t>, <e, t>, t)$

5.   Loose-end

In conflict with the assumption that the distal demonstrative in the relative clause constructions is able to mark definiteness, I found that in many cases, the phrase in such forms is able to be embedded with the existential construction. This use of Mandarin demonstratives can be comparable to the indefinite use of the English *this*.

In English, the proximal demonstrative *this* has an indefinite specific use (Maclaran, 1980; Ionin, 2006; von Heusinger 2011).

(74)   There is this man who lives upstairs from me who is driving me mad because he jumps rope
            at 2 a.m. every night.

                                                                                    (Maclaran 1982, p.85)

The demonstrative *this* in the above sentence is used to introduce an indefinite referent. Unlike an indefinite description which can be ambiguous between the wide or narrow scope interpretations in terms with the existential operator, the demonstrative *this* always take the wide scope.

Mandarin demonstratives can also be embedded within an existential construction and display similar features like *this*.

(75) Tushuguan   li   you   ni   shuo   de   na   ben   shu.

Library   inside   have   you   say   Mod   that   Cl   book.

Lit: 'Inside the library, there is that book you mentioned.'

'There is *this* book you mentioned in the library.'

(76) Zhe-li   mei   you   ni   yao   zhao   de   zhe   ge   ren.

Here   not   have   you   want   find   Mod   this   Cl   book.

Lit: 'there is no *this* person you are looking for.'

'There is no such person that you are looking for here.'

It is evident that, like the indefinite *this*, Mandarin complex demonstratives can combine with the existential constructions and take the wide scope of the existential operator. It is difficult for me at the current stage to account for the semantics of the demonstratives found in this environment. Apparently, they show a strong tendency for a referential and specific reading (taking a wide scope) and at the same time there is no accessible syntax-evident parameter for the felicity condition of the uses; i.e. the specific reading is arguably felicitous even without the existential construction.

(78) Wo   yao   zhao   de   na   ben   shu   daochu   dou   zhao-bu-dao.

I   want   find   Mod   that   Cl   book   everywhere   all   not-found.

'I could not find the book I was looking for anywhere.'

Or 'there is this book I am looking for but I cannot find it anywhere.'

The complex demonstrative of *'that book I am looking for'* takes wider scope when interacting with the quantifier *daochu ('everywhere') or dou ('all')*. Kim (2001, 2004) proposes that in Chinese all

wide-scope expressions need to be analysed as specific rather than definite; and the DP/NP analysis parallel with the specific and non-specific distinction.

I found the specific interpretations of demonstratives clash with a unified definite interpretation of demonstrative descriptions in Chinese. Considering the deictic nature of the lexical and grammatical level of demonstratives, the indefinite use demonstrates a complicated relationship between definiteness and specificity in the article-less language.

BIBLIOGRAPHY

Abbott, B. (2002). 'Definiteness and proper names: Some bad news for the description theory', *Journal of Semantics,*19, pp.191-201.

_____. (2004). Definiteness and indefiniteness, in Horn, L.R. & Ward, G. (eds.), *Handbook of Pragmatics*. Oxford: Blackwell, pp.122-149.

_____. (2010). *Reference*. Oxford: Oxford University Press.

_____. (2014). The indefiniteness of definiteness. In Gamerschlag T., Gerland D., Osswald R., Petersen W. (eds.), *Frames and Concept Types. Studies in Linguistics and Philosophy*, vol 94. Cham: Springer, pp.323-343.

Aguilar-Guevara, A. and Zwarts, J. (2011). 'Weak definites and reference to kinds', *Proceedings of SALT.* Vol. 20, pp. 179–196.

Abney, S. P. (1987). *The English Noun Phase in Its Sentential Aspect*. Doctoral dissertation. MIT.

Anderson, S.R. (1985). *Phonology in the Twentieth Century: Theories of Rules and Theories of Representations.* Chicago: University of Chicago Press. (Chinese translation by Changliang Qu with a new preface published by The Commercial Press, Beijing, 2016)

Atlas, D. (2004). Descriptions, linguistic topic/comment, and negative existentials: A case study in the application of linguistic theory to problems in the philosophy of language, in Reimer, M. and Bezuidenhout, A. (eds.), *Descriptions and Beyond*. Oxford: Oxford University Press, pp. 342-260

Austin, J. L. (1962). *How to Do Things with Words.* Cambridge, MA: Harvard University Press.

_____. (1963). Performative-Constative. (a translation of Austin 1962c by G.J. Warnock) in Charles E. Caton (ed.), *Philosophy and Ordinary Language*. Illinois: University of Illinois Press, pp. 22–54.

_____. and Urmson, J.O. and Warnock, G.J. (eds.), (1979). *Philosophical Papers*, 3rd edn., Oxford: Oxford University Press. doi:10.1093/019283021X.001.0001

Bach, K. (1987). 'On communicative intentions: A reply to Recanati'*, Mind and Language,* 2, pp.141–54.

_____. (1994). 'Conversational implicature', *Mind and Language,* 9, pp. 124–62.

_____. (2004). Descriptions: Points of Reference, in Reimer, M. and Bezuidenhout, A. (eds.), *Descriptions and Beyond*. Oxford: Oxford University Press, pp.189-229.

_____. (2007). 'Referentially used descriptions: a reply to Devitt', *European Journal of Analytic Philosophy,* 3(2), pp. 33-48.

_____. (2008). On referring and not referring, in Gundel, J.K. and Hedberg, N.(eds.), *Reference: Interdisciplinary Perspectives*, New York: Oxford University Press, pp. 13-59.

Bennett, J. (1973). 'The meaning-nominalist strategy', *Foundations of Language,* 10, pp. 141-68

_____. (1974). *Kant's Dialectic.* Cambridge MA: Cambridge University Press

_____. (1976). *Linguistics Behaviour.* New York: Cambridge University Press

Birner, B. J. & Ward, G. (1994).'Uniqueness, familiarity, and the definite article in English', *Proceedings of the Twentieth Annual Meeting of the Berkeley Linguistics Society: General Session Dedicated to the Contributions of Charles J. Fillmore,* pp. 93-102

_____. (1998). *Information Status and Noncanonical Word Order in English.* Amsterdam/Philadelphia: John Benjamins.

Blackburn, S. and Code, A. (1978). 'The power of Russell's criticism of Frege: 'On Denoting' pp. 48-50', *Analysis,* 38, pp. 65-77.

Boer, S. and W. Lycan. (1976). The myth of semantic presupposition, in A. Zwicky (ed.) *Papers in Nonphonology Ohio State Working Papers in Linguistics,* No. 21

Bošković, Ž. (2008). 'What will you have, DP or NP?', *Proceedings of NELS* 37.

Braun, D. (2008). 'Complex demonstratives and their singular contents', *Linguistics and Philosophy,* 31, pp. 57–99.

Brisson, C. (1998). Distributivity, Maximality, and Floating Quantifiers. Ph. D. thesis, New Brunswick: NJ. Rutgers.

_____. (2003). 'Plurals, 'all', and the nonuniformity of collective predication', *Linguistics and Philosophy*, 26(2), 129–184.

Brogaard, B. (2007). 'The but not all: A partitive account of plural definite descriptions' *Mind & Language,* 22(4), pp. 402–426.

