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The Core and Specifics of Mandarin Chinese marker *le*:

A unified approach

and a Cognitive Grammar representation

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SPVR01 Language and Linguistics: Degree Project – Master's (Two Years) Thesis, 30

credits April, 2024

Abstract

The Mandarin Chinese grammatical marker *le* has long been a major focus of grammatical research in Chinese linguistics, yet no definition of its semantics has been able to comprehensively account for the marker's full range of functions and uses. Therefore, the aim of the present study is to identify all major meanings expressed by each conventionally accepted *le* type in a sentence, and investigate if there is a core meaning (underlying schema) expressed in all the marker's occurrences, a meaning that is thus fully applicable to all the marker's uses. To achieve this aim, a mixed-method approach is used, combining a questionnaire survey and an explanatory sequential test, where both methods involve elicitation techniques probing for semantic judgments, measuring metalinguistic knowledge about *le*. Based on the results of both tests and an extensive review of the linguistic literature, the key finding is the identification of a core *le* meaning, namely *modal certainty* (high/highest degree of speaker certitude concerning the truth of a proposition). Through this discovery and the representation of this core meaning and other *le* meanings within the *functional* approach to language (Cognitive Grammar), a crucial step is taken towards a greater understanding of the semantics of *le*, and, at the same time, an important contribution is made to the broader study of the interconnections between tense, aspect, and epistemic modality.

Keywords: assertive marker, Chinese linguistics, epistemic judgment, mixed-method approach, modal certainty, semantic elicitation, temporal and modal dimensions, unqualified/qualified assertion

Acknowledgements

I would like to begin by expressing my deepest appreciation to my main supervisor, Niclas Burenhult, who took over a thesis project that had already been long in the making. His effective and clear guidance has been extremely significant in clarifying the central parts of my analysis and in their assessment, and in bringing this project to completion.

I would also like to thank my second supervisor, Meiyuan Zhang, for her crucial semantic judgments of a great many Mandarin *le* sentences, and sentences without the marker, as well as for ensuring the correctness of these sentences. Thank you as well to the Chinese author whose semantic judgments, of the same and other Mandarin sentences, were equally important.

Thanks are also owed to Johan Löfgren, at Statistics Sweden (SCB), for his important help with the statistical analyses, and to Associate Professor Arthur Holmer, who helped design my survey questionnaire. Moreover, I am deeply indebted to the participants for their hard and diligent work with the survey questions. 谢谢大家，非常感谢！

Thank you to Professor Jordan Zlatev for sharing valuable linguistic knowledge and for many challenging and interesting discussions during all the Zoom meetings that made me forget about the then pandemic for a while. Likewise, thank you Academic Advisor Åsa Wikström for all your friendly assistance since even before I started the Master's Programme at Lund University.

Last, but definitely not least, I would like to express my great appreciation for my friends, including all those I left behind in China many years ago, and my enormous love and gratitude to my family for your undying love, support and immense inspiration.

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Abbreviations and codes

Actn	Action verb
Actv	Active
Adj	Adjectival verb
Adjpr	Adjectival predicate
BA	"Disposal" marker *bǎ* (把)
BEI	Passive voice marker *bèi* (被)
BI	Comparative marker *bǐ* (比)
Ch	Change/New situation
CL	Classifier
Co	Completion
DE	1) Genitive marker *de* (的) 2) Nominalization marker *de* (的)
Decl	Declarative
D-*le*	Double *le*
Imp	Imperative
Inter	Interrogative
Itrv	Intransitive predicate
LE	Marker *le* (了) regardless of syntactic position
MA	Sentence-final question marker *ma* (吗)
NCh	No Change/New situation
NCo	Non-completion
N/A	Not applicable
Pass	Passive
PTCL	(Grammatical) Particle
Qo	Quantified object
S-*le*	Sentential *le*
Trv	Transitive predicate
Uqo	Unquantified object
Vbpr	Verbal predicate
V-*le*	Verbal *le*

Chapter 1 Introduction

. . . one of the thorniest conundrums in Chinese linguistics
— how to understand ***le****.*
(Zhu, 2019, foreword by Mair, p. viii)

The study object in this thesis is the Mandarin Chinese grammatical marker *le* (了). This marker is placed after the verb/adjective in a sentence (verbal *le*), or at the very end of a sentence (sentential *le*), or, sometimes, in both positions in the same sentence (double *le*). *Le* is claimed to have both temporal (expressing ”time”)[1] and modal (expressing ”a speaker's attitude and emphasis”) characteristics, but whether the temporal or modal meaning is dominant when a *le* sentence is used depends, among other things, on the context in which the sentence occurs (see, e.g., Kneussel, 2005). Other factors influencing the meaning of *le*—including *which* expressions of temporality and modality apply—are, for example, which *le* type (verbal *le*, sentential *le*, or double *le*) or verb type (*action* or *stative*/*adjectival*, see Section 2.3.2) is used (see, e.g., Li & Thompson, 1981; Li et al., 1982; Ljungqvist Arin, 2003).

As an illustration of the expression of temporality, *le* may express, for example, *completion* (see [1a]) or *present perfect tense* (see [1b-c]: ”have bought”), and in the case of modality, *le* may express, for example, *excessiveness* (see [1d-e]: ”too thin/salty”) or *contradiction*/*correction* (see [1f]) (see Sections 2.3.1, 2.3.4, 5.1.1.3 for further details).

(1a) Wǒ mǎi **le** sān běn shū. (verbal *le*)
I buy LE three CL book
I *bought* three books. (*temporal*[2] reading)

(1b) Wǒ mǎi sān běn shū **le**. (sentential *le*)
I buy three CL book LE

1 Based on C. S. Smith (2012), a more precise definition of *temporal* is: ”conveying information about time in language”, or the short form: ”conveying time in language” (pp. 2581, 2605). Additionally, the position in this thesis is that the conveyance of time is done via *aspect* or *tense* or both (see, e.g., Dahl, 1985; von Stutterheim et al., 2017).
2 For (1a-c), only the *temporal* readings are given.

I (*have*) *bought* three books. (*temporal* reading)

I *buy*/*am buying* three books. = I *will buy* three books. (*temporal* reading)

(1c) Wǒ mǎi **le** sān běn shū **le**. (double *le*).

I buy LE three CL book LE

I (*have*) *bought* three books. (*temporal* reading)

(1d) Tā shòu **le** yī diǎnr. (verbal *le*)

he thin LE one little

He is a little *too* thin. (*modal*[3] reading)

(1e) Tāng xián **le**. (sentential *le*)

soup salty LE

The soup is *too* salty. (*modal* reading)

(1f) Wǒ mǎi **le** shū **le**. (double *le*)

I buy LE book LE

I *did* buy (the) books/a/the book. (= you're wrong to think that I didn't) (*modal* reading)

Despite all the attention this marker has received, no consensus has been reached on the exact nature of *le*. Thus, although certain *le* meanings have become more or less commonly accepted, there are frequently new attempts to define *le*. One obvious reason for this is that when reviewing the large number of expressions *le* can convey, neither the more standard meanings nor other claimed *le* meanings actually match all expressions. Another reason is the fact that the morphemic status of *le* is still very much a matter of contention. Specifically, there is disagreement on whether there is only *one le* morpheme, represented by what some call the *unified LE* (see, e.g., Xiao & McEnery, 2004), or *two* different morphemes, represented by verbal *le* and sentential *le*, respectively (see Section 2.1). The double-*le* construction, in turn, consists of a combination of the individual semantics/meanings of verbal and sentential *le* (see, e.g., Li & Thompson, 1981; Ljungqvist Arin, 2003; Soh & Gao, 2006), such as a combination of perfectivity (expressed by verbal *le*) and a change of state/new situation (expressed by sentential *le*).

3 For (1d-f), only the *modal* readings are given.

In the approach taken in the present thesis, however, there is nothing purely methodological or analytical to rule out that there can be either one or two morphemes. That is to say, the approach is not based on any of the alternatives. Therefore, regardless of which morpheme approach is more optimal, the aim of this study is to identify all major meanings expressed by *le*, whether temporal or modal, and relate them to each *le* type separately only, or to a unified *le* as well. Crucially, this is to be done in a manner that reveals the most basic (prototypical) meaning of each *le* type and, potentially, a shared core meaning, and these meanings are to indeed be fully applicable to all the marker's uses. In addition, factors influencing the *le* meanings expressed, as well as the ways in which they do so, will also be identified.

Furthermore, the relationship between the temporal and modal meanings *le* conveys will be investigated, to try to find out which *le* properties are the primary ones, the temporal or modal. In other words, an effort will be made to bring more clarity to the question of the classification of *le* as an aspect marker and/or a modal marker, in both syntactic positions. More knowledge in this regard is also intended to contribute to the study of the interconnections between tense, aspect, and (epistemic) modality, overall (see, e.g., Brisard & Patard, 2011).

One step towards achieving these goals was to adopt a theory that could clearly illustrate both the temporal and modal characteristics of *le* as well as illustrate how these characteristics are related. In addition, since two of the characteristic features of *le* are that it serves a communicative function (expresses the speaker's motivation/communicative purpose, Sinclair, 1998; Stubbs, 2016), which is linked to speaker attitude, and that it displays a rich semantic[4] profile (see, e.g., Li & Thompson, 1981), those features needed to be illustrated as well. A theory with properties which seemed to meet all these criteria was Cognitive Grammar (CG), a theory at the centre of *cognitive linguistics* (see Section 2.4).

Specifically, CG ensures that cases where communicative function, general cognition, and semantics play major roles in grammar, are not excluded (Lakoff, 1991). For example, regarding the latter component, the polysemy network model (see Section 5.3.1) was believed to be particularly useful. Namely, regardless of its morphemic status, *le* is to be considered *polysemous*, as the marker displays "a variety of related senses describable as a network" (Langacker, 1991, p. 302), either a separate network for verbal *le* and one for sentential *le* or a common network for both types and, consequently, the double type as well. The classification of *le* as polysemous is also shared by, for example, L. Huang (2017), who claims that *le* is "highly polysemous in nature" (p. 1).

4 The term *semantic* refers to the "meaning" evoked by an expression (representing its *semantic pole*), as opposed to the "form" (representing the *phonological pole*) (Langacker, 2008).

Therefore, in the light of all the above, the research questions are as follows:

RQ1. What are the meanings of verbal *le*, sentential *le*, and double *le*, across *temporal* and *modal* dimensions (**RQ1a**), and what factors may influence these *le* meanings and how do the meanings vary depending on the factors present (**RQ1b**)?

RQ2. Is there a *core* meaning shared by verbal *le*, sentential *le*, and double *le*, and if so, what is this common core meaning?

RQ3. Is it possible to capture all *le* meanings in a *polysemy network* model (**RQ3a**) and, if a common core meaning for *le* exists, to capture it in a CG diagram (**RQ3b**)?

To address these questions, a multiple-choice test was conducted on native speakers of Mandarin Chinese, in order to capture their understanding of the meanings and use of *le*. Based on the results of this test, and a thorough and extensive review of the linguistic literature, an attempt is made to find key characteristics shared by both verbal *le*, sentential *le*, and their combination. Subsequently, an additional test is conducted —with the aid of two Chinese language consultants—where any common key features will be isolated by comparing sentences differing only with respect to the presence or absence of *le* (i.e., *minimal pairs*). Next, based on the results of both tests, a possible common core meaning for *le* is explored. Finally, an attempt is made to give a CG description capturing the meanings of the three *le* types in a polysemy network model, and, if a common core *le* meaning is found, to capture it in a CG diagram.

The remainder of this thesis is organized as follows: Chapter 2 begins with a literature review, and then introduces the theoretical background, with key concepts. Chapter 3 presents the methodology, including materials used in the empirical tests. In Chapter 4, the results of the multiple-choice questionnaire survey are presented, followed by those of the additional test (minimal pair analysis). A discussion of the findings, including the CG description, then follows in Chapter 5, and, finally, conclusions are presented in Chapter 6.

Chapter 2 Theoretical background

This chapter begins with a review of the linguistic literature on *le* (Section 2.1), and is followed by an account of key concepts and terms in the present thesis (Sections 2.2-2.4).

2.1 Literature review of *le*

The influential work on *aspect* in Mandarin Chinese from L. M.J. Huang (1987) argues that the marker *le* had already by then been studied more intensively than any other Mandarin aspect marker. Specifically, Huang states that between 1950-mid 1980's, the research focused on (as described in Chapter 1) whether Mandarin has one or two *le* morphemes and on whether, in the latter case, both morphemes should be regarded as *aspect* markers or not. Judging from the review of both older and more recent literature on *le*, the described interest in this marker has clearly remained strong to the present day.

According to the one-morpheme position, *le* (unified LE) is claimed to have the same underlying meaning (*schema*) in both the verbal-*le* and sentential-*le* position, a core meaning[5] that is, therefore, manifested in all the marker's occurrences. In terms of lexical relations, this analysis entails that *le* is either a monosemous marker (one general meaning) or a polysemous one (multiple but related meanings). This unified interpretation finds support in the fact that verbal and sentential *le* have the same pronunciation, are written with the same Chinese character and, according to several researchers, have the same historical origin (see, e.g., Zhu, 2019). In contrast, those supporting the two-morpheme position claim that the two types of *le* have distinct meanings and functions and, commonly, also different historical origin. This makes their relationship essentially homonymous (same form, unrelated meanings).

Illustrative of the lack of consensus is also the fact that proponents of the two-morpheme position disagree on whether both verbal *le* and sentential *le* should be considered *aspect* markers or not (see Sections 2.1, 2.3.1). This disagreement is particularly pronounced in respect to sentential *le* (L. M.-J. Huang, 1987), and the difficulty with its classification becomes clear when Zhu (2019) argues that it is more correct to classify sentential *le* as simultaneously an aspect and a modal marker.

5 A *core meaning* is in this thesis ”an abstract meaning element (an ‘abstract schema’), shared by all polysemous senses of a linguistic item” (Hansen, 1998; Allan, 2021, p. 311).

The first work worth mentioning from the large group supporting the two-morpheme position is Chao (1968). It contains a comprehensive account of *le*-marked sentences and expressions, and this work appears to be an almost obligatory reference in the literature on *le*. Unlike other adherants to the two-morpheme position, though, Chao does not focus on defining the *main* meaning and function of each morpheme. Instead he focuses on covering as many different types of *le* sentences as possible, of both the verbal-*le* and the sentential-*le* type. Nonetheless, in the case of verbal *le*, Chao maintains that *le* has "the class meaning of 'completed action'" (p. 246), which represents a more unitary description than in the case of sentential *le*, where the many *le* sentences form the basis of a list of as many as seven different uses.

Others who maintain that verbal *le*, exclusively or not, expresses *completed action* or *completion* are: Lü (1980), Fang (1992), Chappell (1988), Chu (1976), and Ross and Ma (2006). Aside from these types of expression, it is also frequently claimed that verbal *le* expresses *perfectivity* (see Section 2.3.1) or that it is a "marker of perfective aspect", and a few of those supporting this claim are: Li and Thompson (1981), C. S. Smith (1991), Chan (1980), J.-S. Wu (2005), and Zhu (2019). Others yet argue that verbal *le* is a "marker of past tense" (Ross, 1995), a "relative past tense marker" (J.-W. Lin, 2000), a "realization marker" (Xunning Liu, 1988), or that it "expresses realization" (Sybesma, 1999); or is a "resultative predicate" (Shen, 2004), a "temporal assertion marker" (Klein et al., 2000), or a marker of "realis" (Chu & Chang, 1987).

As for the meaning of sentential *le*, there have been numerous suggestions as well, but the most frequent claim is that sentential *le* expresses a *change of state* or the *emergence of a new situation*: Lü (1980), Fang (1992), Chappell (1988), Sybesma (1999), J.-W. Lin (2003a), Xiao and McEnery (2004), Ross and Ma (2006), and Zhu (2019). Among the other suggestions, there are those who term sentential *le* "the inchoative *le*" (Chan, 1980), a "marker of perfect aspect" (Shen, 2004), a "marker of the past tense" (Xunning Liu, 2002), a "device to update common ground" (van den Berg & Wu, 2006), or who state that sentential *le* has the communicative function to signal a Currently Relevant State (Li & Thompson, 1981).

While the the aforementioned focused on trying to define the two types of *le* (or their combined "double" form) separately, there is a smaller group (supporting the *one*-morpheme position) who have tried to define a unified meaning of *le*, which is present in all the sentences in which *le* occurs, regardless of the marker's syntactic position.

In an early attempt to define *le* in a unified manner, Thompson (1968) proposed that *le* can be seen as an "event boundary" marker. More specifically, Thompson writes that "the marker *le*, when it is attached to the sentence, indicates that the speaker has in mind the *boundary* [emphasis added] between two events"

(pp. 71-72). What Thompson claims to achieve by attributing both verbal *le* and sentential *le* the same meaning of marking an ”event boundary” is to unify all uses of *le*, and to make it no longer necessary to view “*le* of completed action, *le* of change of state, and *le* of incipient action as separate features” (p. 73).

Others who have argued that *le* marks or is a *boundary* are: L. M.-J. Huang (1987), who argues that *le* ”has as its semantic content the function of marking a BOUNDARY, a BOUNDARY of an EVENT, a PROPOSITION or an even larger unit” (p. 184), and Ljungqvist Arin (2003), who proposes that *le* ”through its core feature BOUNDARY [...] functions as a divider” (p. 116), marking either a *temporal* boundary, on a timeline, or an *attitudinal* boundary, marking a contrast between, among other things, different opinions or attitudes, or both. More recently, Wiedenhof (2015) also joined this group by arguing that “*le* indicates a temporal boundary” (p. 222), and that “alternatively, the boundary can be interpreted in a modal sense, to indicate unexpectedness” (p. 227). More recently still, Jing-Schmidt et al. (2022) gave a unitary account of *le* involving boundaries—without, however, defining what *le* expresses by itself—where verbal *le* and sentential *le* form parts of two aspect constructions. In the verbal-*le* case, the construction profiles the *final* boundary of an event and, therefore, the closing of it, and in the sentential-*le* case, the construction profiles the *initial* boundary of an event and, therefore, its opening.

Another characterization of the unified *le* is that it marks or represents a *change*: Spanos (1979), states that “the LE structures [...] all seem to involve a change concerning the realization of some particular action, process, quality, or state of affairs” (p. 73); Xianmin Liu (1998), calls *le* “an aspectual marker for change”, and Soh (2014), argues that *le* is ”a marker of change [...], and that it may mark one of three types of change depending on its syntactic position” (p. 131). Less frequently, the unified *le* has also been described as “marking relative anteriority” (Z. Shi, 1988), as being a ”grammatical device that has [both] semantic and conceptual content” (Wee, 1997), a ”completive aspect marker” (W. C. J. Lin, 1979), or that *le* signals ”realization”, expressed by Rohsenow (1978) as: *le* “expresses the existence [...] of the ‘coming about’ of the underlying state or action” (p. 275).

To find support for taking (either) the one-morpheme or the two-morpheme position, many have examined the *historical origin* of the *le* marker or markers. The problem, however, is that this has not helped solving the matter either, since the historical data have been interpreted in different ways by different researchers. Chao (1968), for example, suggests that the two types of *le* originate from *different* verbal sources: verbal *le* from *liao* ('finish', 'complete') and sentential *le* from *lai* ('come'), while, for example, van den Berg & Wu (2006) claim that their data suggest that both types of *le* originate from the *same* source, namely, *liao* ('finish', 'complete'). Another method has been comparing Mandarin Chinese

(dialect) with other Chinese *dialects*, such as Cantonese and Wu, to find support for the necessity of regarding verbal *le* and sentential *le* as separate morphemes, but here, too, the same data have led to different conclusions (e.g., Chao, 1968 and Ljungqvist Arin, 2003). A third option concerns the claim that the different syntactic distributions of the two types of *le*, by default, generate different semantic interpretations. However, while the two-morpheme proponents tend to disregard *le* sentences not supporting this claim, the one-morpheme proponents try to describe the shared features of all occurrences of *le* (e.g., L. M.-J. Huang, 1987 and Xiao & McEnery, 2004).