Brøseth, H. and Jin, F. (2008). The cognitive status Referential and its referring forms: A comparative analysis of Chinese, Norwegian, and English, in Åfarli, T. A. and Jin, F. (eds.), *Comparative Grammar and Language Acquisition in the Age of Globalization: Norwegian and Chinese.* Trondheim: Tapir Akademisk Forlag, pp. 107-123.

Carlson, G. (1977). *Reference to Kinds in English*. Doctoral dissertation. University of Massachusetts, Amherst.

Constant, N. (2011). Re-diagnosing appositivity: Evidence for prenominal appositives from Mandarin. In *Proceedings of CLS* 47, Abrego-Collier, C., Kang, A., Martinovi´c, M., and Nguyen, C. (eds.)

Chafe, W. (1976). 'Givenness, contrastiveness, definiteness, subjects, topics and point of view', in C. Li (ed.), *Subject and Topic*, pp. 27-55.

Chao, Y. R. (1968). *A Grammar of Spoken Chinese*. Berkeley: University of California Press.

Carnap, R. (1947). *Meaning and Necessity: A Study in Semantics and Modal Logic*. Chicago: Chicago University Press.

Carney, D., and Fitch, W. (1979). 'Can Russell avoid Frege's Sense?', *Mind,* 88, pp. 384–93.

Chastain, C. (1975). Reference and context, in Gunderson, K. (ed.), *Language. Mind and Knowledge*, Vol.7 of the Minnesota Studies in the Philosophy of Science (University of Minnesota press, Minneapolis).

Chen, P. (2003). 'Indefinite determiner introducing definite referent: A special use of 'yi 'one' +classifier' in Chinese', *Lingua,* 113, pp.1169–1184.

_____. (2004). 'Identifiability and definiteness in Chinese', *Linguistics,* 42*,* pp.1129﹣1184.

_____. (2009). 'Aspects of Referentiality', *Journal of Pragmatics*, 41 (8), pp.1657-1674.

Cheng, L. L.-S. (1986). 'De in Mandarin' *The Canadian journal of linguistics,* 31(4), pp. 313-326.

_____. and Huang, J. (1996). 'Two types of donkey sentences', *Natural Language Semantics,* 4(2), pp. 121–163.

Cheng, L. L.-S. & Sybesma, R.P.E. (1998). 'Yi-wan tang, yi-ge tang: classifiers and massifiers', *Tsing Hua Journal of Chinese Studies,* new series Vol. 28 No.3, pp. 385-412.

_____. (1999). 'Bare and not-so-bare nouns and the structure of NP', *Linguistic Inquiry,* 30(4), pp.509-542.

_____. (2005). Classifiers in four varieties of Chinese, in Cinque, G. & Kayne, R.S. (eds.), *The Oxford Handbook of Comparative Syntax.* New York: Oxford University Press, pp. 259-292.

Chesterman, A. (1991). *On Definiteness.* Cambridge: Cambridge University Press.

Chierchia, G. (1998a). Plurality of mass nouns and the notion of "Semantic parameter", in Rothstein, S. (ed.), Events *and Grammar.* Dordrecht: Kluwer, pp. 53-103

_____. (1998b). 'Reference to kinds across languages', *Natural Language Semantics,* 6, pp. 339-405.

_____. (2010). 'Mass nouns, vagueness and semantic variation', *Synthese,* 174 (1), pp. 99-149.

Chomsky, N. (1957). *Syntactic Structures.* The Hague: Mouton Publishers.

_____. (1959). 'A review of B. F. Skinner's verbal behaviour', *Language,* 35(1), pp. 26-58.

_____. (1965). *Aspects of the Theory of Syntax.* Cambridge, Massachusetts: The MIT Press.

_____. (1977). On Wh-Movement, in Culicover, P. W., Wasow, T. and Akmajian, A. (eds.), *Formal Syntax.* New York: Academic Press, pp.71-132.

Christopherson, P. (1939). *The Articles*: *A Study of Their Theory and Use in English.* Oxford: Oxford University Press.

Clark, H. (1992). *Arenas of Language Use.*Chicago: University of Chicago Press.

Cleary-Kemp, J. (2007). 'Universal uses of demonstratives: Evidence from four Malayo-Polynesian Languages', *Oceanic Linguistics*, 46 (2), pp. 325-347.

Cole, P. (1987). 'Null objects in universal grammar' , *Linguistic inquiry,* 18 (4), pp. 597-612

_____.and Wang, C. (1996). 'Antecedents and blockers of long-distance reflexives: The case of Chinese ziji', *Linguistic inquiry*, pp. 357-390.

Comrie, B. (1981). *Language Universals and Linguistic Typology: Syntax and Morphology.* Chicago: University of Chicago Press.

Coppock, E. & Beaver, D. (2015). 'Definiteness and determinacy', *Linguist and Philos,* 38, pp. 345-377.

Corrazza, E. (2003). 'Complex demonstratives *qua* singular terms', *Erkenntnis,* 59, pp. 263–283.

Corbett, G. (2000). *Number*. Cambridge: Cambridge University Press.

Daly, C. (2013). *Philosophy of Language: An Introduction.* London: Bloomsbury Academic.

Dayal, V. (1998). 'ANY as inherently modal', *Linguistics & Philosophy,* 21, pp. 433-476.

_____. (1999). Quantification with quantifiers: number sensitivity in article-less constructions. ms. Rutgers University.

_____. (2000). Number marking and (in)definiteness in kind terms, ms. Rutgers University.

_____. (2001). Bare nominals: non-specific and contrastive readings under scrambling, in Karimi, S. and Langendoen, T. (eds), *Word Order and Scrambling.* Cornwall: Blackwell Publishers, pp.67-91.

_____. (2004). 'Number marking and (in)definiteness in kind terms', *Linguistics and Philosophy,* 27 (4), pp. 393-450.

_____. (2009) Semantic variation and pleonastic determiners: the case of the plural definite generic, in Khuong, Richa, and Sinha (eds.) *The Fifth Asian GLOW: Conference Proceedings, New Delhi:CIIL (Mysore) and FOSSSIL.*

Davies, M. (1981). *Meaning, Quantification, Necessity: Themes in Philosophical Logic.* London: Routledge & Kegan Paul.

Del Gobbo, F. (2001). Appositives Schmappositives in Chinese, in Irie, M. and Ono, H. (eds.) *UCI Working Papers in Linguistics*, 7, pp.1-25.

_____. (2004). On prenominal relative clauses and appositive adjectives. In *WCCFL 23 Proceedings*, ed. B. Schmeiser, Vineeta Chand, Ann Kelleher, and Angelo Rodriguez, 182–194. Somerville, MA: Cascadilla Press.

_____. (2005). Chinese relative clauses: Restrictive, descriptive or appositive, in Bruge, L., Giusti, G., Munaro, N., Schweikert, W., and Turano, G. (eds.) *Contributions to the XXX Incontro di Grammatica Generativa.* Venezia: Cafoscarina, pp. 287–305.

_____. (2010). 'On Chinese appositive relative clauses', *Journal of East Asian Linguistics,*19, pp. 385–417.

Dever, J. (2001). 'Complex demonstratives' , *Linguistics and Philosophy,* 24(3), pp. 271–330.

Diesing, M. (1992). *Indefinites*. Cambridge/MA: MIT Press.

Diessel, H. (1999). *Demonstratives: Form, Function and Grammaticalization.* Amsterdam: John Benjamins.