Finally, a study conducted by Lundvik (2019), within the larger topic of *negation in Mandarin Chinese*, should also be mentioned. Most importantly, this study resulted in the mapping out of the distinct syntactic positions of verbal *le*, sentential *le* and negation in the Mandarin Chinese clause/sentence structure, and the result of this study also underlies certain arguments and conclusions, mainly concerning (semantic) scope, in the present thesis.

In Lundvik (2019), Mandarin Chinese syntax is argued to have only one *modal* projection—that is, only one level with epistemic modal properties in the Mandarin Chinese clause/sentence structure—for verbal *le* and sentential *le*. This projection is located in the highest clausal/sentential domain, and *modal le* is, therefore, a *clausal*/*sentential* operator, regardless of whether it pertains to verbal *le* or sentential *le*.

On the other hand, Mandarin Chinese syntax is argued to have two *aspectual* projections—that is, two levels with aspectual properties in the Mandarin Chinese clause/sentence structure. The projection containing sentential *le* is located in the highest clausal/sentential domain, and *aspectual* sentential *le* is, therefore, a *clausal*/*sentential* operator. The projection containing verbal *le* is, instead, placed in a structurally lower position between VP and TP, and *aspectual* verbal *le*, therefore, only takes scope over the VP.

2.2 The assertive speech act

As will become clear, *le* is argued here to be closely associated with the notion of *assertion*, and this section provides a theoretical background to assertion, qualified and unqualified (see definitions below), as a speech act.

Le serves a communicative function, and to describe *le* on the basis of this function, the starting point will be the fundamental concept of *speech act*. A speech act may be defined as ”the basic unit of human linguistic communication” (Searle, 1976, p. 1), and the term means that an utterance, as opposed to

merely carrying the meaning of a number of words, in fact performs an action (Levinson, 2017). Thus, when responding to someone's utterance, it is the 'point' intended or conveyed by the speaker that one responds to, not the sentence type or literal meaning of what is uttered (Levinson, 2017). Therefore, if someone says "You're hungry" to you, you are likely to understand it as a question (act), while a comment such as "You're smart" will probably be thought of as a compliment (act) (Levinson, 2017). The speech act is also a concept central to the field of *pragmatics* (Levinson, 2017), which can be broadly defined as "the study of language use in context" (Y. Huang, 2017, p. 1).

According to Searle (2001), there are five basic speech act types, and the one that applies to assertion is *assertives*. These, as defined by Searle (1976), "commit the speaker (in varying degrees) to something's being the case, to the truth of the expressed proposition[[6]]" (p. 10), and include sentences such as "It is raining outside" (see also Searle, 2001), but also "I hypothesize that it is raining outside" and "I swear that it is raining outside" (see also Searle, 1979). Hence, so defined, assertives include both *unqualified* assertions (first sentence) and *qualified* ones (the last two) (see terms in Schiffer, 2000). In the unqualified case, propositions are asserted with standard *assertive force*[7], and with *full* commitment/belief on the part of the speaker (see MacFarlane, 2014), and in the qualified one, the assertive force is mitigated (second sentence) or reinforced (third sentence) (see Sbisà, 2020), and the assertions are made with varying degrees of *partial* commitment/belief (see Schiffer, 2000; N. J. J. Smith, 2010).

Furthermore, based on Kim and Sag (2002) and Boye (2016), it can be argued that what is commonly signalled by the use of declaratives is the *assertion* of propositions, while the use of interrogatives, commonly, signals the *questioning* of propositions[8]—that is, respectively, assertion and questioning of content which may be said to be true (or false). To illustrate, someone may use the declarative to mark the assertion of the proposition expressed by (or in) "It is raining outside" [repeated], while someone else may use the interrogative to mark a question concerning the same proposition expressed by (or in) "Is it raining outside?" (see also Boye, 2012).

As for the imperative sentence type, however, it is typically associated with the *directive* speech act, that is with, for example, orders and requests (Jary & Kissine, 2014). This means that the use of imperatives may be seen as signalling a *command* to someone to bring about an action (Boye, 2012), and imperatives are, therefore, arguably not expressing content which may be said to be true (or false) (Boye).

6 A *proposition* can be defined as *content*, expressed by a *clause* (see also Langacker, 2019) or by a *phrase* (Carretero, 2022) (with propositional scope in both cases), which is *judged/believed—more or less strongly—to be true* (*or false*) (see, e.g., Simon-Vandenbergen & Aijmer, 2007; MacFarlane, 2014; Boye, 2023).

7 *Assertive force* is the force conveyed by an assertive speech act (illocutionary act) (Sbisà, 2020), and includes, for example, the force of asserting, predicting, informing, and testifying (Kissine, 2009).

8 See, however, Section 5.1.1.3 for more on what "questioning of propositions" entails.

To illustrate, someone may say “Stop!” to another person, wanting that person to perform a stopping action, but this command itself may not be evaluated using phrases like “That’s true!” or “That’s false!”, the way the assertion that “It is raining outside” [repeated] may (see also Charlow, 2014).

2.3 The significance of *le*: Five main categories

This section introduces and reviews the definitions of the *le* meanings explored in the current study. The five meaning categories are based on the empirical data/survey results, but the in-depth analysis of these meanings can be found in Section 5.1.1.

2.3.1 Perfectivity

In the words of Comrie (1976), *perfectivity* or *perfective aspect*[9] denotes “a complete situation, with beginning, middle, and end” with “no more emphasis, necessarily, on the end of a situation than on any other part of the situation, rather all parts of the situation are presented as a single whole” (p. 18). However, when in this thesis *le* is claimed to express perfectivity, the term is to be regarded as synonymous with the word *termination* (stopping), which is related to, but distinct from, *completion* (finishing) (see also [4] and [5], below). This treatment of the term, at least as it applies to verbal *le*, corresponds with the view of M. Liu (2015), who states that an *action*[10] or *event*[11] marked by the perfective *le* (= verbal *le*) is normally completed. She then adds, however, that according to her, it is more correct to say that the perfective *le* expresses termination or *boundedness*[12], whereas completion is ensured by the addition of a resultative complement, such as *wán* 'finished', to the verb.

Examples (2) and (3) illustrate the expression of completion (of the action) by verbal *le* and (of the event by) sentential *le*, respectively, and (4) and (5) clarify the distinction between termination and completion, where the difference in expression is linked to a difference in *situation type* (see Footnote 14 and Section 5.1.1.1):

9 *Aspect*, and more precisely *grammatical* (or *viewpoint*) *aspect* (Binnick, 2012), concerns how a situation's beginning, middle, and end (or any other phase) are viewed (see Comrie, 1976).
10 Following, for example, X.-Q. Li (1999) and M. Liu (2015), an *action* is denoted by a verb, without any arguments.
11 According to Smith & Erbaugh (2005), *events* are *dynamic*, that is, they occur “at successive stages” (p. 718) and are denoted by *accomplishment* (e.g., ”build a house”), *achievement* (e.g., ”reach the top”), and *activity* (e.g., ”walk”) predicates and sentences.
12 Since *bounded* situations are, by default, viewed as terminated or completed (Smith & Erbaugh, 2005; C. S. Smith, 2009a), this also means that (in line with the definition of perfectivity) *boundedness* is to be taken as synonymous with termination.

(2) Tā chī **le** liǎng wǎn fàn. (verbal *le* = *completion*)
he eat LE two CL rice
He ate two bowls of rice. (Ross & Ma, 2014, p. 72)
(the action of EATING is completed)

(3) Wǒ bǎ Yīngwén fānchéng Zhōngwén **le**. (sentential *le* = *completion*)
I BA English translate into Chinese LE
I translated the English into Chinese. (Ross & Ma, p. 122)
(the event of MY TRANSLATING THE ENGLISH INTO CHINESE is completed)

(4) Wǒ zuótiān xiě **le** xìn, zhǐshì méi xiě wán (bàle). (verbal *le* = *termination*)
I yesterday write LE letter just not write finish PTCL
I *did* some letter writing yesterday, only I didn't finish (the letter) (that's all). (see also Xiao & McEnery, 2004)

(5) Wǒ zuótiān xiě **le** yī fēng xìn. (verbal *le* = *completion*)
I yesterday write LE one CL letter
I wrote a letter yesterday [i.e., I finished the letter]. (Xiao & McEnery, p. 96)

Based on the above, and the analysis in Chapter 5, the terms *completion*, *termination*, *perfectivity*, and *boundedness*—as defined in this thesis—all share the feature of referring to, or focusing on, a final endpoint[13].

2.3.2 Change of state

As opposed to the ability to express completion, the ability to express a *change of state* into another situation, or the *emergence of a new situation*, is predominantly attributed to sentential *le* (see Section 2.1). Nonetheless, based on the works of, for example, L. M.-J. Huang (1987), Z. Shi (1988), Ljungqvist Arin

13 In the case of an event, *endpoints* refer to the beginning and ending of the event (C. S. Smith, 2009c). States, however, have no endpoints (C. S. Smith), but the state VP (verb phrase) may undergo a "shift in situation type", whereby it appears as an *inchoative*, *with an initial endpoint*, presenting "a change into the state which the verb constellation [= the VP] lexically denotes" (C. S. Smith, 1997, p. 70) (see *situation type* in Footnote 14).

(2003), and Tang (2016), it is argued that verbal *le* and sentential *le* both can express a change of state. What they all claim is that the two types of *le* can express *inchoativity*, which means that they both can indicate the beginning of an event or *state*[14], and the close meaning of change of state and inchoativity is seen in the following words by Smith (1997): "States can also be presented indirectly, through a change of state (inchoative)" (p. 34). The same closeness in meaning is also apparent when comparing Li and Thompson's (1981) definition of change of state as "when the state of affairs represents a change from an earlier state. This means that some state of affairs holds *now* which didn't hold before." (p. 244) and Chao's (1968) claim that the *inchoative le* (referring to sentential *le*) applies to "a situation which is new or only new to the speaker" (p. 798). In all, this means that in this thesis, change of state and inchoativity are considered synonymous terms. In addition, under certain conditions (see Section 5.1), *le* can also express *non-completion* (continuation).

Examples (6) and (7) both illustrate a change from NOT KNOWING A MATTER to KNOWING IT, meaning that they both represent a change of state and a new situation:

(6) Tā de péngyou zhīdào **le** zhè jiàn shì. (verbal *le*)
he DE friend know LE this CL thing
His friends have learned this matter [now]. (Tang, 2016, p. 119)

(7) Zhè jiàn shì tā zhīdào **le**. (sentential *le*)
this CL thing he know LE
Now he knows this (matter).

Aside from *stative* verbs[15], like *zhīdào* 'know' in (6) and (7), there are also some other types of verbs which generate inchoative readings, namely *adjectival* verbs and *modal* verbs (modal verbs regard sentential *le* only). (8) and (9), which contain the adjectival verb *pàng* 'fat', both illustrate a change from NOT HAVING GROWN THREE POUNDS FATTER to HAVING DONE SO, and (10), with the modal verb *huì* 'can', illustrates a change from NOT BEING ABLE TO READ MAPS to BEING ABLE TO, meaning that (6)–(10) all represent a change of state and a new situation:

14 According to Smith & Erbaugh (2005), *states* are *static*, that is, they hold "consistently throughout an interval" (p. 718) and are denoted by state predicates such as "know the answer" (p. 751) and state sentences such as "Ella is sick" (p. 716). In addition, *states*, along with *accomplishments*, *achievements* and *activities*, represent the four *situation types* based on the classification by Vendler (1957), and belong to *situation aspect* (Deo, 2012).
15 Stative verbs "typically head a predicate depicting a stable[,] long-lasting state" (Y.-H. A. Li, 2016, p. 82).

(8) Wǒ pàng **le** sān bàng. (verbal *le*)
I fat LE three pound
I have grown three pounds fatter (now).[16]

(9) Wǒ pàng sān bàng **le**. (sentential *le*)
I fat three pound LE
I have grown three pounds fatter (now). (L. M.-J. Huang, 1987, p. 195)

(10) Wǒ huì kàn dìtú **le**. (sentential *le*)
I can read map LE
I can read maps now.

Unlike the previous examples—which contain stative or stative-like (i.e., adjectival) verbs or "modal verb + main verb" constructions and which thus (in their decontextualized state and if devoid of temporal expressions) always get an inchoative reading (Ross & Ma, 2014)—the situation is less clear-cut when *action* verbs[17] are involved. Specifically, it is (primarily) when *le* (and above all sentential *le*) is added to a VP (verb phrase) or sentence which describes an activity, with only a potential final endpoint[18], that *le* can make both a terminative and an inchoative reading possible (see Ljungqvist Arin, 2003). This type of ambiguous situation is illustrated by (11), where translations (c) and (d) illustrate a change of state, as regards the information described by the whole sentence, while translation (b) illustrates termination of the (verb-phrase) event of DRINKING WINE. Translation (a), however, illustrates both the termination of the (verb-phrase) event of DRINKING WINE and the view that the information, described by the whole sentence, represents a changed state:

(11) Tā hē jiǔ **le**. (sentential *le*)
he drink wine LE

16 The translations of (8) and (9) represent the *temporal* readings of these sentences only. Aside from this temporal interpretation, based on the adjective describing the *process* of 'becoming/having become fatter', a similar adjectival-predicate *le* sentence such as (1d) may also get a temporal interpretation based on the adjective describing a *state*. Depending on the context, (1d) may therefore also get an interpretation based on the adjective describing the state of 'being a little thin': 'He is a little thin now' (see also Chao, 1968, p. 798; Li and Thompson, 1981, p. 188).
17 Action verbs form "the head[s] of verbal predicates that denote activities, accomplishments, and achievements" (Tang, 2016, p. 118).
18 See Section 5.1.1.1 for the distinction between *natural* and *potential* endpoints.

a) He has drunk wine (now). (terminative/inchoative)

b) He drank wine. (terminative)

c) He has begun drinking wine. (used to not drink wine before) (inchoative)

d) He drinks/is drinking wine (now). (ongoing activity[19]) (inchoative)

Two more examples of the expression of non-completion, aside from (11d) above, are (12) and (13), below, where an ongoing reading is more the default (primary reading) and the number of alternative, dynamic readings is more limited, than in cases such as (11). (12) illustrates the continuing state (expressed with the present continuous tense) of MY HAVING CLOTHES ON, and (13) the continuing state of RAINFALL.

(12) Wǒ chuān **le** xīn yīfu. (verbal *le*)

I wear LE new clothes Clause with *state* VP ('wear new clothes')

I'*m wearing* new clothes.

(alternative, dynamic reading: 'I have put on new clothes')

(13) Xià yǔ **le**. (sentential *le*)

fall rain LE Clause with *event* VP ('[fall] rain')

It'*s raining* (now).

(alternative, dynamic reading: 'It has started to rain')

Based on the above, and the analysis in Chapter 5, the terms *change of state*, *new situation*, *inchoativity*, and *non-completion*—as defined in this thesis—all share the feature of referring to, or focusing on, a starting point, that is, an initial endpoint.

2.3.3 Emphasis

In Chapter 1, the ability of *le* to express "a speaker's attitude and emphasis" was referred to, parenthetically, as an indication of the expression of modality. Here, in Section 2.3.3, the specifics of these concepts will be explained.

19 See, however, Section 5.1.1.2 and the argument that, when expressing continuation with *le*, it is the state and not the event that continues.

First, for example, Zhu (2019) supports the view that *le* can express *emphasis* by arguing that verbal *le* may "emphasize a completed action" (p. 63) and that sentential *le* may be used for "emphasizing that something occurred in the past" (p. 143).

Secondly, according to Quirk et al. (1985) and Macaulay (1995; 2002), the two concepts of emphasis and speaker attitude are connected, and Bayer & Trotzke (2015) describe this connection as follows: "Emphasis for intensity [...] has to do with expressive and attitudinal evaluation by amplifying the meaning of the emphasized constituent [in a sentence]" (p. 28). This means, in essence, that when the speaker emphasizes a constituent (which, in Section 5.1.1, is argued to be done indirectly, and directly via *focus*), it gets *highlighted*. In turn, this signals that the constituent, or what it represents, is thought of by the speaker as *remarkable*, for some reason, which is thereby an expression of the speaker's attitude (Bayer & Trotzke).

Finally, Xiao and Hu (2015) argue, with regard to modality, that there is a link between *modal particles* (markers)—placed, typically, at the end of a sentence—and the expression of a speaker's attitude. Similarly, in reference to Li and Thompson (1981) and Chan (1980), C. S. Smith (1991) puts forward the view that sentence-final particles, such as sentential *le*, have the ability to "indicate [both] speaker attitude and emphasis" (p. 345). In addition, although the ability to express modality has traditionally been connected to sentential *le*, specifically, Li and Thompson (1981), L. M.-J. Huang (1987), Z. Shi (1988), and Ljungqvist Arin (2003) all support the view that also verbal *le* has this ability.

Drawing on the above sources, it is argued that by the use of emphasis—conveyed by *le*—the speaker highlights some content, or information, in his or her utterance, which he or she perceives to be remarkable or noteworthy, for some reason. In turn, this evaluation by the speaker, that something is remarkable/noteworthy, is an expression of the speaker's attitude, and therefore also an expression of modality. In other words, the ability of *le* to express a speaker's emphasis makes the expression of the speaker's attitude—as well as that of modality—possible.

However, aside from the ability to express emphasis, both verbal *le* and sentential *le* are argued by some to have the ability to also express *assertion*. Thus, for example, G. Shi (2011), van den Berg & Wu (2006), and Soh (2014) all attribute this ability to sentential *le*, while Klein et al. (2000), instead, treat verbal *le* as an "assertion marker" (though linked to time, not modality), and Zhu (2019) claims that verbal *le* may convey an "affirmative tone for certain effect" (p. 75). Since assertion, too, just as emphasis, may be linked to modality (see *epistemic* modality, in Section 5.1), it needs to be clarified what distinguishes one modal expression from the other. Thus, in a comparison reflective of both expressions, X.-Q. Li (1999)

states that in a sentence such as (14), below, verbal *le* is usually interpreted as *emphasizing* the completion of the action of GOING, while sentential *le*, in the corresponding sentence (15), is usually interpreted as a modal particle expressing a tone of *certainty* (an affirmative/assertive tone).

(14) Tā yǐjīng qù **le** fēijīchǎng. (verbal *le*)
he already go LE airport
He has already gone to the airport[!] (p. 111)

(15) Tā yǐjīng qù fēijīchǎng **le**. (sentential *le*)
he already go airport LE
He has already gone to the airport[!](p. 111)

As for any real difference between the two sentences, however, X.-Q. Li states that the only difference is that the verbal-*le* sentence expresses the completion of the *action* (of GOING), while the sentential-*le* sentence expresses the completion of the *event* (of HIS GOING TO THE AIRPORT); hence the identical translations.

Consequently, both types of *le* can express emphasis as well as assertion, but at least based on the above comments on sentences (14) and (15), it is unclear what the difference between the two expressions really is, when they relate to *le*, and this will, therefore, be explored further in Chapter 5. In any case, the first expression in this thesis is related to the second, since emphasis is defined as *emphatic assertion* (Krifka, 1995, p. 227; Simon-Vandenbergen & Aijmer, 2007, p. 105), and both expressions may therefore be linked to the same speech act, namely assertives (see Section 2.2)[20]. In the emphatic case, the content (meaning) or information conveyed by a clause, or part of a clause, is reinforced/strengthened by a speaker (see, e.g., Krifka, 1995; Simon-Vandenbergen & Aijmer, 2007; Kandybowicz, 2013) by the strong focus on, and highlighting of, that content or information that the emphasis brings (see Simon-Vandenbergen & Aijmer, 2007). In turn, the non-emphatic type, that is, the second type of expression with relatively less assertive strength, is instead referred to as *basic assertion* or (as above) just *assertion*[21]. This type of assertion is also argued—albeit with less force—to make the conveyed content or information highlighted and focused (see also Smith & Erbaugh, 2005; Wang, 2018), and therefore reinforced.