Devitt, M. (1974). 'Singular terms', *The Journal of Philosophy,* 71 (7), pp. 183-205.*271*

_____. (1981a). 'Donnellan's distinction', *Midwest Studies in Philosophy,* 6 (1), pp. 511-526.

_____. (1981b). *Designation.* New York: Columbia University Press.

_____. (1990). Meanings just ain't in the head, in Boolos, I G. (ed.) *Meaning and Method: Essays in Honor of Hilary Putnam.* Cambridge: Cambridge University Press, pp. 79-105.

_____. (2004). The case for referential descriptions, in Reimer, M. and Bezuidenhout, A. (eds.) *Descriptions and Beyond.* Oxford: Oxford University Press, pp. 280-306.

_____. (2007a). 'Referential descriptions and conversational implicatures', *European Journal of Analytic Philosophy,* 3(2), pp. 7-32.

_____. 2007b. 'Referential descriptions: a note on Bach', *European Journal of Analytic Philosophy,* 3(2), pp. 49-54.

_____. (2012a). 'Still Against Direct Reference', in Schantz, R. (ed.), *Prospects for Meaning.* Berlin: Walter de Gruyter, pp. 61-84.

_____. 2013. 'Is there a place for truth-conditional pragmatics?', *Teorema,* 32(2), pp. 85-102.

Doetjes, J. (1997). *Quantifiers and selection.* Doctoral dissertation, Rijksuniversiteit Leiden.

Donnellan, K. (1966). 'Reference and definite descriptions', *The Philosophical Review,* 75(3), pp. 281-304.

_____. (1968). 'Putting humpty dumpty together again', *The Philosophical Review,* 77 (2), pp. 203-215.

_____. (1978). Speaker reference, descriptions and anaphora, in Cole, P. (ed.), *Syntax and Semantics 9: Pragmatics.* New York, San Francisco and London: Academic Press, pp. 47-68.

Elbourne, P. (2005). *Situations and Individuals.* Cambridge, MA: The MIT Press.

_____. (2008). 'Demonstratives as individual concepts', *Linguistics and Philosophy,* 31, pp. 409-466.

_____. (2013). *Definite Descriptions.* Oxford: Oxford University Press.

Erteschik-Shir, N. (2006a). On the architecture of topic and focus, in Molnár, V. and Winkler, S. (eds.), *The Architecture of Focus.* Berlin: Mouton de Gruyter, pp. 33-57.

_____. (2006b). What's what?, in Féry, C., Fanselow, G, Schlesewsky, M., and Vogel, R. (eds.), *Gradience in Grammar.* Oxford: Oxford University Press, pp. 317-335.

_____. (2007). Information Structure: The Syntax-Discourse Interface, volume in Valin, R.D.V. (ed.), *Oxford Survey* on *Syntax and Morphology.* Oxford: Oxford University Press.

Evans, G. (1982). *The Varieties of Reference*. Oxford: Oxford University Press.

Fang, M. (2002). Zhishici ''zhe'' he ''na'' zai Beijinghua zhong de yufahua [On the grammaticalization of the demonstratives zhe and na in Beijing Mandarin]. *Zhongguo Yuwen [Chinese Language and Writing],* 4, pp. 343–356.

_____. (2012). The emergence of a definite article in Beijing Mandarin: The evolution of the proximal demonstrative zhe 'this', in Xing, J. (ed.), *Newest Trends in the Study of Grammaticalisation and Lexicalisation in Chinese.* Berlin & Boston: De Gruyter Mouton, pp. 55–86.

Fara, D. G. (2001). 'Descriptions as predicates', *Philosophical Studies, 102*, 1–42.

Fillmore, J. (1982). Towards a descriptive framework for spacial deixis, in Jarvella, R. J., and Wolfgang, K. (eds.), *Speech, Place, and Action: Studies in Deixis and Related Topics.* Chichester and New York: John Wiley & Sons Ltd, pp. 31–59.

_____. (1997). *Lectures on Deixis.* Stanford: CSLI Publications.

Fitch, G., & Nelson, M. (2014). Singular propositions, in E. Zalta (ed.) *The Stanford Encyclopedia of Philosophy (Fall 2014 Edition)* <http://plato.stanford.edu/archives/fall2014/entries/propositionssingular/>.

von Fintel, K. (1999). 'NPI licensing, Strawson entailment, and context dependency', *Journal of Semantics,* 16 (2), pp. 97-148

_____. (2004). Would you believe it? The King of France is back! (Presuppositions and truth-value intuitions), in Reimer, M. and Bezuidenhout, A. (eds.), *Descriptions and Beyond.* Oxford: Oxford University Press, pp. 315-341.

Fodor, J. and Sag, I. (1982). 'Referential and quantificational indefinites'. *Linguistics and Philosophy,* 5, pp. 355-398.

Frege, G. (1892). Über Sinn and Bedeutung, *Zeitschrft fur Philosophie. und Philosophische Kritik* 100: 25-50. Trans. 1948 as On Sense and Reference, in *The Philosophical Review* 57/3: 209-230. (This paper has been referred to as Frege (1892/1948))

_____. (1892-95). Comments on Sense and Meaning. Trans. 1979 by P. Long and R. White in H. Hermes, F. Kambartel and F. Kaulbach (eds.), *Posthumous Writings*, 118-125 (This paper has been referred to as Frege (1892-95/1979))

Gebhardt, L. (2011). 'Classifiers are functional,' *Linguistic Inquiry*, 42(1), pp. 125-130.

Georgi, G. (2012). Reference and ambiguity in complex demonstratives, in Kabasenche, W.P., O'Rourke, M., and Slater, M. H.(eds.), Reference *and Referring*. Cambridge, MA: MIT Press, pp. 357–384.

Gillon, B. S. (1992). 'A Common Semantics for English Count and Mass Nouns', *Linguistics and Philosophy,* 15(6)*,* pp. 597-639.

Givón, T. (1981). 'On the development of the numeral ''one'' as an indefinite marker', *Folia Linguistica Historica,* 2(1), pp.35–53.

_____. (ed.) (1983). *Topic Continuity in Discourse: Quantitative Cross-language Studies.* Amsterdam: John Benjamins.

_____. (1984/1990). *Syntax: A Functional-Typological Introduction. Vols. I and II.* Amsterdam and Philadelphia: John Benjamins.

Greenberg, J. (1978). How does a language acquire gender markers?, in Greenberg, J.H. (ed.), *Universals of Human Languages. Volume III: Word Structure.* Stanford: Stanford University Press*,* pp. 47–82.

Grice, H. P. (1957). 'Meaning', *The Philosophical Review,* 66(3), pp. 377-88.

_____. (1968). Utterer's Meaning, Sentence-Meaning, and Word-Meaning. *Foundations of Language* 4/3: 225-42.

_____. (1969). 'Utterer 's meaning and intention', *The Philosophical Review,* 78(2), pp. 147-77.

_____. (1969). Vacuous names, in Davidson, D., and Hintikka, J. (eds.), *Words and Objections: Essays on the Work of W. V. Quine*. rev. ed. 1975. Dordrecht: D. Reidel Publishing Company, pp.118-45.

_____. (1975). Logic and conversation, in Cole, P. and Morgan, J.L. (eds.), *Syntax and Semantics 3: Speech Acts*. New York: Academic Press, pp.41-58. (This paper is reappeared in: H. P. Grice, Studies in the Way of Words, (Cambridge, Massachusetts: Harvard University Press, 1989, pp. 22-40; in this dissertation all references to this paper are made from Grice (1989) and are referred to as Grice (1975/1989))

Gundel, J. (1977). *The Role of Topic and Comment in Linguistic Theory.* Indiana University Linguistics Club: Bloomington

_____. (1988). Universals of topic-comment structure, in Hammond, M., Moravacsik, E., and Jessica W. (eds.), *Studies in Syntactic Typology*. Amsterdam: John Benjamins, pp. 209‐239.

_____. and Hedberg, N. and Zacharski, R. (1993). 'Cognitive status and the form of referring expressions in discourse', *Language*, 69, pp. 274–307.

_____. and Hegarty, M. and Borthen, K. (2003). 'Cognitive status, information structure, and pronominal reference to clausally introduced entities', *Journal of Logic, Language and*

Information, 12, pp. 281–299.

Halliday, M.A.K., and Hasan, R. (1976). *Cohesion in English*. London: Longman.

Hashimoto, A. Y. (1971). *Mandarin syntactic structures*. Unicorn 8 (Chinese Linguistics Project and Seminar), Princeton University.

Hawkins, J. A. (1978). *Definiteness and Indefiniteness*. Atlantic Highlands, NJ: Humanities Press

Her, One-Soon. (1991). 'Topic as a grammatical function in Chinese', *Lingua,* 84 (1), pp. 1-23

_____. (2009). 'Language and group identity: on Taiwan Mainlanders' mother tongue and Taiwan Mandarin', *Language and Linguistics,*10 (2), pp.375-419.

_____. and Hsieh, Chen-Tien. (2010). 'On the semantic distinction between classifiers and measure words in Chinese', *Language and Linguistics,* 11(3), pp. 527-551.

Heim, I. (1982). *The Semantics of Definite and Indefinite Noun Phrases*. New York: Garland Publishing

_____. (1983). Where does the definiteness restriction apply? - Evidence from the definiteness of variables, in Meulen, A. and Reuland, E. (eds.), *The Representation of (In)definitenes*s, Cambridge: MIT Press, pp. 21-42, 1987.

_____. (1988). *The Semantics of Definite and Indefinite Noun Phrases*. New York: Garland Publishers

von Heusinger, K. (1999). *Intonation and Information Structure. The Representation of Focus in Phonology and Semantics.* Habilitationsschrift. Universität Konstanz.

_____. (2000). 'Anaphora, antecedents, and accessibility', *Theoretical Linguistics,* 26 (1/2), pp.75-94.

_____. (2001). 'Information structure and discourse semantics', *The Prague Bulletin of Mathematical Linguistics*, 73-74, pp.13-32.

_____. (2002). 'Specificity and definiteness in sentence and discourse structure,' *Journal of Semantics,* 19 (3), pp.245-274.

_____. (2003). The double dynamics of definite descriptions, in Peregrin, J. (ed.), *Meaning in the Dynamic Turn*. Amsterdam: Elsevier, pp.150-168.

_____. (2007). Alternative semantics for definite NPs, in Schwabe, K. and Winkler, S. (eds.). *On Information Structure, Meaning and Form.* Amsterdam: Benjamins, pp. 485-508

_____. (2011). Specificity, in Maienborn, C., Von Heusinger, K. & Portner, P. (eds.). *Semantics. An International Handbook of Natural Language Meaning*. Vol. 2. Berlin: De

Gruyter, pp. 1025-1058.

Henning, P. (2016) *Revisiting Russell's Theory of Descriptions.* Ms. California State University, Fullerton

Himmelmann, N. P. (1996). Demonstratives in narrative discourse: a taxonomy of universal uses, in Fox, B. (ed.), *Studies in Anaphora.* Amsterdam: John Benjamins*,* pp.205–254.

Householder, F.W. (1981) The Syntax of Apollonius Dyscolus. Translation with Complementary. *Amsterdam Studies in the Theory and History of Linguistic Science III. Studies in the History of Linguistics. Vol 23.* Amsterdam: Benjamins

Huang, C.-T. J. (1982). *Logical Relations in Chinese and the Theory of Grammar.* Doctoral dissertation, MIT.

_____. (1984). 'On the distribution and reference of empty pronouns', *Linguistic Inquiry*,15 (4), pp. 531–574.

_____. (1987). Existential sentences in Chinese and (in)definiteness, in Reuland, E. and Meulen, A.(eds.), *The Representation of (In)Definiteness*. Cambridge, MA: MIT Press, pp.226–253.

_____. and Li, Audrey and Li, Yafei. (2009). *The Syntax of Chinese*. Cambridge: Cambridge University Press.

Huang, S. (1999). 'The emergence of a grammatical category definite article in spoken Chinese', *Journal of Pragmatics,* 31, pp. 77-94.

_____. and Chui, K. (1997). Is Chinese a Pragmatic Ordering Language?, in Tseng, C. (ed.), *Typological studies of languages in China, Symposium Series of the Institute of History and Philology,* 4. Taipei: Academia Sinica, pp. 51-79

Hsieh, Chen-Tien. (2009). A Frame-based Approach to Classifiers: A Case Study of Taiwan Mandarin. Taipei: National Chengchi University MA thesis.

Hylton, P. (1998). The Significance of 'On Denoting', in Savage and Anderson, *Rereading Russell,* pp. 88–107.

Iida, T. (2007) 'Russell on plurality', *CARLS Series of Advanced Study of Logic and Sensibility,* Vol. 4. Keio University, pp. 273-282.

Ionin, T. (2006). 'This is definitely specific: specificity and definiteness in article systems', *Natural Language* Semantics, 14, pp.175-234.

Jacquette, D. (1996). 'On defoliating meinong's jungle', *Axiomathes,* 7(1-2), pp. 17- 42.

Jespersen, O. (1943). *A Modern English grammar on historical principles, Part 7 : Syntax,* Copenhagen : Munksgaard.

Jenks, P. (2015). Two kinds of definites in numeral classifier languages. In Proceedings of SALT 25.

_____. (2017) Articulated definiteness without articles. Ms. UC Berkeley

Jiang, L. (2012). *Nominal arguments and language variation*. Ph.D. dissertation, Harvard University.

_____. and Hu, S. (2010). On bare classifier phrases. Paper presented at the 22nd North American Conference on Chinese Linguistics and the 18th International Association of Chinese Linguistics. (to appear in Proceedings of the 22nd North American Conference on Chinese Linguistics and the 18th International Association of Chinese Linguistics.) https://nacclosu.edu/sites/nacclosu.edu/files/NACCL-22_2_47_jiang-hu.pdf

Jiang, Z. (1991). Some aspects of the syntax of topic and subject in Chinese. Doctoral dissertation. University of Chicago

Kadmon, N. (1990). 'Uniqueness', *Linguistics and Philosophy,* 13, pp. 273–324.

Kaplan, D. (1970). 'Dthat', *Syntax and Semantics,* 9, pp. 221-243.

_____. (1977) Demonstratives, in Almog, J., Perry, J., and Wettstein, H. (eds.) *Themes from Kaplan*. Oxford: Oxford University Press, pp.481–563.