20 This also means, therefore, that assertion and emphasis can be linked to the same *scale of* ***strength of assertion*** (see Section 5.2; see also also corresponding scales/clines in Grabe & Kaplan, 1997; Hyland, 2004; Simon-Vandenbergen & Aijmer, 2007).
21 See Section 5.2 for further details.

2.3.4 Tense

According to Comrie (1985), *tense* is the ”grammaticalised expression of location in time” (p. 9). C. S. Smith (2006) subscribes to essentially the same definition, but she also adds the element of ”necessity” to it (through the word ”obligatory”): ”[tense is] obligatory grammaticized location in time” (p. 93). This addition is an important specification, since the requirement to invariably express tense, grammatically, even if it is not necessary for temporal interpretation, is a distinctive characteristic of tensed languages (see J.-W. Lin, 2012). A case in point is English, where, as is well known, a tense morpheme (such as ”-(e)d” in “live**d**”) is used in a sentence to express location in time, despite the concurrent use of a time-denoting temporal adverbial (such as ”last year”).

In contrast, Mandarin Chinese does not have this type of tense, that is, one that is overtly marked via inflectional markings on the verbs (see, e.g., M. Liu, 2015). Therefore, (non-overridable) temporal location is primarily conveyed by time expressions (such as *xiànzài* 'now' or *zuótiān* 'yesterday') only, or is inferred from the context. The described lack of morphological tense marking, at least on the verbs, is also what, as a rule, has placed Mandarin Chinese in the category of ”tenseless” languages (Soh, 2014).

Nonetheless, on the basis of, among other things, the account of temporal interpretation in Mandarin by Smith and Erbaugh (2005), it can be argued that, indirectly, Mandarin does, in fact, have the means to express tense. Based on the same account, it can also be argued that, in the default case (when time expressions are lacking and the context provides no guidance), this expression of tense is conveyed by *aspectual* (linguistic) forms, which give information about *situation type* and *viewpoint* (see definitions in Sections 2.3.1, 2.3.2). Importantly, though, the information from these aspectual forms may be overridden by information from *lexical* forms (e.g., resultative verb complements, past- and future-oriented verbs or modal verbs), *adverbial* forms (e.g., adverbs of time or frequency or temporal adjectives) or *context* (Smith & Erbaugh).

The described account, by Smith and Erbaugh (2005), is semantic in nature (developed within *Discourse Representation Theory*, see Kamp & Reyle, 1993; C. S. Smith, 1997, 2003) and so is the definition of the concept of tense adopted in this thesis, grounded in the same account. Specifically, this definition relies on the model of Reichenbach (1947), as interpreted by Smith and Erbaugh (2005) and C. S. Smith (2006). Hence, the meaning of tense ”involves three times: Speech Time, Situation Time, and Reference Time [where tense] codes [i.e., conveys] two relations between these times: the relation between

Speech Time (SpT) and Reference Time (RT), and the relation between RT and Situation Time (SitT)" (C. S. Smith, 2006, p. 94). Smith & Erbaugh (2005) define Speech Time (SpT) as "the moment of speech", and Situation Time (SitT) as "the moment or interval at which a situation takes place" (p. 719), whereas Reference Time (RT) is defined by C. S. Smith (2009d) as "the time talked about in a sentence" (p. 184).

To illustrate, the following sentence gives examples of each of the three times, where each time differs from the other two: "On Sunday, Mary had (already) arrived" (C. S. Smith, 2009b, p. 162). Here, the time when the sentence is uttered is the Speech Time (= present/now), and "the Sunday before" is the Reference Time (= follows SitT, but precedes SpT), while the Situation Time is the time which precedes "the Sunday before" (= precedes RT *and* SpT).

In turn, the basic tense meanings, based on the above definition, of the altogether four different tenses tested[22] in the questionnaire survey (see Chapter 4), are given in (16):

(16) Simple [= absolute] tense meaning

Present: RT=SpT; RT=SitT

Past: RT < SpT; RT=SitT

Future: RT > SpT; RT=SitT; modal force[23] (C. S. Smith, 2006, p. 94; 2012, p. 2590)

Relative tense meaning

Present perfect: RT=SpT; SitT < RT [24] (C. S. Smith, 2012, p. 2593)

"=" signifies "simultaneous with"; "<" signifies "precedes"; ">" signifies "follows"

In line with the above, C. S. Smith (2006) argues that the (indirect) ability of verbal *le*, as an aspectual form (its modal ability unaddressed), to express *time* is connected to its ability to convey that an event is *bounded* (see Section 2.3.1). Accordingly, Smith & Erbaugh (2005) give verbal *le* the following time-related definition: "*Le* conveys that an event is bounded, although the boundary need not coincide with the completion of a telic[25] event; [...] The event is contained in SitT, SitT=RT" (p. 725). They also state that, in the default case, "bounded events are in the Past: located before speech time [SpT]" (Smith & Erbaugh, p. 715).

22 Notably, however, not only these types of tense, tested for simple sentences, can be expressed via *le*. See, for example, the complex *le* sentences in Section 4.4.1.

23 The term "modal force", related to the *future* tense, refers to the element of modality conveyed by "future modals, future-oriented verbs and expressions" (see also C. S. Smith, 2006, p. 98), in addition to the element of tense.

24 In the survey questionnaire, however, the same tenses were defined in less theoretical terms, using standard semantic definitions (see Section 3.4).

25 According to Smith & Erbaugh (2005), *telic* situations concern *accomplishments* and *achievements*, whereas *atelic* situations concern *activities*. *Static* situations, however, concern *states*, as described in Footnote 14.

Although the definition concerns *verbal le*, specifically, Smith & Erbaugh (2005) argue that verbal *le* may give rise to *inchoative* readings (more typical of *sentential le*) as well: "*Le* appears with event verb constellations, which we take to include inchoatives" (p. 725). Additionally, they also state that the same type of *le* appears with constellations containing state verbs, in inchoative clauses and ingressives (Smith & Erbaugh). This means that verbal *le*, which according to C. S. Smith (1997) and others expresses *termination*, may focus not only on the *final* endpoint of a situation (see Section 2.3.1) but also, under certain conditions, on the *initial* endpoint of a situation (expressing *inchoativity*, see Section 2.3.2).

2.3.5 Forward linking

Used in complex sentences, verbal *le* may have a *forward-linking* function, and according to Li and Thompson (1981), this linking occurs when "the first clause [in a sentence is] dependent on the second clause for its meaning to be complete" (p. 632). Notably, however, not only verbal *le* but also sentential *le* may serve a forward-linking function in complex sentences (J. Li, 1924). When the linking takes place, what is signaled is that following the occurrence of the event or state in the first clause, where *le* is used, another event/state will occur in a subsequent clause, and the connection thus created—between the two events/states—represents a relationship of *sequentiality* (see also Ljungqvist-Arin, 2003).

Two types of these complex sentences with *le* are the *temporal sequential sentence* and the *conditional sentence* (see Ljungqvist-Arin, 2003). The difference between the types is that while the first concerns a real temporal relationship (*after/when* the situation described by the subordinate clause is realized, the situation in the main clause will be as well), the second concerns a hypothetical one (*if* the situation described by the subordinate clause is realized, then so will the situation in the main clause) (Ljungqvist-Arin).

Examples (17) and (18) illustrate the expression of (*simple*) *temporal sequence* (type one) with verbal *le* and *conditional* (*temporal*) *sequence* (type two) with sentential *le*, respectively:

(17) Tā hē **le** jiǔ, jiù shuì zháo le. (verbal *le*)
S/he drink LE wine then sleep succeed LE
After s/he had drunk the wine, s/he went to sleep. (Li & Thompson, 1981, p. 641)

(18) Zuò mǔqīn zuò de tǎoyàn **le**, nǐ jiù bǎ háizi sòng dào wàimiàn qù. (sentential *le*)

be mother make DE dislike LE you just BA child send to outside go
If you dislike being a mother, just send your children out (of your home). (J. Li, 1924, p. 312)

2.4 Cognitive Grammar (CG): A theory of grammar

The theory of grammar upon which the method of investigating RQ3 (see Chapter 1) in this thesis is based, is called *Cognitive Grammar* (*CG*). This theory has been under development by American linguist Ronald Langacker since 1976, and it occupies a central position within the overall modern field of *cognitive linguistics* (see the third paragraph below) (Langacker, 1986; Evans et al., 2007).

Some of the defining features of *CG* are: a view of grammar as *symbolic* in nature (Langacker, 2008), in the sense that not only is each word, or part of a word, claimed to be symbolic, but so is a combination of words, or word parts, in the form of (symbolically) complex expressions (such as phrases, clauses, and sentences) (Langacker). According to Langacker (2008), we use grammar to construct and symbolize the meanings of everything from morphemes to complex expressions, which makes grammar "an essential aspect of the conceptual apparatus through which we apprehend and engage the world", and it is, therefore, "an integral part of [and a key to the understanding of] cognition" (pp. 3-4); grammar is *not* an autonomous linguistic component, separated from all other parts of language, but constitutes an integrated part of a continuum consisting of both lexicon, morphology and syntax; grammar carries semantic content (is meaningful), as opposed to being viewed as just a system of syntactic primitives where, in said system, notions such as "subject" and "noun" are claimed to be without intrinsic meaning (Langacker).

Cognitive linguistics is most accurately described as a "movement" or "enterprise", which adheres to a number of common core commitments and guiding principles, and these have given rise to a diverse range of interrelated theories (Evans et al., 2007). The two key commitments of the movement are termed the *Generalization Commitment* and the *Cognitive Commitment* (Lakoff, 1990): the first commitment represents an undertaking to find and describe general principles which pertain to *all* aspects of human language, as opposed to principles which apply only to a certain area of the language faculty, such as the *phonological*, *syntactical*, or *semantic* area, etc. (Evans et al., 2007); the second commitment represents a dedication to characterizing principles for language which are in agreement with—and thus reflect—what is known about the human mind from other cognitive and brain sciences (Evans et al.).

In more general terms, what is central to the cognitive linguistics enterprise is ”investigating the relationship between human language, the mind and socio-physical experience” (Evans et al., 2007, p. 2). In turn, cognitive linguistics belongs to the *functional* approach to language, where functional considerations are seen as *fundamental* to the description of language form, and emerged in the 1970s as a reaction to the other major approach to language, the syntax-centric *formal* one (where *generative grammar* has a prominent position), in which functional considerations are seen as merely *secondary* (Langacker, 2008; Evans et al.).

Furthermore, the CG theory's commitment to describing language in a detailed and precise way ensures that—unlike in the case of more formal approaches—cases where (as mentioned in Chapter 1) communicative function, general cognition, and semantics are of great importance in grammar, are not excluded (Lakoff, 1991). At the same time, the CG accounts are not, the application of CG in Chapter 5 indicates, based on linguistic descriptions which are too broad for the accounts to be revealing and adequate.

However, based on the literature review, no CG analysis/description of *le* has been done before, despite the described qualities. An important guide to the theoretical assumptions and conceptual tools important to the CG analysis/description in this thesis was therefore instead the analysis by De Wit and Brisard (2014). While their CG analysis concerns a different grammatical phenomenon (the English present progressive), it deals with a similar combination of temporal and modal properties of the grammatical phenomenon they analyse—making their analysis a useful parallel, when analysing the different senses of *le*.

In conclusion, to be more specific when it comes to the use of CG in the present study, the CG analysis/description of *le* involves finite clauses/propositions. Therefore, what is termed a *conceptualizer*, labeled C, needs to be described. A *conceptualizer* usually represents the speaker or hearer, but may also refer to, for example, the clausal subject. It is C who apprehends the propositions expressed by finite clauses, who interprets these propositions, and then assesses or judges their status (deeems them to be true/valid or not) with respect to C's perception of reality (see Langacker, 2008).

Chapter 3 Methodology

This chapter covers the methodology of the thesis, divided into the five Sections of 3.1 Participants, 3.2 The survey questionnaire, 3.3 The explanatory sequential test, 3.4 Procedure, and 3.5 Data analysis.

The methodological approach combined a questionnaire survey (Sections 4.1-4.4.1) and an explanatory sequential test (Section 4.6), and both methods used semantic elicitation (asking for semantic judgments) techniques, using a questionnaire and minimal pairs, respectively, measuring metalinguistic knowledge. This approach is unique in its use of empirical testing of the meaning of *le*, both quantitatively and qualitatively, incorporating both temporal and modal *le* properties in all three main sentence types, as well as all three commonly accepted *le* types (regarding the rarity of empirical testing of *le*, see, e.g., Jing-Schmidt et al., 2022).

The questionnaire was employed to carry out what can be seen as a variant of the truth-value judgment task, where 10 non-specialist native speakers of Mandarin were asked to judge which linguistic description fitted (was true for) a certain meaning of one or more *le* sentences. As opposed to a similar technique based on picture selection, this technique based on linguistic description can be applied to not just non-modal declarative sentences but to modal ones too, as well as to the other sentence types (Krifka, 2011). As such, the latter technique therefore seemed well suited for the study of a multifaceted object such as *le*.

The minimal pairs, with *le*-marked and *le*-less sentences, were constructed to ask two Chinese language consultants to (a) judge what the semantic difference in these minimal pairs was, where the meaning that *le* is usually found to contribute was already expressed in the *le*-less sentence in some of these minimal pairs, and not in others. Having confirmed that *le* in these minimal pairs expressed emphasis, the next step (b) was to ask the consultants what these emphases conveyed in terms of attitude.

In support of both methods, Matthewson (2004) argues that “one cannot gather adequate information about meaning from spontaneous discourse alone”, making semantic/direct elicitation “an indispensable methodological tool” (p. 369).

3.1 Participants

A sample of 10 Chinese participants (4 males and 6 females) was selected for the questionnaire survey. The participants were between 26-43 years (mean = 30.3). All participants were from the southeastern part of the Chinese mainland (Xiamen, Fujian province), and were all native speakers of Modern Standard Chinese (MSC)[26].

Those recruited were recruited in the social network. All (except one) were proficient in English and none of the participants were Chinese language specialists.

Furthermore, though Mandarin Chinese shows some regional variations, the *Southern Min* dialect, which coexists with Mandarin Chinese in the part of China the participants came from, has, in terms of *morphological* features, only influenced the standard variety spoken in Taiwan (called *Guóyǔ*), but not the one spoken in mainland China (D. Shi, 2016). This, therefore, suggests that the form of Mandarin Chinese spoken by the participants in all probability does not deviate from what is considered the standard elsewhere in China, as far as the use and understanding of *le* is concerned.

For the explanatory sequential test (see Section 4.6), the approach was the opposite of the one above and a *specialist/language consultant* was consulted instead, namely a published Chinese author and native speaker of Mandarin Chinese, with a degree in Chinese literature. The reason for consulting a specialist was that a deeper investigation of TAM (tense, aspect, and modality) semantics requires the consultant to have ”a certain level of experience”, so that he/she ”understands the significance of small semantic or pragmatic variations” (Cover, 2015, p. 244). Specifically, the use of this consultant was about *validating* an ability of *le* (viz., to express *emphasis* in contexts of expressing *attitude*) suggested by some, but not all, of the participants in the questionnaire survey (Bhatia, 2013). Likewise, the consultant was used in order to find out whether this ability—if validated—was shared by verbal *le* and sentential *le*.

As suggested by Nielsen (1997) though, it is likely advisable to consult more than one specialist for such validation, in order to limit the influence of potential “individual constraints”. Therefore, a second language consultant, also a native speaker of Mandarin Chinese and working as a teacher of Mandarin Chinese at Lund University, contributed her views on the investigated ability as well.

3.2 The survey questionnaire

26 MSC, which is also called *Pǔtōnghuà* ('the common language'), is, however, referred to in this thesis by the more widely known designation *Mandarin Chinese*.

The questionnaire used in the survey was designed in co-operation with an Associate Professor in General Linguistics at Lund University. It consisted of questions of both multiple-choice and open-ended format, and was designed to elicit linguistic judgments. The questions measured *binary* or *nominal* variables (e.g., "tense") as well as an *ordinal* variable (involving "the rating of attitudes on a scale").

A large number of Chinese *le* sentences, from different genres, was initially gathered from sources such as the *Beijing Daxue* (BEIDA) *Corpus* website (2016) and the *Modern Chinese Corpus* website (2016). The selection of these sentences was guided by example sentences and categorizations in Mandarin Chinese grammars such as Liu et al. (2001) and Xing (1997), as well as by native Chinese speakers who were consulted during this part of the design process.

One aim was to find sentences which represented as many distinct usages of *le* as possible. Another was to find or create *minimal sets* (see also *minimal pairs*) containing three sentences each, with each sentence differing only with respect to the presence or absence of verbal or sentential *le*, or their combination. The purpose of the latter aim was to find differences in the readings of these sentences due to a difference in a single morpheme (*le*) only.

An example of a minimal set of the described type, from the 10 eventually chosen/created, is the following:

(19)

Tā qù ***le*** *nàr.*	He went/is going/has gone there.	(verbal *le*)
Tā qù nàr ***le****.*	He is going/went there.	(sentential *le*)
Tā qù ***le*** *nàr* ***le****.*	He went/has gone/is going there.	(double *le*)

The altogether 60 sentences were all checked for grammatical and idiomatic errors by two native speakers of Mandarin Chinese (1 female, 28 years; 1 male, 30 years), both teachers of English from southeast China, and were then used as the test sentences in the questionnaire. Moreover, based on these sentences, a total of five main categories of *le* meaning could be identified (see also Section 2.3). These categories, plus the notion of *negation*, then represented the topics in the different sections which—with some or all of the test sentences placed in each of them—made up the questionnaire. The topics in the sections were: (1) *Completion–Non-completion* (see Sections 4.1.2, 4.2.2, 4.3.2), (2) *Change/New situation* (see Sections 4.1.3, 4.2.3, 4.3.3), (3) *Attitude* (see Sections 4.1.4, 4.2.4, 4.3.4), (4) *Tense* (see Sections 4.1.1, 4.2.1, 4.3.1), (5) *Forward linking* (see Section 4.4.1), and (6) *Negation* (see Lundvik, 2019).

3.3 The explanatory sequential test

After the completion of the survey, a new test was added to try and explain some of the results that the questionnaire yielded, specifically those linked to attitude/modality (see Sections 4.1.4, 4.2.4, 4.3.4). This changed the original study design to what Abbuhl et al. (2013) call an "explanatory sequential design" (p. 125). In turn, this combination of two research methods is referred to in the linguistic literature as a "mixed-method approach" (Abbuhl et al., p. 124).

The motivation for an additional test was two-fold: 1. an element deemed important was lacking in the survey questionnaire: *le*-less sentences, and 2. the data linked to attitude/modality were, on the whole, very evenly distributed among the *le* types, but it was unclear what caused the result. Addressing the latter first, an attempt was made, through a post-survey follow-up with some of the participants, to find out what motivated the choice of one *le* type (or rather *le sentence*) over the others.

The answers gave a mixed picture, but the factor that most participants said was the basis for the choice of *le* type, was *emphasis*. To try and validate an ability of *le* to express emphasis and, if validated, to link it to the expression of modality, however, a different test than the one in the questionnaire needed to be carried out. The chosen method was a *minimal pair* test, involving the element missing in the survey by comparing sentences with and without *le*. These sentences were judged by the two Chinese language consultants (see Section 3.1), in regard to the expression of emphasis, and one such minimal pair is the following:

(20)

Jiǔshí niándài tā chūguó liúxué, cóngcǐ wǒ zài yě méiyǒu jiànguò tā.	She went abroad to study in the 1990s, and I haven't seen her since.	(without *le*) In the first clause, the adverbial of past time ("in the 1990s") *indicates* that the event of HER GOING ABROAD TO STUDY IN THE 1990S is (already) *completed*.
Jiǔshí niándài tā chūguó liúxué ***le****, cóngcǐ wǒ zài yě méiyǒu jiànguò tā.*	She went abroad to study in the 1990s (!), and I haven't seen her since.	(sentential *le*) In the first clause, *le emphasizes* that the event of HER GOING ABROAD TO STUDY IN THE 1990S is (as already indicated by the time adverbial) *completed*.

3.4 Procedure

The recruitment of survey participants took place on site in China during a time when the country was the present author's home, in 2013. The actual survey was then carried out in the spring of 2014, following electronic distribution of the questionnaire in Microsoft Excel spreadsheet form. Each participant completed the questionnaire individually, at home, and then returned the filled-out questionnaire to the said author, electronically.

Informed consent was obtained orally from the participants, followed by their (as described) personally returning the completed questionnaires to the present author. The participants were assigned pseudonyms, and personal information collected included gender, age, place of origin, profession and educational background (see Section 3.1).

To limit the risk of participants rationalizing their answers based on a correlation between sentences with the same type of *le* (i.e., to reduce the possibility of *common method bias*), the *le* sentences in the relevant sections of the questionnaire were all spread out. This was done to the extent deemed appropriate, and included not placing the three *le* sentences in each minimal set together, but with a large number of other *le* sentences between each of them.

Furthermore, to minimize the risk of misunderstandings, all instructions in the questionnaire were given in Mandarin Chinese, formulated with the help of a native Chinese speaker. It was found that some questions were unanswered, and the participants were therefore contacted again and asked if they would be willing to look over any questions they potentially had missed. As a result, some then sent revised response versions where most blanks had now been filled in, and these revised versions then replaced the original ones.

Regarding the specific questionnaire instructions, for the questions measuring *binary* or *nominal* variables, participants were instructed to select the most appropriate option from between two to eight multiple-choice options, for each *le* sentence (see [21] below). For the questions measuring an *ordinal* variable, they were instead told to, for each "attitudinal phrase + *le* sentence", select the most appropriate option out of four on a rating scale (see [22] below). For the open-ended questions, finally, they were instructed to write down all possible negative counterparts of each of the 60 *le* sentences (see Lundvik, 2019).

(21) Example (translated from Chinese) from the questionnaire (see *tense* data, Appendix A), with 8 options for *le* sentence 35:

At what time do you think the actions/states in the following sentences occurred? – Please judge which option is more suitable. If you feel that none of the options are suitable, please leave a blank.

***Sentence 35**: Tā shòu **le** yīdiǎnr **le**.* ('He has become a little thinner/is a little too thin/is a little thin now')

(no translation in the actual questionnaire)

***1.** Action/state taking place in the **past**: **a)** Action/state has been completed*
***b)** Action/state has not yet been completed*

***2.** Action/state starting in the **past** and continuing up to the **present**: **a)** Action/state has been completed*
***b)** Action/state has not yet been completed*

***3.** Action/state taking place in the **present**: **a)** Action/state has been completed*
***b)** Action/state has not yet been completed*

***4.** Action/state taking place in the **future**: **a)** Action/state has been completed*
***b)** Action/state has not yet been completed*

(22) Example (translated from Chinese) from the questionnaire (see relevant data, Appendix C), with 4 rating options for each "attitudinal phrase + *le* sentence" in set 1:

Which phrases related to attitude, opinion or emotion do you think are suitable for the following sentences? For each of the following sets of 3 (phrase + sentence) alternatives, please decide which alternative is more suitable (sounds best).

Rating options: ***a)** It sounds very nice **b)** It sounds okay **c)** It doesn't sound good **d)** It is out of the question*

***Set 1**:*

*1. Zāogāo! Tā mǎi **le** sān běn shū **le**.* ('How terrible! He (has) bought three books'): ***a)**, **b)**, **c)**, **d)***

*2. Zāogāo! Tā mǎi sān běn shū **le**.* ('How terrible! He (has) bought/buys three books'): ***a)**, **b)**, **c)**, **d)***

*3. Zāogāo! Tā mǎi **le** sān běn shū.* ('How terrible! He bought three books'): ***a)**, **b)**, **c)**, **d)***

(no translation in the actual questionnaire)

Furthermore, the translation of each Chinese test sentence in this thesis is, in terms of "tense" selection, based on the "tense" option that gave the *highest* percentage (see "relative frequency scores", in Section 3.5) for each test sentence, in the "tense"-related section (see data, Appendix A). Additionally, for

sentences which regularly elicit two distinct interpretations (*temporal* or *modal*), such as those with an adjectival predicate, two translations are given; two or more translations are also given when two or more temporal interpretations are (almost) equally acceptable, based on the same data. In these last-named cases, the translations are arranged according to the order of magnitude of the percentages of the different ”tense” options, for each test sentence (again, see Section 3.5).

As for the language consultants, finally, correspondence with them took place via e-mail, telephone and the online platform Zoom, and both consultants gave informed consent to participate in this study.

3.5 Data analysis

The analysis in this thesis has both quantitative elements (the descriptive statistical analysis) and qualitative elements (the linguistic literature review, the minimal pair analysis, the CG analysis). As a whole, however, the study was conducted with a qualitative descriptive approach.

The techniques used to analyse the data in this study varied based on the research question being addressed. To investigate **RQ1** (see Chapter 1), focus was placed on five of the aforementioned questionnaire topics, namely: (1) *Completion–Non-completion*, (2) *Change/New situation*, (3) *Attitude*, (4) *Tense*, and (5) *Forward linking* (see Section 3.2). Upon completion of the questionnaire survey, the data obtained on the three *le* types, across these topics, underwent descriptive statistical analysis. This yielded relative frequency scores (percentages) for each *le* sentence (related to the respective topic), based on the number of answers given by the participants. In addition, to ground the findings based on these data, support was also consistently drawn from the linguistic literature.

Furthermore, the dataset has been mined/researched for two different studies, and the data on the *affirmative le* sentences were used in this thesis, while those on the *negative le* sentences (collected through the open-ended questions) were used in a BA thesis (see Lundvik, 2019). In addition, some contradictory answers to rephrased questions in section two of the questionnaire (concerning *completion–non-completion*) were found. As the post-survey follow-up revealed that these answers were not based on strictly grammatical grounds—as opposed to the answers to the questions in section one (see *completion–non-completion* data, Appendix A)—but on individually more variable semantic interpretations, these answers were discarded (see *iterative questioning*, Shenton, 2004). All the raw data, including those on the *negative le* sentences, may, however, be sent upon request.

To investigate **RQ2** (see Chapter 1), a minimal pair analysis was carried out using the minimal pair test described in Section 3.3. Drawing on this analysis, and that of the survey and the linguistic literature reviewed, an attempt was then made to derive a core (semantic) meaning for *le*, shared by the three *le* types.

To investigate **RQ3** (see Chapter 1), finally, a CG description and analysis was conducted, where one aim was to capture the main meanings of the three *le* types, as described in this thesis, in a polysemy network model. The other aim was to capture a core (semantic) *le* meaning, if one could be found, in a CG diagram.

Chapter 4 Results

In this chapter, the results of the questionnaire survey will be presented first (Sections 4.1-4.4.1), followed by the results of the explanatory sequential test (Section 4.6). More precisely, the data from these two tests provide part of the basis for the answers to **RQ1a** and **RQ1b** (test one) and to **RQ2** (test two), respectively.

4.1 The questionnaire survey: Verbal *le* (Simple sentences)

In the questionnaire, the 10 participants were instructed to answer multiple-choice questions measuring the variables Completion–Non-completion, Change/New situation, Attitude, Tense, and Forward linking (see below). The selection of the most appropriate option from the multiple-choice options for each *le* sentence, yielded a total amount of data of 3000 data points, concerning the affirmative *le* sentences analysed in this thesis.

The rates (proportions/percentages), for each multiple-choice option per *le* sentence, were calculated based on the number of participants and not the number of answers. This meant that each option frequently yielded 0-10 answers/10 participants (= 0-100%). However, as the participants were allowed to mark several answers, the total number of answers for each numbered *le* category ([23a], [23b], etc., below), therefore, does not always correspond to the total number of participants, and the proportions, consequently, do not always add up to 100%. See, for example, (25b), Section 4.1.1.3, where 9 participants marked a total of 10 answers = 111.1%.

Moreover, sometimes one test sentence applies per category (as in all Tense categories = [23a], [23b], etc.) and sometimes two or three sentences per category (as in some Completion–Non-completion- and Change/New situation–No Change/New situation categories, e.g., [23a-b; 24a], [24b-c]). Therefore, the conclusions are at times drawn from one sentence and at times from several.

Additionally, it was not always possible to find/construct *correct* versions of *le* sentences in all the cases where such sentences are acceptable in English, which may explain, for example, the lack of a *le*-marked imperative sentence with a quantified object. Cases such as these are labled Not applicable (N/A) in Tables 1, 2, and 3 (see Section 4.5).

For each *le* type, the Tense sections (4.1.1, 4.2.1, 4.3.1) in this chapter are ordered first, and in these sections all the test sentences are also presented. For reasons of thesis word limitations, only the

numbers of these test sentences (same as those of the *le* categories, i.e., [23a], [23b], etc.) are repeated/displayed in the Completion–Non-completion (4.1.2, 4.2.2, 4.3.2) and Change/New situation sections (4.1.3, 4.2.3, 4.3.3). The partially different test sentences in the Attitude (4.1.4, 4.2.4, 4.3.4) and Forward linking sections (4.4.1) are, however, presented as well.

4.1.1 Tense

4.1.1.1 Declarative sentences with *transitive* predicates

(23a) **Active** sentence with an **unquantified** object

(23b) **Active** sentence with a **quantified** object

(23c) **Passive** sentence with a **quantified** object

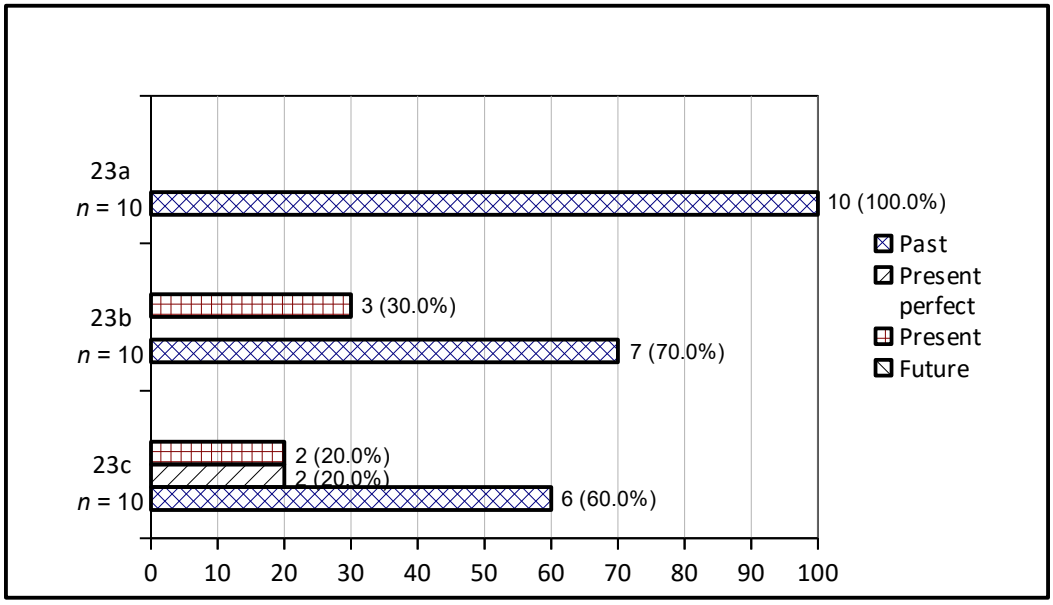

Figure 1: Number of Past, Present perfect, Present, and Future tense answers for verbal *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

(23a) Wǒ mǎi **le** shū.[27]

I buy LE book

I bought (the) books/a/the book.

27 NB: Simple verbal-*le* sentences such as this, with an unquantified object, can by some Chinese be perceived as unfinished.

(23b) Wǒ mǎi **le** sān běn shū.
I buy LE three CL book
I bought three books.

(23c) Wǒ bèi chá **le** liǎng piào.
I BEI check LE two CL
Two of my shipments were checked.

The temporal reading preferred by all ten participants in the verbal-*le* category with an *unquantified* object (23a), was the *past* tense (100.0%).

In contrast, when comparing (23a) with the corresponding category with a *quantified* object (23b), the reading patterns are noticeably different. In (23b), it was clear that although the most preferred alternative, chosen by seven participants, was the *past* tense (70.0%), the preference was not as pronounced as in (23a). Also, with three participants preferring the *present* tense type (30.0%), this created the additional difference of a more scattered reading distribution in (23b) (with two tense alternatives) than in (23a) (with one alternative).

In the *passive* verbal-*le* category with a *quantified* object (23c), not only was the most preferred alternative—chosen by six participants—the same as in the corresponding active category (23b), that is, the *past* tense, but also the proportion of answers of this type was of similar size (60.0%). However, with the remaining participants in (23c) preferring the *present perfect* type (n = 2, 20.0%) and the *present* tense type (n = 2, 20.0%), respectively, that contributes to a reading distribution in this passive category (23c) which is even more scattered (with three tense alternatives) than in the corresponding active one (23b).

4.1.1.2 Declarative sentences with *intransitive* (verbal or adjectival) predicates

(24a) **Active** sentence (verbal predicate) with an **adverbial**

(24b) **Active** sentence (adjectival predicate) with an **adverbial**

(24c) **Active** sentence (adjectival predicate) with an **adverbial**

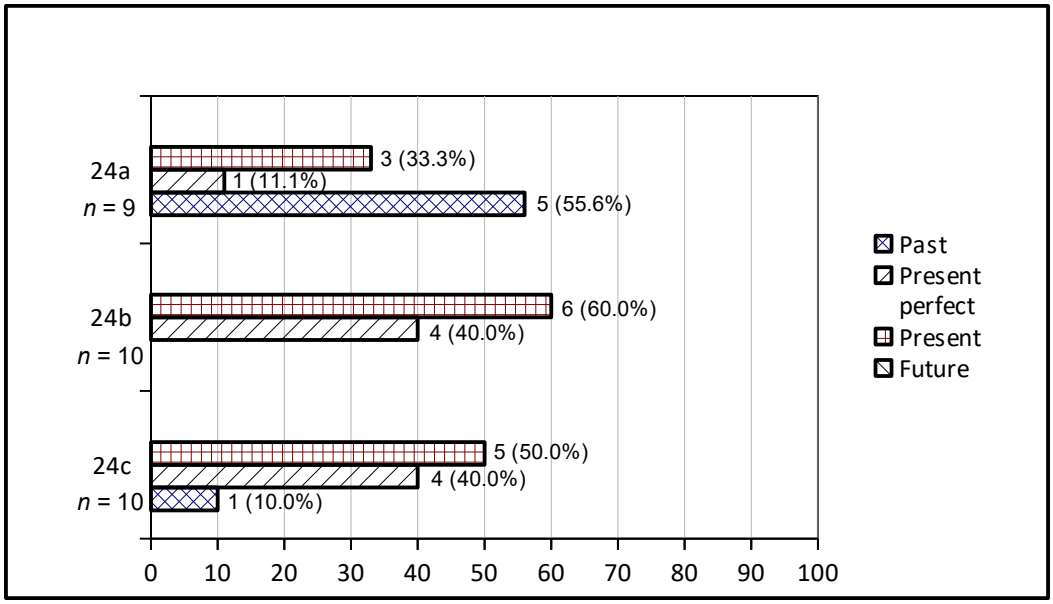

Figure 2: Number of Past, Present perfect, Present, and Future tense answers for verbal *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

(24a) Tā qù **le** nàr.
he go LE there
He went there.

(24b) Tā shòu **le** yī diǎnr.
he thin LE one little
He is a little (*too*) thin.
He has become a little thinner.

(24c) Jīntiān de fēnglàng bǐ lái de shíhou xiǎo **le** hěn duō.
today DE stormy wave BI come DE time small LE very much
Today's stormy waves are much smaller than when we came.
Today's stormy waves have become much smaller than when we arrived.

Comparing the *intransitive* verbal-*le* category (24a) with the *transitive* equivalents (23a)–(23c), it is clear that the most preferred temporal reading was the same, namely the *past* tense, in all four categories. However, this reading was not nearly as pronounced in the *intransitive* category (24a)—where it was chosen by five out of nine (55.6%) participants—as in the corresponding *transitive* category with an

unquantified object (23a), and less pronounced than in the equivalents with a *quantified* object (23b) and (23c) as well. Additionally, with one participant choosing the *present perfect* (11.1%) and three the *present* tense (33.3%), the other rates for (24a) show a distribution pattern decidedly more in line with the categories with a *quantified* object than the category with an *unquantified* object.

In sharp contrast, however, to the reading patterns for the transitive (23a)–(23c) and intransitive *verbal*-predicate (24a) verbal-*le* categories stand the patterns for the two intransitive *adjectival*-predicate verbal-*le* categories (24b) and (24c)[28]. Thus, instead of showing a *past* tense preference, the dominant tense in the adjectival-predicate categories was the *present* tense, chosen by six out of ten (60.0%) and five out of ten (50.0%) participants, respectively; and the remaining, less preferred, readings were the *present perfect* (n = 4, 40.0% [24b]; n = 4, 40.0% [24c]) and the *past* (n = 1, 10.0% [24c]) tense.

4.1.1.3 Interrogative sentences with *transitive* or *intransitive* (verbal) predicates

(25a) **Active** sentence (transitive predicate) with an **unquantified** object

(25b) **Active** sentence (intransitive predicate) with an **adverbial**

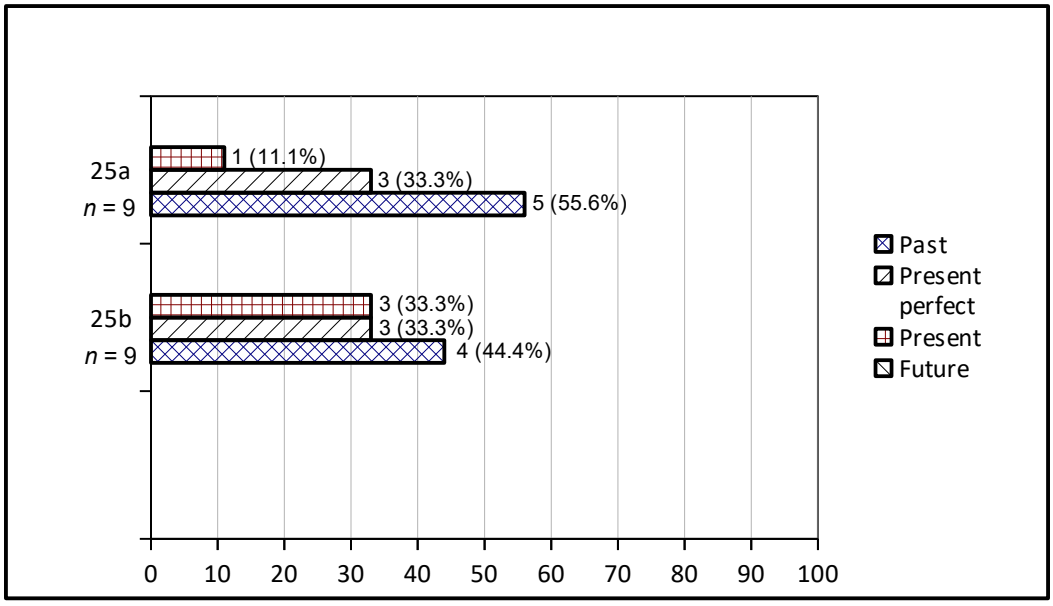

Figure 3: Number of Past, Present perfect, Present, and Future tense answers for verbal *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

28 The classification of the marker as verbal *le* here, where *le* is followed by an adverbial, follows the examples from Li and Thompson (1981), Ljungqvist Arin (2003), and others.