_____. (1979b). 'On the logic of demonstratives', *Journal of Philosophical Logic,* 8(1), pp. 81-98.

_____. (1989a). Demonstratives: An essay on the semantics, logic, metaphysics, and epistemology of demonstratives and other indexicals, in Almog, J., Perry, J., and Wettstein, H. (eds.) *Themes from Kaplan*. Oxford: Oxford University Press, pp. 482-563.

_____. (1989b). Afterthought, in Almog, J., Perry, J., and Wettstein, H. (eds.) *Themes from Kaplan*. Oxford: Oxford University Press, pp. 565-614.

_____. (2005). Reading 'On Denoting' on its Centenary', *Mind,* 114(456), pp. 933- 1003.

Karttunen, L. (1976). Discourse referents, in McCawley, J.(ed.), *Syntax and Semantics. Volume 7: Notes from the Linguistics Underground*. New York: Academic Press, pp. 363–385

_____. (1969). Discourse referents. Dissertation University of Texas at Austin

Kim, J.-Y. (2004). 'Specific nominals in Chinese and Korean', *Language and Linguistics,* 5(1). Institute of Linguistics, Academia Sinica, Taipei, pp. 243-270.

King, J. C. 2001. *Complex Demonstratives*: *A Quantificational Account*. Cambridge, Mass: The MIT Press.

Klement K. (2014). The paradoxes and Russell's theory of incomplete symbols.

Philosophical Studies 169: 183–207

Kratzer, A. (1995). Stage-level and individual-level predicates, in Carlson, G., and Pelletier, F.J. (eds.), *The Generic Book*. Chicago: The University of Chicago Press, pp. 125-175

_____. (1989). 'An investigation of the lumps of thought', Linguistics and Philosophy, 12 (5), pp.607-653.

Kremer, M. (1994). 'The argument of 'On Denoting', *The Philosophical Review,* 103, pp. 249–97

Krifka, M. (1988).The relational theory of generics, in M. Krifka (ed.), *Genericity in Natural Language*. SNS-Bericht: University of Tubingen, pp.88-42,

_____. (1991). 'Definite NPs aren't quantifiers', *Linguistic Inquiry,* 23, pp. 156-163.

_____. (1995). Common nouns: a contrastive analysis of Chinese and English, in Carlson, G., and Pelletier, F.J. (eds.), *The Generic Book*, University of Chicago Press, Chicago, pp. 398-412.

Kripke, S. (1977). 'Speakers reference and semantic reference', *Midwest Studies in Philosophy* II, pp. 255-76.

_____. (1980). *Naming and Necessity*. Cambridge, Mass: Harvard University Press.

_____. (1981). Wittgenstein on rules and private language: An elementary exposition, in Block, I., (ed.), *Perspectives on the Philosophy of Wittgenstein.* Oxford, Basil: Blackwell, pp. 238-312.

Kroeger, P. (2004). *Analyzing Syntax. A Lexical-Functional Approach.* Cambridge: Cambridge University Press.

Kuo, J. (2008). 'A pragmatic approach to the interpretations of Mandarin bare nouns', *Journal of Pragmatics,* 40, pp. 1082-1102.

Lambrecht, K. (1994). *Information Structure and Sentence Form: A Theory of Topic, Focus, and the Mental Representation of Discourse Referents.* Cambridge: Cambridge University Press.

Landman, F. (1989). 'Groups, I', *Linguistics and Philosophy,* 12, pp. 559-605.

_____. (1995). Plurality, in Lappin,S. (ed.), *Handbook of contemporary semantics*. London: Blackwell, pp. 425-457.

LaPolla, R. (1990). Grammatical relations in Chinese: Synchronic and diachronic considerations, PhD dissertation, Berkeley: University of California

_____. (1993). 'Arguments against 'subject' and 'direct object' as viable concepts in Chinese', *Bulletin of the Institute of History and Philology,* 63/4, pp. 759-813.

_____. (2009). Chinese as a Topic-Comment (not Topic-Prominent and not SVO) language, in Xing, J.(ed.), *Studies of Chinese Linguistics: Functional Approaches*. Hong Kong: Hong Kong University Press, pp.9-22.

Larson, R., & Segal, G. (1995). *Knowledge of Meaning*. Cambridge, Mass: The MIT Press.

Lasersohn, P. (1999). 'Pragmatic halos', *Language*, 75(3), pp. 522–551.

Lepore, E. and Ludwig, K. (2000). 'The semantics and pragmatics of complex demonstratives', *Mind,* 109 pp. 199–240.

Li, A. (1990). *Order and constituency in Mandarin Chinese.* Dordrecht: Kluwer

Li, J. (1997). Predicate types and the semantics of bare nouns in Chinese, in Xu, L. (ed.), *The Referential Properties of Chinese Noun Phrases.* Centre de Recherches Linguistiques sur l'Asie Orientale Paris, pp. 61- 84.

Li, X.P. (2013). *Numeral Classifiers in Chinese The Syntax-Semantics Interface.* Berlin: Mouton de Gruyter.

Li, X. P. and W. Bisang. (2012). 'Classifiers in Sinitic languages: from individuation to definiteness marking', *Lingua,* 22, pp. 335-355.

Li, C. and Thompson, S. (1976). Subject and topic: a new typology of language, in Li, C. (ed.), *Subject and Topic*. New York: Academic Press, pp. 459-489,

_____. (1981). and (1989). *Mandarin Chinese: A Functional Reference Grammar*. Berkeley: University of California Press.

Lin, Jo-wang. (1997). 'Some remarks on the semantics of prenominal relative clauses in Chinese', *The International Conference on Chinese Linguistics VII*, Leiden University.

_____. (2003). 'On restrictive and non-restrictive relative clauses in Mandarin Chinese', *Tsinghua Journal of Chinese Studies*, New Series, 33, pp.199–240.

Link, G. (1983). The logical analysis of plurals and mass terms: a lattice theoretical approach, in Ponter, P. and Partee, B. (eds.), *Formal Semantics: The Essential Readings.* (2002). Oxford: Wiley-Blackwell, pp. 127-146.

_____. (1984). Hydras: on the logic of relative clause constructions with multiple heads, in Landman, F. and Veltman, F. (eds.), *Varieties of formal semantics*: *Proceedings of the Fourth Amsterdam Colloquium,* (September 1982). Dordrecht: Foris Publicatio, pp. 245-257.

Liu, E. (2015). 'Acquiring topic structures in Mandarin Chinese', *Chinese as a Second Language Research*, ,4, (1), pp.1-21.

Longobardi, G. (1994). 'Reference and proper names', *Linguistic Inquiry,* 25, pp.609-665.

Ludlow, P. (1995). 'The logical form of determiners', *Journal of Philosophical Logic,* 24 (1), pp. 47–69.

_____. (2013). Descriptions. *Stanford Encyclopedia of Philosophy. (Summer 2018 Edition), Edward N. Zalta (ed.), forthcoming URL = <https://plato.stanford.edu/archives/sum2018/entries/descriptions/>.*

_____. and Stephen, N. (1991). 'Indefinite descriptions: In defense of Russell', *Linguistics and Philosophy,* 14, pp. 171–202.

_____.and Segal, G. (2004). On a unitary semantical analysis for definite and indefinite descriptions, in Reimer, M. and Bezuidenhout, A. (eds.), *Descriptions and Beyond*. Oxford: Oxford University Press, pp. 420–437.