(25a) Nǐ chī **le** wǎnfàn ma?
you eat LE dinner MA
Did you have dinner?

(25b) Tā lái **le** wǒ jiā ma?
she come LE my home MA
Did she show up at the house?
Has she showed up at/Is she coming to the house?

Just as in the corresponding declarative category (23a), the *past* tense was the most preferred temporal reading in the *interrogative* verbal-*le* category with an *unquantified* object (25a). This answer was, however, chosen by only about half of the participants (*n* = 5/9, 55.6%), while the remaining participants chose the *present perfect* (*n* = 3/9, 33.3%) and the *present* (*n* = 1/9, 11.1%) tense, respectively. These answers, therefore, show a more scattered reading distribution in the interrogative category than in the declarative one.

In both the *interrogative intransitive* verbal-*le* category (25b) and its declarative intransitive equivalent (24a), the number of chosen tenses (three) was the same, and the rates for the tenses are also quite evenly distributed in both categories, but more so in (25b). Specifically, as in (24a), the most preferred reading in (25b) was the *past* tense, chosen by, in the latter category, four out of nine (44.4%) participants. Additionally, almost as many chose the *present perfect* (*n* = 3, 33.3%) and the *present* (*n* = 3, 33.3%) tense in the same category.

4.1.1.4 Imperative sentence with a *transitive* predicate

(26) Sentence with an
unquantified object

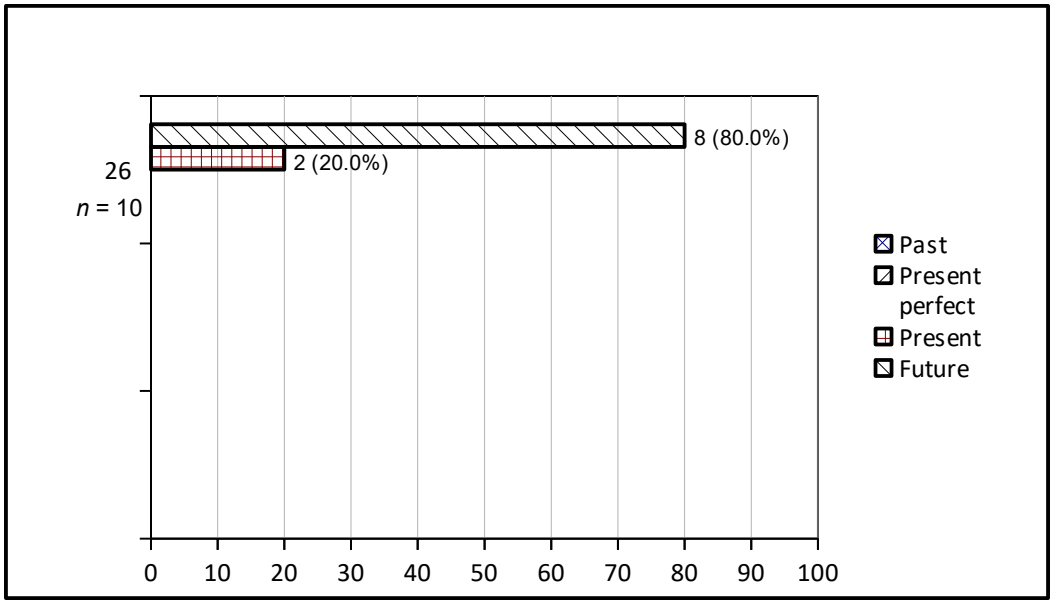

Figure 4: Number of Past, Present perfect, Present, and Future tense answers for verbal *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

(26) Dào **le** tā!
pour LE it
Empty it!

While two out of ten (20.0%) participants selected the *present* tense in the *imperative*[29] verbal-*le* category with an *unquantified* object (26), all the remaining eight (80.0%) selected the *future* tense, making it the clearly dominant alternative in this category.

4.1.2 Completion (Co)–Non-completion (NCo)

4.1.2.1 Declarative, interrogative, and imperative sentences

(23a-b; 24a) **Active** sentences with an **action** verb (23c) **Passive** sentence with an **action** verb

(24b-c) **Adjectival**-verb sentences (25a-b) **Interrogative** sentences (26) **Imperative** sentence

29 Morphological tense is, however, not applicable to the imperative mood, at least not in English.

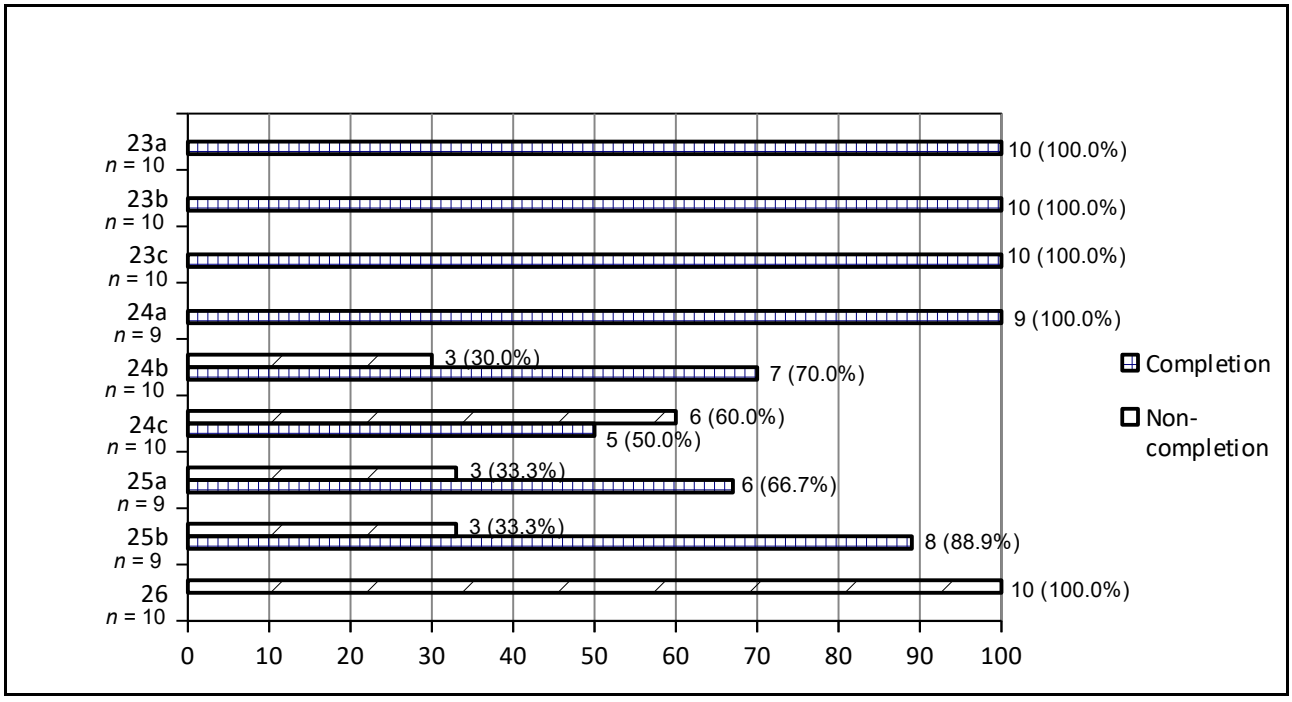

Figure 5: Number of Completion and Non-completion answers for verbal *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

In the verbal-*le* categories with *action* verbs, for both *active* (23a-b; 24a) and *passive* (23c) sentences, all participants answered that *le* expressed *completion* (*n* = 10, 100.0%; *n* = 10, 100.0%; *n* = 9, 100.0%; *n* = 10, 100.0%). Thus, the data show that it was equally common for verbal *le* to express completion regardless of the quantificational status (unquantified; quantified) of the object and the transitivity (transitive; intransitive) and voice (active; passive) of the predicate.

In the category with *adjectival*-verb sentences (24b-c), however, the data show a rather mixed picture. Hence, for sentence (24b), most participants answered that *le* expressed *completion* (*n* = 7, 70.0% Co vs. *n* = 3, 30.0% NCo), while for sentence (24c), the result was the opposite—albeit by a small margin—with most participants answering that *le* expressed *non-completion* (*n* = 6, 60.0% NCo vs. *n* = 5, 50.0% Co). These data therefore indicate that verbal *le*, in these sentences, can just as well convey *completion* as *non-completion*.

As for the *interrogative* category (25a-b), the proportion of *completion* answers is clearly higher than that of *non-completion* answers for both sentences (*n* = 6, 66.7% Co vs. *n* = 3, 33.3% NCo [25a]; *n* = 8, 88.9% Co vs. *n* = 3, 33.3% NCo [25b]). However, since the sum of the percentages for sentence (25b) exceeds 100%, a comparison with other sentences and categories cannot be made directly, and instead, the ratio between the proportion of *completion* and *non-completion* answers, can be used. Thus, the average

proportion of *completion* answers compared to *non-completion* answers in the interrogative category is 77.8 versus 33.3%[30], and compared to the average proportions in the other categories, this means that *le* was considered to express *completion* to a notably lesser extent in the interrogative category than in the declarative action-verb categories (100.0% Co), but to a greater extent than in the one with declarative adjectival verbs (60.0% Co vs. 45.0% NCo).

Finally, in the *imperative* category (26), in direct contrast to the results for the declarative action-verb categories, all participants responded that *le* expressed *non-completion* (n = 10, 100.0%).

4.1.3 Change/New situation (Ch)–No Change/New situation (NCh)

4.1.3.1 Declarative, interrogative, and imperative sentences

(23a-b; 24a) **Active** sentences with an **action** verb (23c) **Passive** sentence with an **action** verb

(24b-c) **Adjectival**-verb sentences (25a-b) **Interrogative** sentences (26) **Imperative** sentence

30 Calculation of the average proportions in (25a-b): (n = 6/9 + 8/9)/2 = *completion*; (n = 3/9 + 3/9)/2 = *non-completion*. The same method of calculating average proportions is, most frequently, used throughout Chapter 4. However, when the number of answering participants per included sentence differs, the calculation looks like for (23a-b; 24a): (5+4+6)/(7+7+9) = *change/new situation*; (2+3+3)/(7+7+9) = *no change/new situation*.

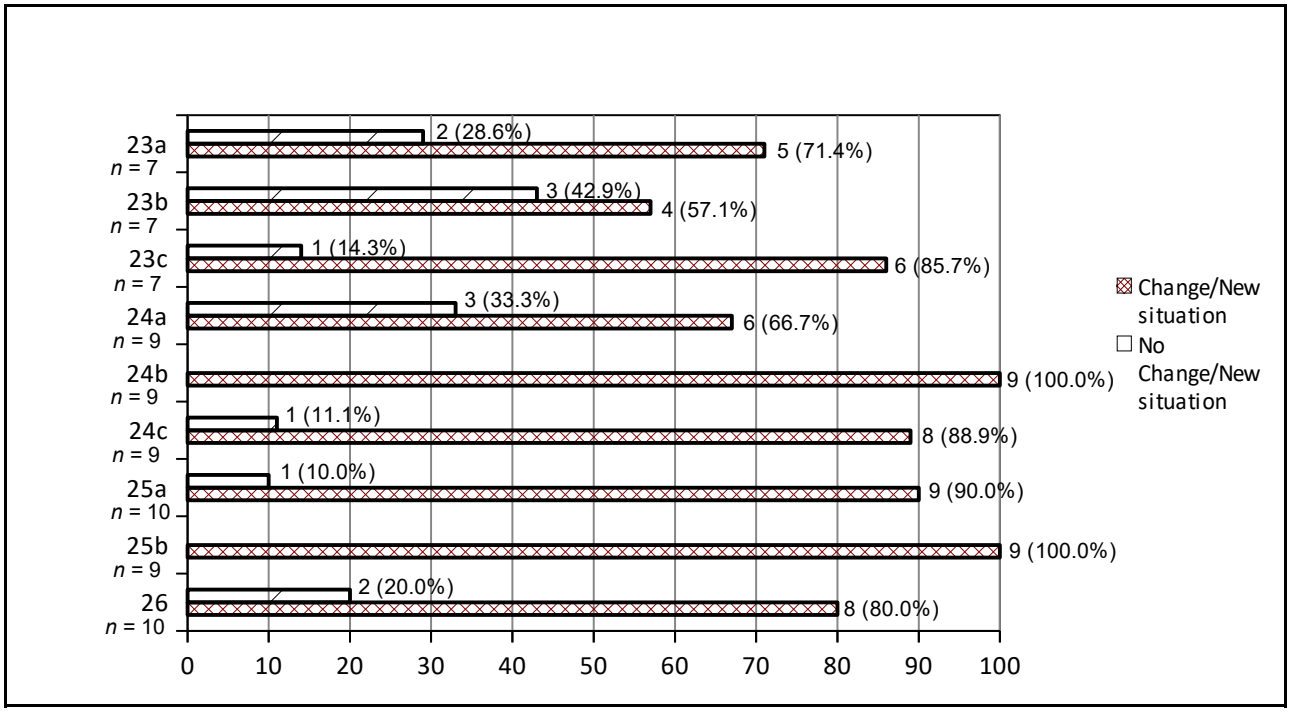

Figure 6: Number of Change/New situation and No Change/New situation answers for verbal *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

In the verbal-*le* category with *adjectival*-verb sentences (24b-c), all participants (*n* = 9, 100.0% [24b]) or all but one (*n* = 8, 88.9% [24c]) answered that *le* expressed *change/new situation*, meaning that *le* to a great extent was considered to express *change/new situation* in these sentences.

Also in the *interrogative* category (25a-b), the expression of *change/new situation* predominates over *no change/new situation* and moreover to an almost identical extent. Specifically, for sentence (25a), all but one participant answered that *le* expressed *change/new situation* (*n* = 9, 90.0%) and for (25b), the same answer was given by all participants (*n* = 9, 100.0%).

To only a slightly lesser extent, *le* was considered to express *change/new situation* in the *passive* sentence category (23c), where all but one participant chose that alternative (*n* = 6, 85.7%) over the other (*n* = 1, 14.3%).

In the active declarative *action*-verb category (23a-b; 24a), the proportion of *change/new situation* answers ranges between 57.1% (*n* = 4/7) for (23b) and 71.4% (*n* = 5/7) for (23a). What the data show, overall, therefore, is that the average proportion of *change/new situation* answers in this category (65.2%) is notably lower than in, above all, the *adjectival*-verb (94.4%) and *interrogative* (94.7%) categories.

The answers in the *imperative* category (26), finally, show that, just as in all the previous categories, the expression of *change/new situation* clearly dominates, with eight out of ten (80.0%) participants choosing this answer.

4.1.4 Attitude

In order to study the ability of *le* to express *modality*, the participants were instructed to choose the *le* sentence that best matched a certain attitudinal expression (in the form of a one-word or multi-word "attitudinal phrase"). A total of 14 different sets of three "attitudinal phrase + *le* sentence" alternatives were included, with the same attitudinal expression for each *le* sentence in each set (see examples below), and for each set, the participants had to choose between 4 different rating options: a) *It sounds very nice* b) *It sounds okay* c) *It doesn't sound good* d) *It is out of the question*.

In the compilation of the answers, the a) and b) responses were merged together and labeled as "positive" answers, and the c) and d) ones were merged together and labeled as "negative" answers, in order to obtain a representative number (percentage) per "attitudinal phrase + *le* sentence" alternative. With 10 participants, each alternative could, in this section of the questionnaire, receive a maximum of 10 (100.0%) positive or negative answers.

The response outcome was overall very even between the different alternatives, and when choosing the sentence felt to be most appropriate, various factors played a role: for example, *rhythm/*appropriate *total le amount* (too many *le*s were considered "uncomfortable" to pronounce/perceived as less idiomatic) and *content* (unrelated to *le*, such as a negative attitudinal expression not fitting with a positive trait).

In addition to the factors already mentioned, the factor of emphasis also seems to have been important for the participants' choices, and below are two sets of "attitudinal phrase + transitive *le* sentence", to show precisely the importance of emphasis in relation to modality/attitude (see also Sections 4.2.4, 4.3.4):

(27a) *Tā mǎi **le** sān běn shū **le**. Tài hǎo le!* 'He (has) bought three books. Great!' (double *le*)
(7/10 + 0/10 = 70.0% "positive"; 3/10 + 0/10 = 30.0% "negative")

(27b) *Tā mǎi sān běn shū **le**. Tài hǎo le!* 'He (has) bought/buys three books. Great!' (sentential *le*)
(4/10 + 4/10 = 80.0% "positive"; 2/10 + 0/10 = 20.0% "negative")

(27c) *Tā mǎi **le** sān běn shū. Tài hǎo le!* 'He bought three books. Great!' **(verbal *le*)**

(7/10 + 2/10 = 90.0% ”positive”; 1/10 + 0/10 = 10.0% ”negative”)

(28a) *Zhōngyú! Tā mǎi sān běn shū* ***le****.* 'Finally! He (has) bought/buys three books.' (sentential *le*)
(4/10 + 2/10 = 60.0% ”positive”; 2/10 + 2/10 = 40.0% ”negative”)

(28b) *Zhōngyú! Tā mǎi* ***le*** *sān běn shū.* 'Finally! He bought three books.' **(verbal *le*)**
(3/10 + 7/10 = 100.0% ”positive”; 0/10 + 0/10 = 0% ”negative”)

(28c) *Zhōngyú! Tā mǎi* ***le*** *sān běn shū* ***le****.* 'Finally! He (has) bought three books.' (double *le*)
(5/10 + 2/10 = 70.0% ”positive”; 2/10 + 1/10 = 30.0% ”negative”)

For the verbal-*le* sentences in both sets above, the participants who believed that emphasis was decisive for which alternative was considered best stated that the verb *mǎi* 'buy' was emphasized or in focus. According to these participants, the focus on the verb meant that the situation was interpreted as the actor in the sentence ”succeeding in buying (something)”, which is why the attitudinal expressions *Tài hǎo le!* 'Great!' and *Zhōngyú!* Finally! were considered to fit best with the verbal-*le* sentences (27c) and (28b).

4.2 The questionnaire survey: Sentential *le* (Simple sentences)

4.2.1 Tense

4.2.1.1 Declarative sentences with *transitive* predicates

(29a) **Active** sentence with an **unquantified** object

(29b) **Active** sentence with a **quantified** object

(29c) **Passive** sentence with a **quantified** object

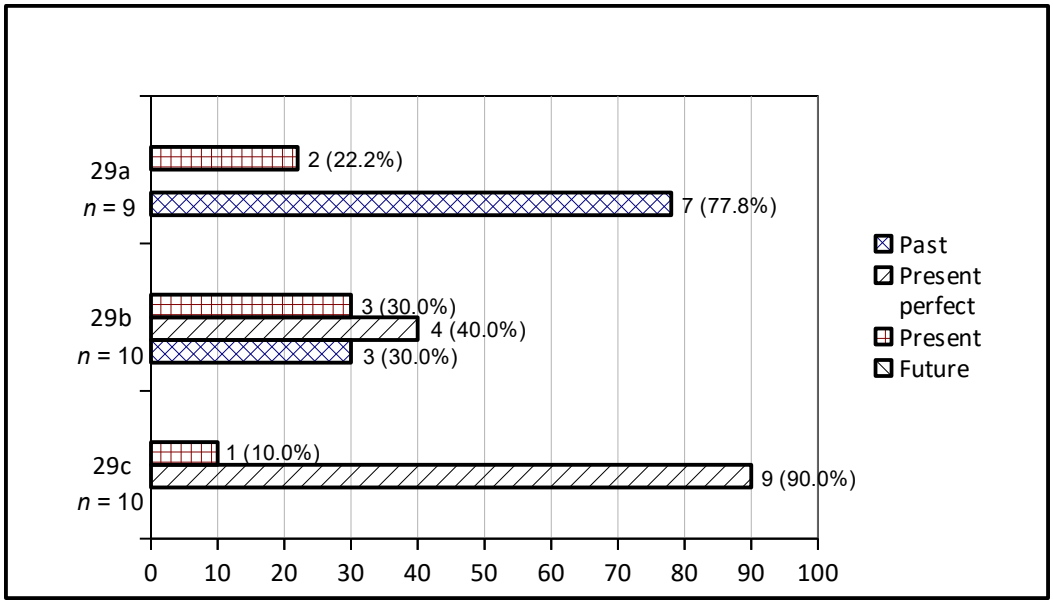

Figure 7: Number of Past, Present perfect, Present, and Future tense answers for sentential *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

(29a) Wǒ mǎi shū le.

I buy book LE

I bought (the) books/a/the book.

(29b) Wǒ mǎi sān běn shū **le**.

I buy three CL book LE

I have bought three books.

I bought/buy/am buying (= will buy) three books.

(29c) Wǒ bèi chá liǎng piào **le**.

I BEI check two CL LE

Two of my shipments have been checked.

With seven out of nine (77.8%) participants choosing the *past* tense, and the remaining two (22.2%) the *present* tense, the answers in the sentential-*le* category with an *unquantified* object (29a) show that the most preferred temporal reading was the *past* tense.

Unlike the preferred *past* tense reading in (29a), the most preferred reading in the sentential-*le* category with a *quantified* object (29b) was the *present perfect*, chosen by four out of ten (40.0%)

participants. Additionally, this alternative was followed closely by both the *past* and the *present* tense, chosen by three (30.0%) participants in both cases. This means that the difference between the sentential-*le* category with an *unquantified* object (29a) and that with a *quantified* object (29b), is evident. Specifically, the reading distribution in (29b) is not only more scattered but also more even than in (29a), and the most preferred readings are different in the two categories.

Just as in the corresponding *active* category (29b), the most preferred reading in the *passive* sentential-*le* category with a *quantified* object (29c) was the *present perfect* tense. However, with as many as nine out of ten (90.0%) participants choosing this tense in the latter category, this reading is distinctly more dominant in (29c) than in (29b), and the reading distribution in (29c) is less scattered as well.

4.2.1.2 Declarative sentences with *intransitive* (verbal or adjectival) predicates

(30a) **Active** sentence (verbal predicate) with an **adverbial**

(30b) **Active** sentence (adjectival predicate) with an **adverbial**

(30c) **Active** sentence (adjectival predicate) with an **adverbial**

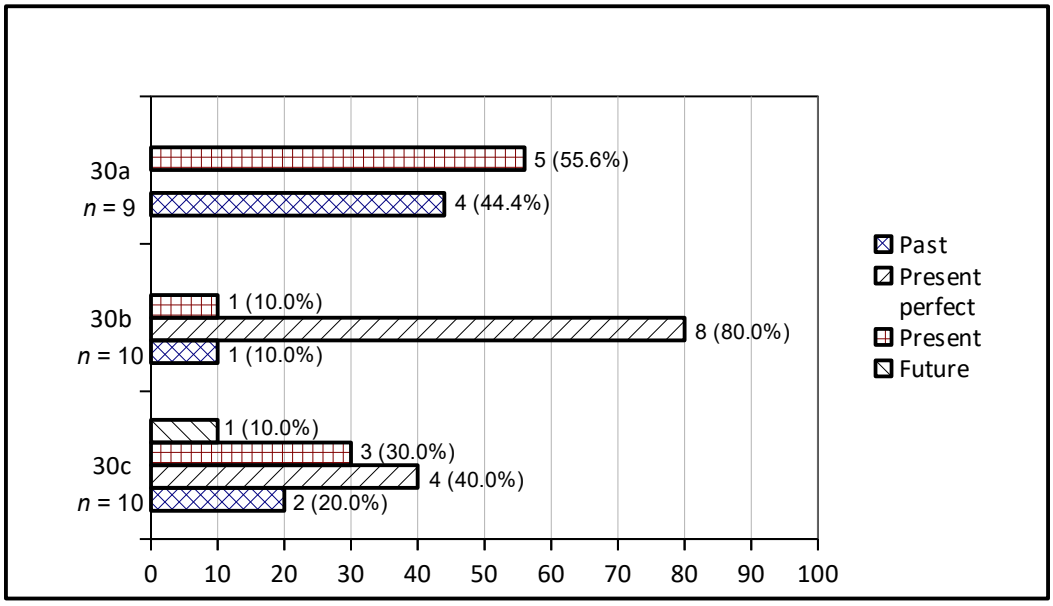

Figure 8: Number of Past, Present perfect, Present, and Future tense answers for sentential *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

(30a) Tā qù nàr **le**.

he go there LE
He is going there.
He went there.

(30b) Tā shòu yī diǎnr **le**.
he thin one little LE
He has become a little thinner.

(30c) Jīntiān de fēnglàng bǐ lái de shíhou xiǎo hěn duō **le**.
today DE stormy wave BI come DE time small very much LE
Today's stormy waves have become much smaller than when we arrived.
Today's stormy waves are much smaller than when we came.

Interestingly, when comparing the *intransitive* sentential-*le* category (30a) with the corresponding *transitive* categories (29a)–(29c), some major differences are evident, both in the size of the rates for the tenses and their order of magnitude. Most predominantly, unlike the most preferred temporal readings in the *transitive* sentential-*le* categories—which were the *past* (29a) and *present perfect* (29b)–(29c) tense—the most preferred reading in (30a) was the *present* tense, selected by five out of nine (55.6%) participants, followed closely by the *past* tense, selected by four (44.4%).

The most preferred reading in the two intransitive *adjectival*-predicate sentential-*le* categories (30b) and (30c) was the *present perfect* tense, chosen by eight out of ten (80.0%) and four out of ten (40.0%) participants, respectively. Thus, the most preferred reading in (30b)–(30c) was the same as in the *transitive* sentential-*le* categories with a *quantified* object (29b)–(29c).

4.2.1.3 Interrogative sentences with *transitive* or *intransitive* (verbal) predicates

(31a) **Active** sentence (transitive predicate) with an **unquantified** object

(31b) **Active** sentence (intransitive predicate) with an **adverbial**

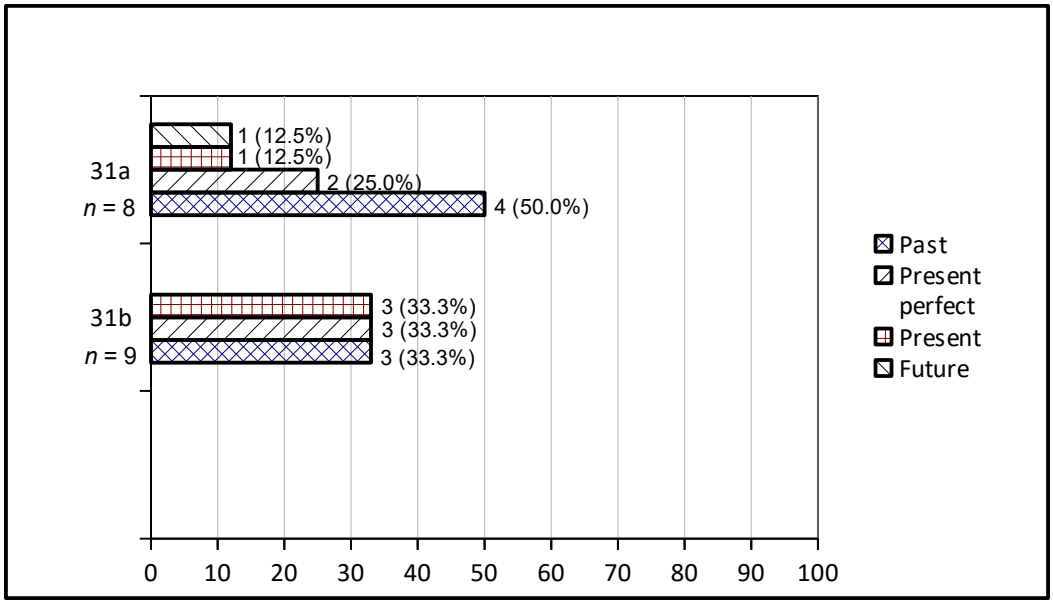

Figure 9: Number of Past, Present perfect, Present, and Future tense answers for sentential *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

(31a) Nǐ chī wǎnfàn **le** ma?
you eat dinner LE MA
Did you have dinner?

(31b) Tā lái wǒ jiā **le** ma?
she come my home LE MA
Did she show up at/Has she showed up at/Is she coming to the house?

The most preferred temporal reading in the *interrogative* sentential-*le* category with an *unquantified* object (31a) was the same as in the declarative sentential-*le* equivalent (29a), that is, the *past* tense. However, this reading was chosen by clearly fewer participants in the interrogative category (*n* = 4/8, 50.0% [31a]) than in the declarative one (77.8% [29a]). Moreover, when adding the tenses in (31a) chosen by the rest of the participants (*n* = 2/8, 25.0% *present perfect*, *n* = 1/8, 12.5% *present*, *n* = 1/8, 12.5% *future*), it is clear that the reading distribution in this category is also distinctly more scattered than in (29a).

Unlike the pattern between the corresponding transitive sentential-*le* categories ([29a] vs. [31a]), the most preferred reading in the *interrogative intransitive* sentential-*le* category (31b) was not the same as in the declarative intransitive equivalent (30a), at least not exclusively. Thus, the *past*, the *present perfect* and the *present* tense readings all share the same level of preference, chosen by three out of nine (33.3%)

participants per tense. However, just as for (29a) and (31a), the most preferred reading was yet again chosen by clearly fewer participants (more participants chose other readings) in the interrogative category (31b) than in the declarative equivalent (30a), and a more scattered and (slightly) more even reading distribution in the interrogative category than the declarative one can be seen here as well.

4.2.1.4 Imperative sentence with an *intransitive* (verbal) predicate

(32) Sentence **without**
an **adverbial**

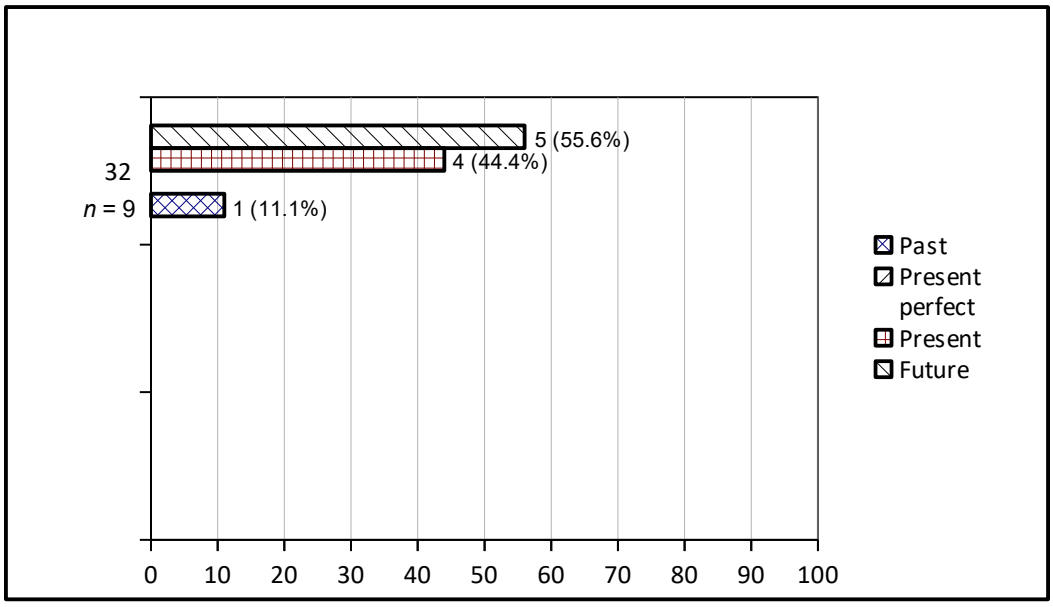

Figure 10: Number of Past, Present perfect, Present, and Future tense answers for sentential *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

(32) Zǒu **le**!
go LE
It's time to go!

The answers in this *imperative* sentential-*le* category (32) show that the most preferred reading was the *future* tense. The *future* tense was selected by five out of nine (55.6%) participants, and as many as four chose the *present* (44.4%) tense and one the *past* (11.1%).

4.2.2 Completion (Co)–Non-Completion (NCo)

4.2.2.1 Declarative, interrogative, and imperative sentences

(29a-b; 30a) **Active** sentences with an **action** verb (29c) **Passive** sentence with an **action** verb

(30b-c) **Adjectival**-verb sentences (31a-b) **Interrogative** sentences (32) **Imperative** sentence

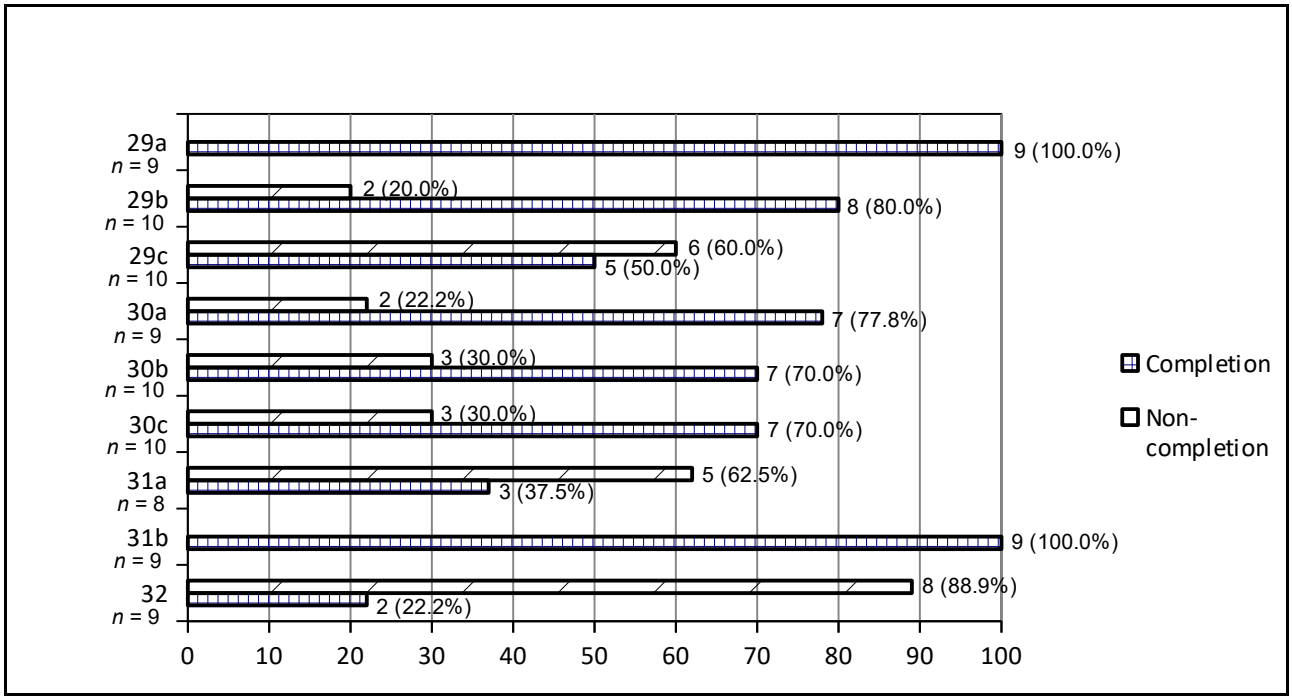

Figure 11: Number of Completion and Non-completion answers for sentential *le*, for each option, per number of participants; n = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

In the sentential-*le* categories with *action* verbs, all participants answered that *le* expressed *completion* for the sentence with an *unquantified* object (n = 9, 100.0% [29a]).

For the sentence with a *quantified* object (29b) and the sentence with an *intransitive verbal* predicate (30a), however, sentential *le* was judged to express *completion* to a slightly lesser extent. Thus, for (29b), eight out of ten (80.0%) participants chose the *completion* alternative, and for (30a), seven out of

nine (77.8%) chose the same alternative. The average proportion of *completion* answers in the active declarative action-verb category (29a-b; 30a) is therefore 85.7%.

By contrast, in the *passive* sentential-*le* category (29c), most participants answered that *le* expressed *non-completion* (*n* = 6, 60.0% NCo vs. *n* = 5, 50.0% Co) as opposed to *completion*, albeit by a narrow margin.

Moving on to the sentential-*le* category with *adjectival*-verb sentences (30b-c), seven out of ten (70.0%) participants chose the *completion* answer, for both sentences, which indicates that sentential *le*, in these sentences, primarily conveys *completion*. This also means that the average proportion of *completion* answers in (30b-c) is 70.0%.

In contrast to the aforementioned sentential-*le* categories, the answers in the *interrogative* category (31a-b) instead show a far more mixed picture. Hence, for sentence (31a), with a transitive predicate, most participants answered that *le* expressed *non-completion* (*n* = 5, 62.5% NCo vs. *n* = 3, 37.5% Co), while for sentence (31b), with an intransitive predicate, all participants instead chose the *completion* alternative (*n* = 9, 100.0%). In turn, this means that unlike the pattern for the active declarative action-verb sentences (29a-b; 30a), in terms of the ability to express *completion*, the pattern for the active interrogative action-verb sentences (31a-b) is clearly less uniform. Nonetheless, the average proportion of *completion* answers in this category, at 70.6%, is on a par with that of the adjectival-verb category.

In the final category (32), regarding *imperatives*, two out of nine (22.2%) participants answered that *le* expressed *completion*. A clear majority of the answers, however, were of the *non-completion* type (*n* = 8, 88.9%).