Löbner, S. (1985). 'Definites', *Journal of Semantics*, 4, pp. 279–326.

Lü, S. (1990 [1944]). Ge zi de yingyong fanwei, fu lun danweici qian yi zi de tuoluo [Scope of the uses of ge and omission of yi in front of classifiers]. In *Lü Shuxiang Wenji.* [Collected Works of Lu¨ Shuxiang]. Vol. 2, 144–175. Beijing: Shangwu Yinshuguan.

_____. (1990 [1948]). ba zi yongfa de yanjiu [Studies in the uses of ba]. In *Lü Shuxiang Wenji.* Vol. 2, 176–199. Beijing: Shangwu Yinshuguan.

_____. (1990 [1956]). Zhongguo Wenfa Yaolue [Essentials of Chinese Grammar]. In *Lü Shuxiang Wenji.* Vol. 1, 1–463. Beijing: Shangwu Yinshuguan.

_____. (1990 [1985]). Jindai Hanyu Zhidaici [Demonstratives and Pronouns in Early Modern Chinese].

In *Lü Shuxiang Wenji. Vol. 3,* 1–406. Beijing: Shangwu Yinshuguan.

—(1990). Zhishi daici de erfenfa he sanfenfa [Binary and ternary distinctions of demonstrative

pronouns]. In *Lü Shuxiang Wenji*. Vol. 3, 591–601. Beijing: Shangwu Yinshuguan.

Lyons, C. (1999). *Definiteness*. Cambridge: Cambridge University Press.

_____. and John (1977). *Semantics. Vols. I and II.* Cambridge: Cambridge University Press.

Lyons, J. (1968). *Introduction to Theoretical Linguistics.* London: Cambridge University Press.

Lycan, W. (2008). *Philosophy of Language: A Contemporary Introduction*. 2nd ed. New York and London: Routledge, Taylor and Francis Group.

_____. (1980). *Naming and Necessity*, Singapore: Blackwell Publishing.

_____. (2005). 'Russell's notion of scope', *Mind,* 114(456), pp. 1005-1037.

Ma, J. (1898/1983) *Ma Shi Tong Wen [Basic principles for writing clearly and coherently from Mister Ma]* Michigan:University of Michigan Library (January 1, 1898) Reprinted (1983).Beijing: Commercial Press (in Chinese)

Maetzner, E. A. F. (1880). *Englische Grammatik*. Berlin, Weidmann.

Maclaran, R. (1982). *The Semantics and Pragmatics of the English Demonstratives,* Doctoral dissertation, Cornell University, Ithaca, New York

Malamud, S. (2012). 'The meaning of plural definites: A decision-theoretic approach', *Semantics & Pragmatics,* 5, pp. 1–58.

Mates, B. (1973). 'Descriptions and reference', *Foundations of Language*, 10, pp. 409‑418

Mark, S. (2016). The Metaphysics of Mass Expressions. *The Stanford Encyclopedia of Philosophy (Winter Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/win2016/entries/metaphysics-massexpress/>*.

Mei, K. (1978). On Verb-Phrase Complement in Chinese. In *A Festschrift for Professor Chu Wan Li*, Taipei.

Meinong, A. (1910). *Über Annahmen*. Trans. and ed. 1983 by James Heanue as *On Assumption*. Berkeley and Los Angeles: University of California Press.

Miller, A. (2007). *Philosophy of Language*. 2nd edn. Oxen: Routledge

_____. (2013). The development of theories of meaning: from Frege to McDowell and beyond, in Beaney, M. (ed.), *The Oxford Handbook of the History of Analytic Philosophy.* Oxford: Oxford University Press, pp. 656-688

Morris, M. (2007). *An Introduction to the Philosophy of Language*. Cambridge: Cambridge University Press.

Neale, S. (1990). *Descriptions*. Massachusetts: The MIT press.

_____. (2004). This, That, and The other, in Reimer, M. and Bezuidenhout, A. (eds.), *Descriptions and Beyond*. Oxford: Oxford University Press, pp. 68–182.

_____. (2005). Descriptions, in Craig, E. (ed.), *The Shorter Routledge Encyclopedia of Philosophy*. London and New York: Routledge, pp.190-94.

_____. (2005). 'A century later', *Mind,* 114/456, pp. 809-871.

_____. (2006). Pronouns and anaphora, in Devitt, M. and Hanley, R. (eds.), *Blackwell Guide to the Philosophy of Language*. Oxford: Blackwell Publishing Ltd., pp. 335-373.

_____. and Ludlow, P. (2006). Descriptions, in Devitt, M. and Hanley, R. (eds.) *Blackwell Guide to the Philosophy of Language*. Oxford: Blackwell Publishing Ltd., pp. 288-313.

Ning, C. Y. (1993). *The Overt Syntax of Relativization And Topicalization.* PhD. Dissertation.

University of California, Irvine.

_____. (1996). De as a Functional Head in Chinese, Ms. University of California, Irvine.

Noonan, H. (1996). The 'Gray's Elegy' argument - and others, in Monk, R. and Palmer, A. (eds.), *Bertrand Russell and the Origins of Analytical Philosophy*. Bristol: Thoemmes, pp. 65-81.

Norman, J. (1988) *Chinese.* Cambridge: Cambridge University Press.

Nowak, E. (2014). Demonstratives without rigidity or ambiguity. In: *Linguistics and Philosophy* 37.5 pp. 409–436.

_____. (2015). Complex demonstratives, hidden arguments, and presupposition. Ms Available at https://www.dropbox.com/ (Accessed: October 2016)

_____. (2016) Two Dogmas About Demonstratives. Doctoral dissertation. University of California, Berkeley.

Oliver, A., & Smiley, T. (2013). *Plural logic*. Oxford: Oxford University Press.

Pan, H & Jiang, Y (2015). 'The bound variable hierarchy and donkey anaphora in Mandarin Chinese', *International Journal of Chinese Linguistics, Vol. 2 (2)* pp. 159–192.

Paris, M.-C. (1981). *Problemes de Syntaxe et de Semantique Chinoise* (Problems of syntax and semantics in Chinese linguistics). College de France, Paris.

Partee, B. (1987). Non phrase interpretation and type-shifting principles, in Groenendijk, J. et al. (eds.), *Studies in discourse representation theory and the theory of generalized quantifiers.* Foris, Dordrecht, pp. 115-143.

_____. (1998). Integrating lexical and formal semantics: Genitives, relational nouns, and type-shifting, in *Proceedings of the Second Tbilisi Symposium on Language, Logic, and Computation*, edited by Cooper, R. and Gamkrelidze,T. Tbilisi: Center on Language, Logic, Speech, Tbilisi State University, pp.229-241.

_____. (2006). A note on Mandarin possessives, demonstratives, and definiteness, in Birner, B.J. and Ward, G. (eds.), *Drawing the Boundaries of Meaning: Neo-Gricean Studies in Pragmatics and Semantics in Honor of Laurence R. Horn*. Amsterdam: John Benjamins, pp.263-280.

Paul, W. (2005). 'Adjectival modification in Mandarin Chinese and related issues', *Linguistics,* 43(4), pp. 757-793.

Peacocke, C. (1975). Proper names, reference, and rigid designation, in Blackburn, S. (ed.), *Meaning, reference, and necessity.* Cambridge: Cambridge University Press, pp.109–32.

Prince, E. (1981). Towards a taxonomy of given-new information, in Peter C. (ed.), *Radical*

Pragmatics. New York: Academic Press, pp. 223–255.

Pupa, F. (2008). *Ambiguous Articles ‐ An Essay on the Theory of Descriptions*. Ph.D. thesis, the City University of New York, New York.

Qu, Y. (1994). *Object noun phrase dislocation in Mandarin Chinese.* Vancouver: University of British Columbia dissertation.

Quine, W.V.O. (1960). *Word and Object*. MIT Press, Cambridge, Massachusetts

_____. (1966). 'Russell's ontological development', *Journal of Philosophy,* 63(21), pp. 657-667.

Ramsey, F. P. (1931). Last paper, in Braithwaite, R.B. (ed.), *The Foundation of Mathematics and Other Logical Essays*. London: Routledge and Kegan Paul Ltd., pp.212-269

Recanati, F. (1986). 'On defining communicative intentions', *Mind and Language,* 1, pp. 213-242.

_____. (1993). *Direct Reference: From Language to Thought*. Cornwall: Blackwell Publishing.

Reinhart, T. (1981). 'Pragmatics and linguistics: an analysis of sentence topics,' *Philosophica,* 27, pp.53-94.

Reimer, M. (1992). 'Incomplete Descriptions', *Erkenntnis,* 37 (3), pp.347-363.

_____. (1998). 'Donnellan's distinction/Kripke's test', *Analysis,*58 (2), pp. 89–100.

_____. and Bezuidenhout, A. (2004). The referential/attributive distinction, in M. Reimer & A. Bezuidenhout (eds.) *Descriptions and Beyond*. Oxford: Oxford University Press, pp. 183-188.

Roberts, C. (1986). *Modal Subordination, Anaphora, and Distributivity.* Ph.D dissertation, University of Massachusetts at Amherst

_____. (1996). Anaphora in intensional contexts, in Shalom, L. (ed.), *Handbook of Contemporary Semantic Theory.* Blackwell Publishing, pp. 215–247.

_____. (1998). Information structure in discourse: towards an integrated formal theory of pragmatics, in Yoon, Jae-Hak and Kathol, A. (eds.), *OSU Working Papers in Linguistics: Vol. 49: Papers in Semantics, (1998 revision) edn.* Dept. of Linguistics, Ohio State University.

_____. (2002). Demonstratives and definites, in van Deemster, I. & Kibble, K. (eds.), *Information sharing*. CSLI, Stanford/CA.

_____. (2003). 'Uniqueness in definite noun phrases', *Linguistics and Philosophy*, 26, pp.287–350.

Rothstein, S. (2010). 'Counting and the Mass/Count distinction', *Journal of Semantics*, 27(3), pp.343-397.

Rullmann, H. and A. You. (2003). General number and the semantics and pragmatics of indefinite bare nouns in Mandarin Chinese. Ms. Canada:University of Calgary.

Russell, B. (1903): *The Principles of Mathematics. Vol. 1*. Cambridge: Cambridge University Press.

_____. (1905). 'On denoting', *Mind,* 14(56), pp. 479-93.

_____. (1907). Review of *Über die Stellung der Gegenstandstheorie im System der Wissenschaften* by Von A. Meinong. *Mind* 16(63), pp. 436-39.

_____. and Whitehead, A. N. (1910). *Principia Mathematica*. Cambridge: Cambridge University Press.

_____. (1918). *The Philosophy of Logical Atomism*. London, New York: Routledge. (Reprinted in 2010)

_____. (1919). *Introduction to Mathematical Philosophy*. London: George Allen & Unwin Ltd.

_____. (1940). *Inquiry into Meaning and Truth*. London: George Allen and Unwin Ltd.

_____. (1948). *Human Knowledge: Its Scope and Limits* (London: George Allen and Unwin Ltd.

_____. (1959). *My Philosophical Development*. London: George Allen and Unwin Ltd. (Reprinted in 1975 as Unwin Books edition)

_____. (1957). 'Mr. Strawson on referring', *Mind,* 66(273), pp.385-89.

Salmon, N. (1982). Assertion and incomplete definite descriptions. *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition,* 42(1), pp.37-45

_____. (2002). 'Demonstrating and necessity', *Philosophical Review,* 111(4), pp. 497–537.

_____. (2006). 'Terms in bondage', *Philosophical Issues,* 16, pp. 263–274.

_____. (2008). 'That *F*', *Philosophical Issues,* 141 pp. 263–280.

Searle, J. (1958). 'Proper names', *Mind,* 67(266), pp. 166-173.

Si, F. (2004). Zhongxinyu lilun he hanyu de DeP [Head theory and DeP in Chinese]. *Dangdai Yuyanxue [Contemporary Linguistics],* 1, pp. 26-34.

Sio, J. (2006). *Modification and reference in the Chinese nominal*. Ph.D. dissertation, The Leiden University Centre for Linguistics

Soames, S. (1986). 'Incomplete definite descriptions', *Notre Dame Journal of Formal Logic,* 27(3), pp. 349-75.

_____. (1994). 'Donnellan's referential/attributive distinction', *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition,* 73(2/3), pp. 159-68.

_____. (2005). 'Why incomplete definite descriptions do not defeat Russell's theory of descriptions', *Teorema,* 34(3), pp.7-30.

Schwarz, F. (2009). *Two Types of Definites in Natural Language.* Doctoral Dissertation, University of Massachusetts, Amherst, PhD.

_____. (2012). 'Situation pronouns in determiner phrases', *Natural Language Semantics,* 20, pp.431–475.

_____. (2013). 'Two kinds of definites cross-linguistically', *Language and Linguistics Compass,* 7, pp. 534–559.

_____. (2014). How weak and how definite are Weak Definites? in AguilarGuevara, A., Le Bruyn, B., and Zwarts, J.(eds.), *Weak Referentiality*. Amsterdam, Philadelphia: John Benjamins, pp. 213-235.

Schwarzschild, R. (1996). *Pluralities.* Kluwer: Springer Science.

_____. (2006). 'The role of dimensions in the syntax of noun phrases, *Syntax,* 9, pp. 67-110.

Sellars, W. (1954). 'Presupposing', *Philosophical Review,* 63 (2), pp.197-215.

Sharvy, R. (1978). 'Maybe English has no count nouns: notes on Chinese semantics,' *Studies in Language,* 2 (3), pp. 345-365.

_____. (1980). 'A more general theory of definite descriptions', The *Philosophical Review*, 89(4), pp. 607–624.

Shi, D. (2000). 'Topic and topic-comment constructions in Mandarin Chinese', *Language,* 76 (2), pp. 383 – 408.

Shi, Y. (2002). *Discourse Analysis of Chinese Referring Expressions: An Application of Gundel, Hedberg, and Zacharski's Givenness Hierarchy.* Lewiston and New York: The Edwin Mellen Press.

Simpson, A. (2001). 'Definiteness agreement and the Chinese DP', *Language & Linguistics,* 2, pp. 125-156.

Sio, J.U. (2006). *Modification and Reference in the Chinese Nominal.* Doctoral dissertation, Leiden University.

Stalnaker, R. (1974). Pragmatic presuppositions, in Munitz, M. and Under, P. (eds.), *Semantics and Philosophy,* pp. 197–213.