4.2.3 Change/New situation (Ch)–No Change/New situation (NCh)

4.2.3.1 Declarative, interrogative, and imperative sentences

(29a-b; 30a) **Active** sentences with an **action** verb (29c) **Passive** sentence with an **action** verb

(30b-c) **Adjectival**-verb sentences (31a-b) **Interrogative** sentences (32) **Imperative** sentence

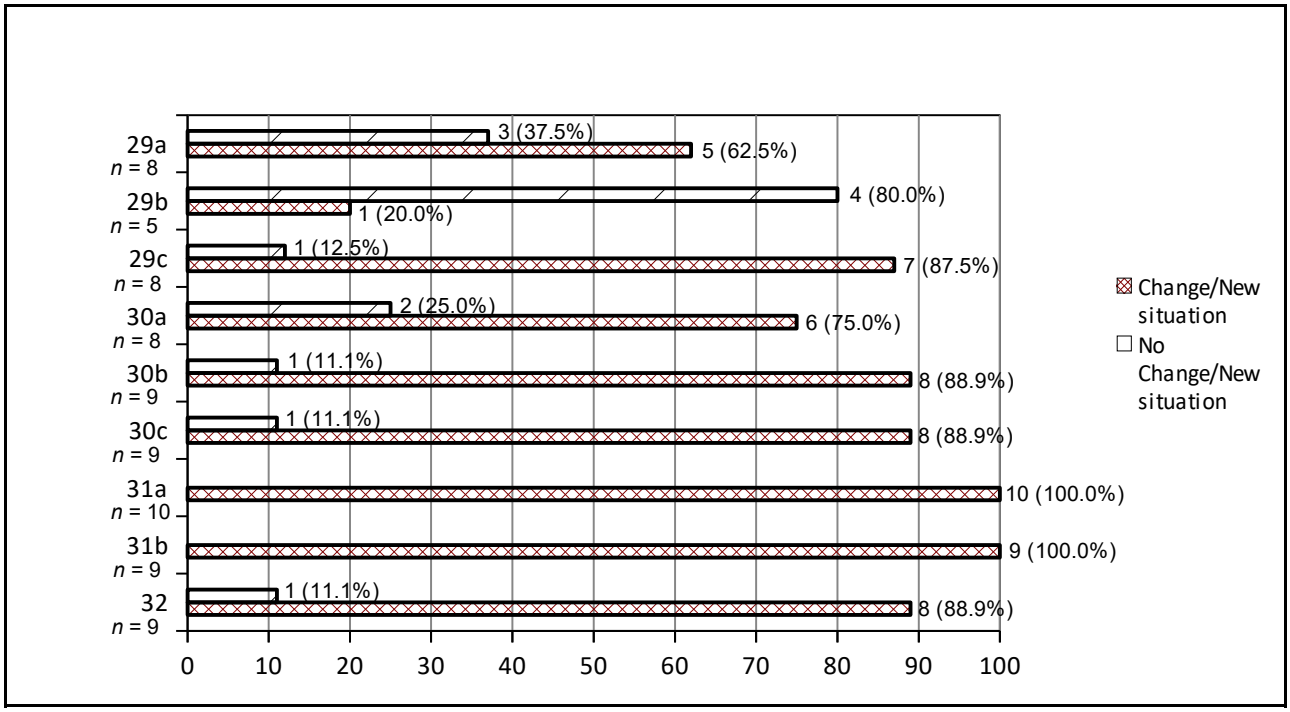

Figure 12: Number of Change/New situation and No Change/New situation answers for sentential *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

In the sentential-*le* category with *adjectival*-verb sentences (30b-c), the data show that sentential *le* was judged to express *change/new situation* to a very large extent (*n* = 8, 88.9% Ch vs. *n* = 1, 11.1% NCh [30b]; *n* = 8, 88.9% Ch vs. *n* = 1, 11.1% NCh [30c]).

In the *interrogative* category (31a-b), the extent of the same expression was even more pronounced, with all participants choosing the *change/new situation* alternative, for both sentences (*n* = 10, 100.0% [31a]; *n* = 9, 100.0% [31b]).

Similarly, the proportion of *change/new situation* answers in the *passive* sentence category (29c) is only slightly lower than in the previous categories, with seven out of eight (87.5%) participants choosing the *change/new situation* alternative over the other.

In contrast, the proportion of *change/new situation* answers in the active declarative action-verb category (29a-b; 30a) ranges between 20.0% (*n* = 1/5) for (29b) and 75.0% (*n* = 6/8) for (30a). Thus, the data show that the average proportion of *change/new situation* answers in this category (57.1%) is much lower than in the aforementioned sentential-*le* categories.

Finally, the expression of *change/new situation* clearly dominates in the *imperative* sentential-*le* category (32), with eight out of nine (88.9%) participants choosing this answer.

4.2.4 Attitude

The participants who had emphasis as a starting point considered that the focus in the sentential-*le* sentence (33a), below, unlike in the verbal-*le* sentence (33c), is more on “the number” of books. The natural consequence of this was that the attitudinal expression *Zhēn tài duō le!* 'That's too many!' was thought to fit best with the sentential-*le* sentence. In a more detailed comment, one of the participants claimed that in sentences such as (33a), “we may focus more on the number, not the action” and that this type of sentence expresses that “you've already bought enough books”, and that sentences like this therefore express the same as the double-*le* version (33b) of the same sentence.

(33a) *Tā mǎi sān běn shū* ***le****. Zhēn(de) tài duō le!* 'He (has) bought/buys three books. **(sentential *le*)**
That's too many!' (2/8 + 3/8 = 62,5% ”positive”; 2/8 + 1/8 = 37,5% ”negative”)

(33b) *Tā mǎi* ***le*** *sān běn shū* ***le****. Zhēn(de) tài duō le!* 'He (has) bought three books. (double *le*)
That's too many!' (2/8 + 2/8 = 50.0% ”positive”; 2/8 + 2/8 = 50.0% ”negative”)

(33c) *Tā mǎi* ***le*** *sān běn shū. Zhēn(de) tài duō le!* 'He bought three books. (verbal *le*)
That's too many!' (1/8 + 3/8 = 50.0% ”positive”; 3/8 + 1/8 = 50.0% ”negative”)

4.3 The questionnaire survey: Double *le* (Simple sentences)

4.3.1 Tense

4.3.1.1 Declarative sentences with *transitive* predicates

(34a) **Active** sentence with an **unquantified** object

(34b) **Active** sentence with a **quantified** object

(34c) **Passive** sentence with a **quantified** object

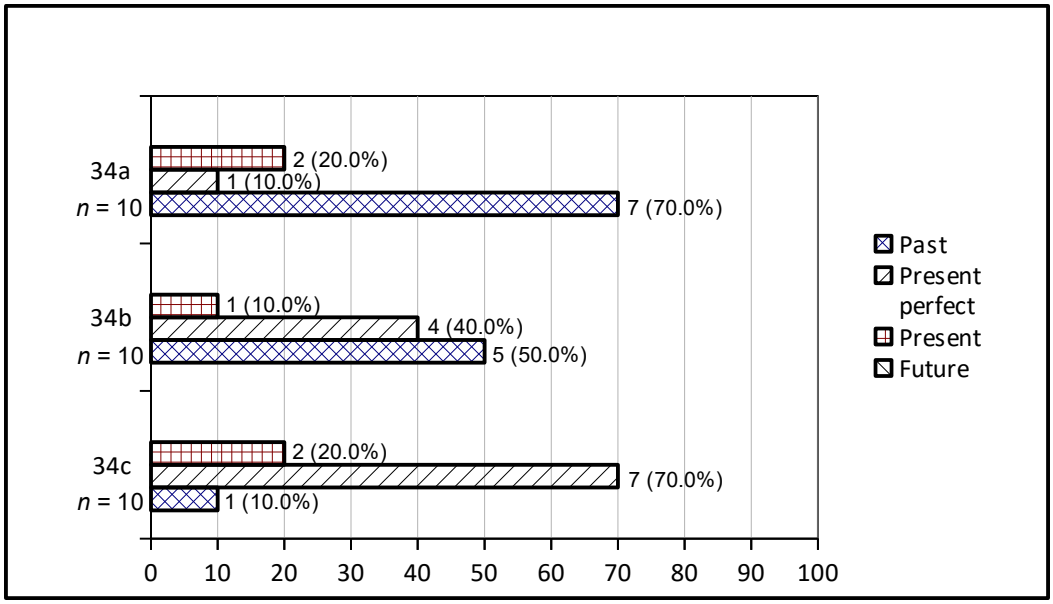

Figure 13: Number of Past, Present perfect, Present, and Future tense answers for double *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

(34a) Wǒ mǎi **le** shū **le**.

I buy LE book LE

I bought (*did* buy) (the) books/a/the book.

(34b) Wǒ mǎi **le** sān běn shū **le**.

I buy LE three CL book LE

I bought (*did* buy) three books.

I have (or *have*) bought three books.

(34c) Wǒ bèi chá **le** liǎng piào **le**.

I BEI check LE two CL LE

Two of my shipments have (or *have*) been checked.

The *past* tense was the most preferred temporal reading in the double-*le* category with an *unquantified* object (34a). This tense was chosen by seven out of ten (70.0%) participants, and the remaining participants chose the *present* (*n* = 2, 20.0%) and the *present perfect* (*n* = 1, 10.0%) tense, respectively.

The most preferred reading in the double-*le* category with a *quantified* object (34b) was also the *past* tense. In (34b), the *past* tense was chosen by five out of ten (50.0%) participants, followed closely by the *present perfect* chosen by four (40.0%).

What can be seen, therefore, is that a distinct difference exists for the double-*le* categories (34a, 34b), between the *le* sentence with an unquantified object and that with a quantified object. Specifically, while the most preferred reading in the two categories (34a) and (34b) was the same, the rate for (34b) was decidedly lower than for (34a). Additionally, while the two double-*le* categories contain the same number of tenses, the reading distribution in category (34b) is more even than in (34a), and, based on *all* the readings, the difference between a stronger *past* tense connection in (34a) and a stronger *present perfect* connection in (34b), is evident.

In the *passive* double-*le* category with a *quantified* object (34c), the answers show that the strongly preferred reading was the *present perfect*, chosen by seven out of ten (70.0%) participants. Also, with the remaining readings in (34c) added, namely, the *present* (n = 2, 20.0%) and the *past* (n = 1, 10.0%) tense, the total reading distribution is just as scattered as in (34a) and (34b).

4.3.1.2 Declarative sentences with *intransitive* (verbal or adjectival) predicates

(35a) **Active** sentence (verbal predicate) with an **adverbial**

(35b) **Active** sentence (adjectival predicate) with an **adverbial**

(35c) **Active** sentence (adjectival predicate) with an **adverbial**

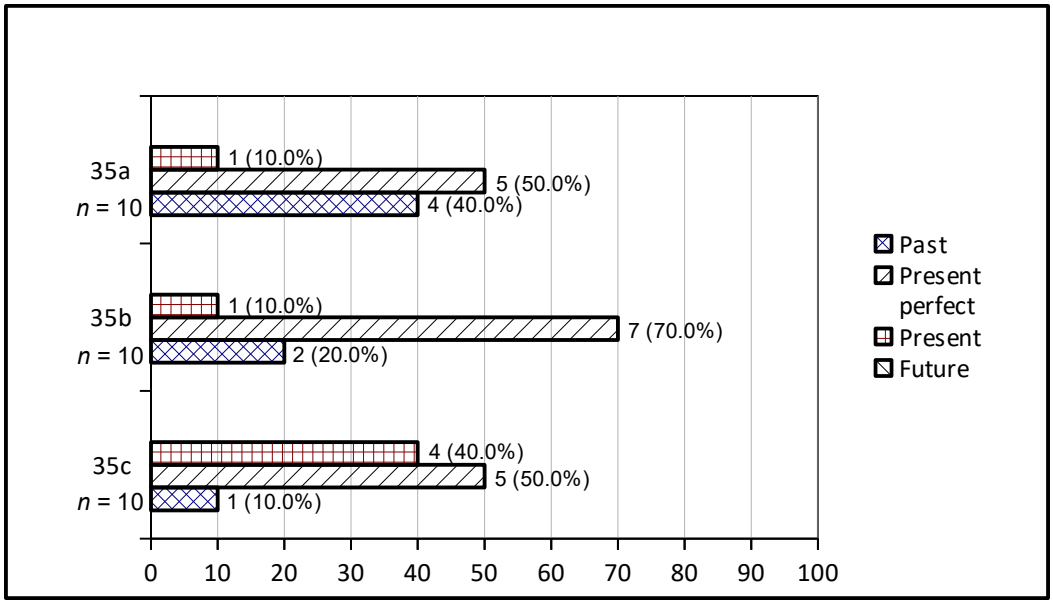

Figure 14: Number of Past, Present perfect, Present, and Future tense answers for double *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

(35a) Tā qù **le** nàr **le**.

he go LE there LE

He has (or *has*) gone/went (or *did* go) there.

(35b) Tā shòu **le** yī diǎnr **le**.

he thin LE one little LE

He has (or *has*) become a little thinner.

He is a little (*too*) thin.

(35c) Jīntiān de fēnglàng bǐ lái de shíhou xiǎo **le** hěn duō **le**.

today DE stormy wave BI come DE time small LE very much LE

Today's stormy waves have (or *have*) become much smaller than when we arrived.

Today's stormy waves are (or *are*) much smaller than when we came.

While the most preferred temporal reading in the *intransitive* double-*le* category (35a), selected by five out of ten (50.0%) participants, was the same reading as in (34c), namely the *present perfect* tense, it differs from the one in (34a) and (34b). However, looking also at the remaining readings in (35a), with four (40.0%) participants selecting the *past* tense and one (10.0%) the *present* tense, the pattern for category

(34b) is more similar to that for (35a), overall. This, in turn, means that the pattern for the intransitive double-*le* category (35a) is more similar to the patterns for the double-*le* categories with a *quantified* object (34b)–(34c) than that for the double-*le* category with an *unquantified* object (34a).

In both of the two *intransitive adjectival*-predicate double-*le* categories (35b)–(35c), the most preferred reading was the *present perfect*, chosen by seven out of ten (70.0%) and five out of ten (50.0%) participants, respectively. The remaining, less preferred, readings, however, show a difference between the two categories with respect to the order of magnitude, with two (20.0%) participants choosing the *past* tense and one (10.0%) the *present* tense in (35b), whereas four (40.0%) chose the *present* tense and one (10.0%) the *past* tense in (35c).

4.3.1.3 Interrogative sentences with *transitive* or *intransitive* (verbal) predicates

(36a) **Active** sentence (transitive predicate) with an **unquantified** object

(36b) **Active** sentence (intransitive predicate) with an **adverbial**

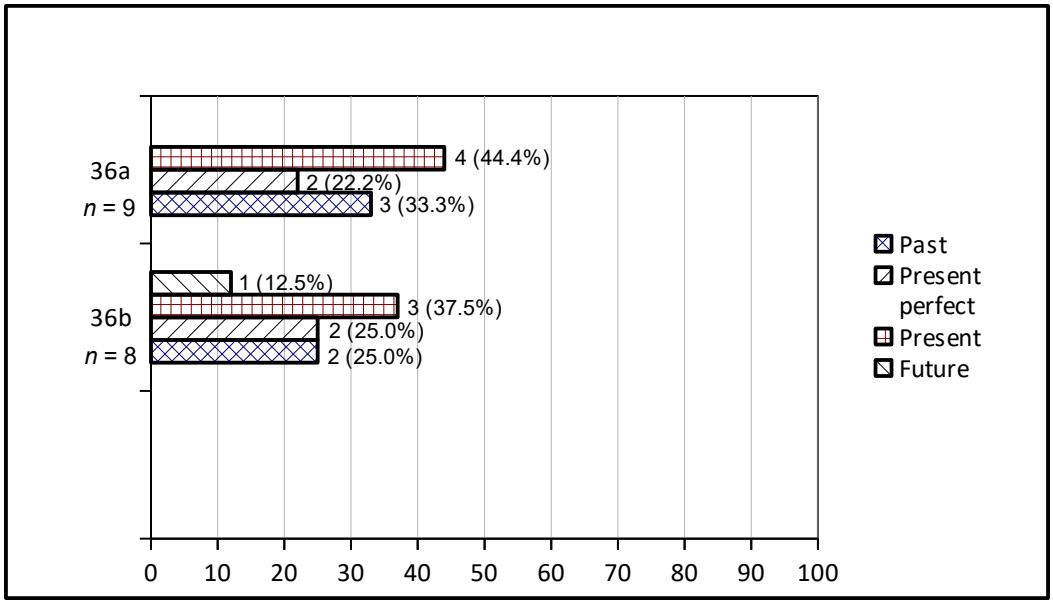

Figure 15: Number of Past, Present perfect, Present, and Future tense answers for double *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

(36a) Nǐ chī **le** wǎnfàn **le** ma?
you eat LE dinner LE MA
Are you finished eating (= Have you had) dinner?

Did you have dinner?

(36b) Tā lái **le** wǒ jiā **le** ma?
she come LE my home LE MA
Is she coming to the house?
Did she show up at/Has she showed up at the house?

Interestingly, the most preferred temporal reading in the *interrogative* double-*le* category with an *unquantified* object (36a) was not the same as in the declarative double-*le* equivalent (34a). Therefore, instead of the dominant *past* tense reading in (34a), the most preferred reading in (36a) was the *present* tense, selected by four out of nine (44.4%) participants. Thus, the pattern difference between the declarative and interrogative *transitive* category, in terms of the dominant answer, is prominent. Also, when adding the tenses in (36a) chosen by the rest of the participants (*n* = 3/9, 33.3% *past*, *n* = 2/9, 22.2% *present perfect*), it is clear that the reading distribution in this category is very even. Additionally, the most preferred reading was selected by markedly fewer participants in the interrogative category (36a) than in the declarative equivalent (34a).

In line with the pattern between the corresponding transitive double-*le* categories ([34a] vs. [36a]), the most preferred reading in the *interrogative intransitive* double-*le* category (36b) was not the same as in the declarative double-*le* equivalent (35a). Thus, instead of the most preferred reading in (35a)—the *present perfect*—the most preferred one in (36b) was the *present* tense, selected by three out of eight (37.5%) participants. This means, however, that the pattern difference between the intransitive double-*le* categories ([35a] vs. [36b]) is not as evident as that between the corresponding transitive ones ([34a] vs. [36a]). Additionally, when including the tenses in (36b) selected by the remaining participants (*n* = 2/8, 25.0% *past*, *n* = 2/8, 25.0% *present perfect*, *n* = 1/8, 12.5% *future*), it can be seen that the reading distribution in the *interrogative* double-*le* category (36b) is more scattered and more even than in the declarative one (35a). Moreover, the most preferred reading was chosen by fewer participants in the interrogative category (36b) than in the declarative equivalent (35a).

4.3.2 Completion (Co)–Non-Completion (NCo)

4.3.2.1 Declarative and interrogative sentences

(34a-b; 35a) **Active** sentences with an **action** verb (34c) **Passive** sentence with an **action** verb

(35b-c) **Adjectival**-verb sentences (36a-b) **Interrogative** sentences

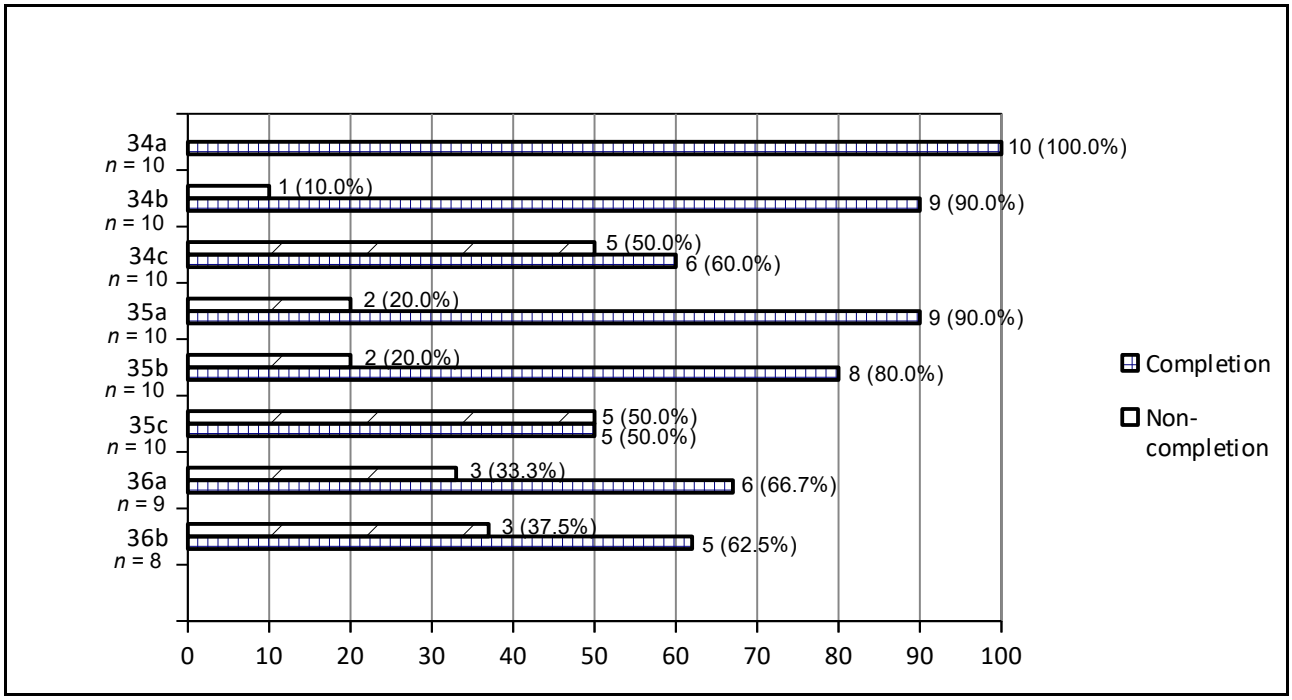

Figure 16: Number of Completion and Non-completion answers for double *le*, for each option, per number of participants; n = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

In the double-*le* categories with *action* verbs, all participants answered that *le* expressed *completion* for the sentence with an *unquantified* object (*n* = 10, 100.0% [34a]).