Stevens, G. (2011). *The Theory of Descriptions: Russell and the Philosophy of Language.* Basingstoke: Palgrave Macmillan.

_____. (2005) *The Russellian Origins of Analytical Philosophy.* London: Routledge.

_____. (2008). 'Russell and the unity of the proposition', *Philosophy Compass*, 3(3), pp. 491-506.

Strawson, P. F. (1950). 'On referring', *Mind,* 59(235), pp. 320-44.

_____. (1952). *Introduction to Logical Theory.* London: Methuen.

_____. (1964). 'Intention and convention in speech acts', *Philosophical Review,* 73, pp.439–460.

Sybesma, R. (1999). The Ba-construction, in Sybesma, R. (ed.), *The Mandarin VP*. Dordrecht: Kluwer Academic Publishers, pp. 131-182.

_____. and Sio, J. (2008). 'D is for demonstrative, investigating the position of the demonstrative in Chinese and Zhuang', *The Linguistic Review,* 25(3-4)[Special issue on Syntactic categories and their interpretation in Chinese, ed. Huba Bartos], pp.453-478.

Szabo, Z. G. (2000). 'Descriptions and uniqueness', *Philosophical Studies,* 101, pp. 29–57.

_____. (2003). Definite descriptions without uniqueness: A reply to Abbott. *Philosophical Studies* 114: 279–91.

_____. (2005). Introduction, in Z. G. Szabo (ed.), *Semantics vs. Pragmatics*. New York: Oxford University Press.

_____. (2005). *Semantics vs. Pragmatics*. New York: Oxford University Press.

Tan, F. (1991). *Notion of Subjects in Chinese.* Stanford, CA: Stanford University dissertation

Tang, J. C.-C. (1990). *Chinese phrase structure and the extended X'-theory*. Doctoral dissertation, Cornell University.

Tang, T-C. (1981). *Studies in Chinese Syntax*. Student Book: Taipei.

Tao, H. (1999). 'The grammar of demonstratives in Mandarin', *Journal of Chinese Linguistics,* 27(1), pp.69–103.

Teng, S.-H. (1987). Relative clause in Chinese, in The Chinese Language Society of Hong Kong (eds.), *Wang Li Memorial Volume* (English volume). Hong Kong: Joint Publishers.

___.((1981). 'Deixis, anaphora, and demonstratives in Chinese', *Cahiers de Linguistique d'Asie Orientale* 10, pp.5–18.

Tsai, D. W.-T. (1994) *On Economizing the Theory of A-Bar Dependency*. Doctoral dissertation, MIT.

Tsao, Feng-fu (1986.) Relativization in Chinese and English: A contrastive study of form and function. *Journal of Chinese Language Teachers Association 21*: 13–47.

Tsao, F. A. (1979). *Functional Study of Topics in Chinese: the First Step Towards Discourse*

Analysis. Doctoral Dissertation. Cornell University, USA.

____ .(1990). *Sentence and clause structure in Chinese: A functional perspective*. Taipei: Student Book.

Wang, L. (1943/1985). Disposal, in Wang (ed.), *Li. Zhongguo Xiandai Yufa (A Modern Grammar of Chinese)*. Ji'nan: Shandong Education Press, pp. 124-130.

Wen, Kang. (2007). *Peculiar Fate of Heroine (1821-1875)*. Beijing: YanShan Publication.

Wettstein, H.K. (1981). 'Demonstrative reference and definite descriptions', *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition,* 40(2), pp. 241-57.

_____. (1983). 'The semantic significance of the referential/attributive distinction', *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition,* 44(2), pp. 187-96.

Westerstahl, D. (1984). Determiners and context sets, in van Benthem, J. and ter Meulen, A. (eds.), *Generalized Quantifiers in Natural Language*. Dordrecht: Foris, pp. 45–71.

Wilson, G. (1978). 'On definite and indefinite descriptions', *Philosophical Review,* LXXXW, pp.48-76.

Williams, A. (1999). Context variables and Mandarin demonstratives, in Gruber et al. (eds.), *CLS 34 Part 1: Papers from the main session*, Chicago: Chicago Linguistic Society, pp. 407–420.

Wolter, L. (2006) *That's that; the Semantics and Pragmatics of Demonstrative Noun Phrases*. PhD thesis. University of California at Santa Cruz

_____. (2009). 'Demonstratives in philosophy and linguistics', *Philosophy Compass,* 4, pp. 451–468.

Wu, Y. (2004). *Spatial Demonstratives in English and Chinese: Text and Cognition*. Amsterdam ; Philadelphia: John Benjamins Publications

Wu, Y. & Bodomo, A. (2004). 'Classifiers ≠ determiners', *Linguistic Inquiry,* 40, pp. 487-503.

Xu, L. (1986). 'Free empty category', *Linguistic Inquiry,* 17, pp.75‑93.

_____. (2005). Topicalization in Asian languages, in Everaert, M. and van Riemsdijk, H. (eds.), *Blackwell Companion to Syntax*. Oxford: Blackwell, pp.137‑174.

_____. (2015) Topic and Topic Prominence. *The Oxford Handbook of Chinese Linguistics.* C. Sun and W. S. Y. Wang. Oxford, Oxford University Press,pp. 393-403

_____. and Liu, D. (1997). *Huati de jiegou yu gongneng.* [The structure and functions of topics]. Shanghai: Shanghai Education Press.

Xue, P. (1991). *Syntactic Dependencies in Chinese and Their Theoretical Implications.* Victoria, BC: University of Victoria dissertation.

Yang, H. (2005). *Plurality and Modification in Mandarin Nominal Phrases*, PhD dissertation. University of Texas at Austin.

Yang, R. (1998). 'Chinese bare nouns as kind-denoting terms', *Ruling Papers* 1, Rutgers University, pp.247-288.

_____. (2001). *Common Nouns, Classifiers, and Quantification in Chinese.* Doctoral Dissertation.The State University of New Jersey.

Yuan, B. (1995). 'Acquisition of base-generated topics by English-speaking learners of Chinese', *Language Learning,* 45, pp. 201-237.

_____. (1996). How Are Lexical-semantic differences represented in L2 syntax? --A study of the Unaccusative/Unergative distinction in L2 Chinese, in Kellerman, E.,Weltens, B., and Bongaerts, T. (eds.). *EUROSLA 6: A Selection of Papers.* Amsterdam: VU Uitgeverij, pp.201- 215.

Zamparelli, R. (2005). 'Introduction: some questions about (in)definiteness', *Lingua,* 115, pp.759-766.

Zhang, Niina. (2001). *On the Absence of Nonrestrictive Relatives in Chinese*. Ms., ZAS, Berlin.

_____. (2006). 'Representing specificity by the internal order of indefinites', *Linguistics,* 44 (1), pp. 1-21.

_____. (2015). 'Nominal-internal phrasal movement in Mandarin Chinese', *The Linguistic Review*, 32, pp.375–425.

Zhu, D.-X. (1982). *Yufa Jiangyi*.[Grammar handout]. Beijing: Commercial Press.

_____. (1984). Dingyu he zhuangyu de qufen yu tici he weici de duili (On the demarcation between attributes and adverbials with reference to the opposition between substantives and verbs). The Chinese department of Beijing University (eds.), *Yuyanxue luncong*. Shangwu, Beijing, pp. 5 - 14.