Moreover, to only a slightly lesser extent, double *le* was judged to express *completion* for the sentence with a *quantified* object (34b) and the sentence with an *intransitive verbal* predicate (35a), with nine out of ten (90.0%) participants choosing the *completion* alternative, for both sentences. However, as the sum of the percentages for (35a) exceeds 100%, the *completion–non-completion* response ratio (as argued in Section 4.1.2) is a more appropriate measure, here and in general, when making comparisons involving varying total percentages. Hence, to enable a comparison between the active declarative action-verb categories for all three *le* types (see Section 5.1), the average proportion of *completion* answers versus *non-completion* ones for (34a-b; 35a) is 93.3 versus 10.0%.

In contrast to the previous categories, in the *passive* sentence category (34c), the proportion of *completion* answers was only slightly higher than that of *non-completion* ones (*n* = 6, 60.0% Co vs. *n* = 5, 50.0% NCo).

Turning to the double-*le* category with *adjectival*-verb sentences (35b-c), eight out of ten (80.0%) participants answered that *le* expressed *completion* for sentence (35b), but only five out of ten (50.0%) for sentence (35c). The data therefore indicate that, in these sentences, double *le* is almost as likely to express *completion* as *non-completion*.

As for the *interrogative* category (36a-b), finally, the proportion of *completion* answers is notably higher than that of *non-completion* ones for both sentences (*n* = 6, 66.7% Co vs. *n* = 3, 33.3% NCo [36a]; *n* = 5, 62.5% Co vs. *n* = 3, 37.5% NCo [36b]). However, double-*le* was judged to express *completion* to a clearly lesser extent in the interrogative category (64.7% Co vs. 35.3% NCo) than in the active declarative category with action verbs (93.3% Co vs. 10.0% NCo), based on average proportions.

4.3.3 Change/New situation (Ch)–No Change/New situation (NCh)

4.3.3.1 Declarative and interrogative sentences

(34a-b; 35a) **Active** sentences with an **action** verb (34c) **Passive** sentence with an **action** verb

(35b-c) **Adjectival**-verb sentences (36a-b) **Interrogative** sentences

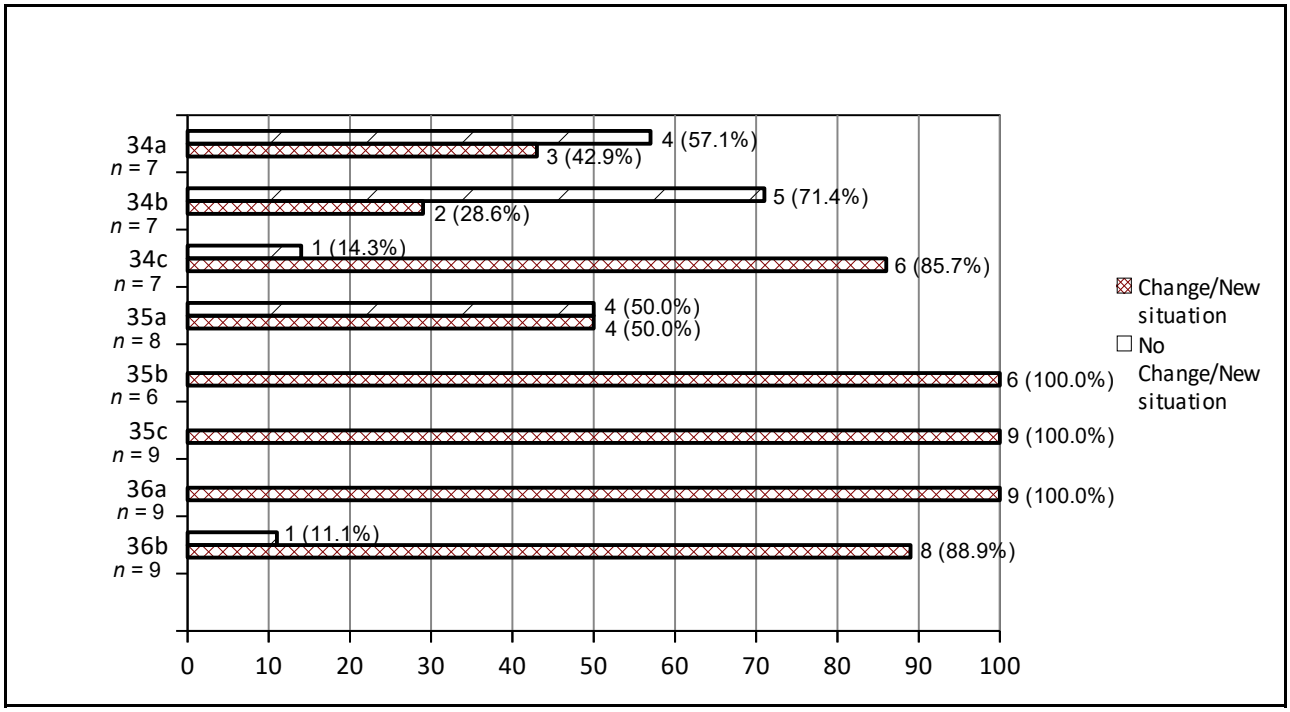

Figure 17: Number of Change/New situation and No Change/New situation answers for double *le*, for each option, per number of participants; *n* = number of participants, numeric values without brackets = number of answers, percentages = number of answers/number of participants

In the double-*le* category with *adjectival*-verb sentences (35b-c), all participants answered that *le* expressed *change/new situation*, for both sentences (*n* = 6, 100.0% [35b]; *n* = 9, 100.0% [35c]).

Only slightly lower than in (35b-c) was the proportion of *change/new situation* answers in the *interrogative* category (36a-b), with all participants choosing that answer for sentence (36a) (*n* = 9, 100.0%) and all but one for sentence (36b) (*n* = 8, 88.9%).

In the *passive* sentence category (34c), six out of seven (85.7%) participants answered that *le* expressed *change/new situation*.

Finally, the contrast is clear between the low average proportion of *change/new situation* answers in the active declarative *action*-verb category and the distinctly higher one in all the other categories. Thus, the proportion of *change/new situation* answers in (34a-b; 35a) ranges between 28.6% (*n* = 2/7) for (34b) and 50.0% (*n* = 4/8) for (35a), which yields an average proportion of only 40.9%.

4.3.4 Attitude

As justification for favouring the double-*le* sentence (37c) below, the participants spoken to after the study was conducted stated that double *le* conveys the sense *yǐjīng* 'already'. In addition, it was also about a

feeling that one had bought “too many” books, which is why the expression *Zhè jiù gòu le!* 'That's enough!' was considered to fit best with the double-*le* sentence (37c). Based on these comments, it therefore seems that in this type of double-*le* sentence, the emphasis or focus is more on the plural object *sān běn shū* 'three books' than on the action of BUYING, like in the sentential-*le* sentence (33a) in Section 4.2.4.

(37a) *Wǒ mǎi sān běn shū* ***le****. Zhè jiù gòu le!* 'I (have) bought/buy three books. (sentential *le*)
That's enough!' (2/10 + 6/10 = 80.0% ”positive”; 2/10 + 0/10 = 20.0% ”negative”)
(37b) *Wǒ mǎi* ***le*** *sān běn shū. Zhè jiù gòu le!* 'I bought three books. (verbal *le*)
That's enough!' (2/10 + 6/10 = 80.0% ”positive”; 2/10 + 0/10 = 20.0% ”negative”)
(37c) *Wǒ mǎi* ***le*** *sān běn shū* ***le****. Zhè jiù gòu le!* 'I (have) bought three books. **(double *le*)**
That's enough!' (5/10 + 4/10 = 90.0% ”positive”; 1/10 + 0/10 = 10.0% ”negative”)

4.4 The questionnaire survey: Verbal *le* & Sentential *le* (Complex sentences)

4.4.1 Forward linking

For the purpose of measuring Forward linking, the participants were asked to judge which of three descriptions fit the meaning of each of four complex *le* sentences ([38]–[41], below). The description options were: a) *Expresses that the second action occurs immediately after the first action* b) *Expresses condition* (*if*/*in case*) c) *Expresses time* (*when*/*whenever*), and each option yielded 0-10 answers/10 participants (= 0-100%).

Based on the most preferred option for each sentence, (38) expresses Condition (*if*/*in case*), (39) expresses Time (*when*/*whenever*), (40) Sequence (*just as*/(*right*) *after*), and (41) Condition (*if*/*in case*), with the forward-linking marker *le* in bold type. In addition, despite the different designations, both a) and c) concern the expression of non-hypothetical Time, based on the *sequentiality* of two events, though a more instantaneous sequentiality in the (c) case, which also describes a habit.

(38) *Chī yī diǎn ba, chī* ***le*** *jiù huì yǒu lìqi, yǒu* ***le*** *lìqi jiù hěn kuài hǎo le.* (verbal *le*)
'Eat a little, if you eat, you'll have energy and if you have energy, you'll quickly get better!'

(*le* [*chī* ***le***] and *le* [*yǒu* ***le***] in [38] both mark **Condition** [*if/in case*]
in 100.0% [10/10] of the cases)

(39) *Diū* ***le*** *dōngxi, wǒ huì zhěng xīngqī bù ān.* (verbal *le*)
'When I lose something, I feel uneasy all week.'
(*le* [*Diū* ***le***] in [39] marks **Time** [*when/whenever*]
in 80.0% [8/10] of the cases)

(40) *Wǒ xià* ***le*** *chē jiù kànjiàn mài yíngguāngbàng de le.* (verbal *le*)
'Just as I had stepped out of the car/bus, I saw the glow stick seller.'
(*le* [*xià* ***le***] in [40], marks **Sequence** [*just as*/(*right*) *after*]
in 100.0% [10/10] of the cases)

(41) *Nǐ kǒukě* ***le*** *jiù hē diǎn guǒzhī.* (sentential *le*)
'If you are thirsty, just drink a little (fruit) juice.'
(*le* (*kǒukě* ***le***), in [41], marks **Condition** [*if/in case*]
in 80.0% (8/10) of the cases)

4.5 Summary

Analysis of the survey data presented in this chapter, excluding the less data-intensive "Attitude" & "Forward linking" sections, revealed the following general and specific patterns:

(A) Completion: In the *active declarative* sentences with *action* verbs, the meaning of Completion was expressed, by *le*, to a very great extent, for all three *le* types (see figures in bold in Table 1). In comparison, the same meaning was expressed to a markedly lesser extent in the *interrogative* sentences with *action* verbs, *declarative* sentences with *adjectival* verbs, and in the *imperatives*, for the three *le* types (the imperatives, however, concern verbal and sentential *le* only). Table 1 shows the proportions (for single-sentence categories) and average proportions (for multi-sentence categories) of Completion and Non-Completion answers for the previously introduced *le* categories, with the category number below each figure.

Table 1: Proportions and average proportions of Completion and Non-Completion answers for the three *le* types; Actn = Action verb, Actv = Active, Adj = Adjectival verb, Decl = Declarative, D-*le* = Double *le*, Imp = Imperative, Inter = Interrogative, N/A = Not applicable, Pass = Passive, S-*le* = Sentential *le*, Vbpr = Verbal predicate, V-*le* = Verbal *le*

	Completion			Non-Completion		
	V-*le*	S-*le*	D-*le*	V-*le*	S-*le*	D-*le*
Actv Decl Actn	**100.0%** (23a-b; 24a)	**85.7%** (29a-b; 30a)	**93.3%** (34a-b; 35a)	0.0% (23a-b; 24a)	14.3% (29a-b; 30a)	10.0% (34a-b; 35a)
Pass Decl Actn	100.0% (23c)	50.0% (29c)	60.0% (34c)	0.0% (23c)	60.0% (29c)	50.0% (34c)
Actv Decl Adj	60.0% (24b-c)	70.0% (30b-c)	65.0% (35b-c)	45.0% (24b-c)	30.0% (30b-c)	35.0% (35b-c)
Actv Inter Actn	77.8% (25a-b)	70.6% (31a-b)	64.7% (36a-b)	33.3% (25a-b)	29.4% (31a-b)	35.3% (36a-b)
Imp Vbpr	0.0% (26)	N/A	N/A	100.0% (26)	N/A	N/A
Imp Vbpr	N/A	22.2% (32)	N/A	N/A	88.9% (32)	N/A

(B) Change/New situation: For this meaning, the pattern was largely the opposite compared to that of Completion. Therefore, the expression of Change/New situation, by *le*, was clearly most pronounced in the *interrogative* sentences with *action* verbs and *declarative* sentences with *adjectival* verbs, but also in the *passive* sentence, for all three *le* types (see figures in bold in Table 2). At the same time, in the *active declarative* sentences with *action* verbs, the same meaning was expressed to a markedly lesser extent, for all *le* types. Table 2 shows the Change/New situation and No Change/New situation rates for the previously introduced *le* categories, with the category number below each figure.

Table 2: Proportions and average proportions of Change/New situation and No Change/New situation answers for the three *le* types; Actn = Action verb, Actv = Active, Adj = Adjectival verb, Decl = Declarative, D-*le* = Double *le*, Imp = Imperative, Inter = Interrogative, N/A = Not applicable, Pass = Passive, S-*le* = Sentential *le*, Vbpr = Verbal predicate, V-*le* = Verbal *le*

	Change/New situation			No Change/New situation		
	V-*le*	S-*le*	D-*le*	V-*le*	S-*le*	D-*le*
Actv Decl Adj	**94.4%** (24b-c)	**88.9%** (30b-c)	**100.0%** (35b-c)	5.6% (24b-c)	11.1% (30b-c)	0.0% (35b-c)
Actv Inter Actn	**94.7%** (25a-b)	**100.0%** (31a-b)	**94.4%** (36a-b)	5.3% (25a-b)	0.0% (31a-b)	5.6% (36a-b)
Pass Decl Actn	**85.7%** (23c)	**87.5%** (29c)	**85.7%** (34c)	14.3% (23c)	12.5% (29c)	14.3% (34c)
Actv Decl Actn	65.2% (23a-b; 24a)	57.1% (29a-b; 30a)	40.9% (34a-b; 35a)	34.8% (23a-b; 24a)	42.9% (29a-b; 30a)	59.1% (34a-b; 35a)
Imp Vbpr	80.0% (26)	N/A	N/A	20.0 (26)	N/A	N/A
Imp Vbpr	N/A	88.9% (32)	N/A	N/A	11.1% (32)	N/A

(C) Tense: There was a notable variation in the most preferred temporal reading (tense) between the three *le* types. For verbal *le*, Past tense was most frequently the most preferred reading, while for sentential and double *le*, it was Present perfect. Excluding the imperatives, the most preferred reading for verbal *le* was Past tense in 6 out of 8 *le* categories, and for sentential and double *le*, it was Present perfect in 4 (+ 1 shared) and 4 out of 8 *le* categories, respectively (see figures in bold in Table 3). The imperatives are omitted in this comparison due to the lack of double-*le* versions, according to the present study.

Regarding the temporal reading distribution, there were three clear general patterns: 1. There was a markedly more *even* (similar rates) and/or *scattered* (greater number of tenses) reading distribution in the *interrogative* categories than in the corresponding *declarative* categories (relevant categories highlighted in grey in Table 3), for all three *le* types. 2. The distribution in the active declarative *verbal-le* categories with a *transitive* predicate was less scattered and even than in the corresponding sentential-*le* and double-*le* categories. 3. For all three *le* types, the distribution in the active declarative categories with an *unquantified* object was less scattered and/or even than in both the corresponding active categories with a *quantified* object and in the categories with an *intransitive* verbal predicate. Table 3 shows the number of tenses and the tense rates for each of the previously introduced *le* categories, with the category number below each figure.

Table 3: Proportions of Past, Present perfect, Present, and Future tense answers for the three *le* types; Actv = Active, Adjpr = Adjectival predicate, Decl = Declarative, D-*le* = Double *le*, Imp = Imperative, Inter = Interrogative, Itrv = Intransitive predicate, N/A = Not applicable, Pass = Passive, Qo = Quantified object, S-*le* = Sentential *le*, Trv = Transitive predicate, Uqo = Unquantified object, Vbpr = Verbal predicate, V-*le* = Verbal *le*

	Past tense			Present perfect			Present tense			Future tense		
	V-*le*	S-*le*	D-*le*	V-*le*	S-*le*	D-*le*	V-*le*	S-*le*	D-*le*	V-*le*	S-*le*	D-*le*
Actv Decl Trv Uqo	**100.0%** (23a)	**77.8%** (29a)	**70.0%** (34a)	0.0% (23a)	0.0% (29a)	10.0% (34a)	0.0% (23a)	22.2% (29a)	20.0% (34a)	0.0% (23a)	0.0% (29a)	0.0% (34a)
Actv Decl Trv Qo	**70.0%** (23b)	30.0% (29b)	**50.0%** (34b)	0.0% (23b)	**40.0%** (29b)	40.0% (34b)	30.0% (23b)	30.0% (29b)	10.0% (34b)	0.0% (23b)	0.0% (29b)	0.0% (34b)
Pass Decl Trv Qo	**60.0%** (23c)	0.0% (29c)	10.0% (34c)	20.0% (23c)	**90.0%** (29c)	**70.0%** (34c)	20.0% (23c)	10.0% (29c)	20.0% (34c)	0.0% (23c)	0.0% (29c)	0.0% (34c)
Actv Decl Itrv Vbpr	**55.6%** (24a)	44.4% (30a)	40.0% (35a)	11.1% (24a)	0.0% (30a)	**50.0%** (35a)	33.3% (24a)	**55.6%** (30a)	10.0% (35a)	0.0% (24a)	0.0% (30a)	0.0% (35a)
Actv Decl Itrv Adjpr	0.0% (24b)	10.0% (30b)	20.0% (35b)	40.0% (24b)	**80.0%** (30b)	**70.0%** (35b)	**60.0%** (24b)	10.0% (30b)	10.0% (35b)	0.0% (24b)	0.0% (30b)	0.0% (35b)
Actv Decl Itrv Adjpr	10.0% (24c)	20.0% (30c)	10.0% (35c)	40.0% (24c)	**40.0%** (30c)	**50.0%** (35c)	**50.0%** (24c)	30.0% (30c)	40.0% (35c)	0.0% (24c)	10.0% (30c)	0.0% (35c)
Actv Inter Trv Uqo	**55.6%** (25a)	**50.0%** (31a)	33.3% (36a)	33.3% (25a)	25.0% (31a)	22.2% (36a)	11.1% (25a)	12.5% (31a)	**44.4%** (36a)	0.0% (25a)	12.5% (31a)	0.0% (36a)
Actv Inter Itrv Vbpr	**44.4%** (25b)	**33.3%*** (31b)	25.0% (36b)	33.3% (25b)	**33.3%*** (31b)	25.0% (36b)	33.3% (25b)	**33.3%*** (31b)	**37.5%** (36b)	0.0% (25b)	0.0% (31b)	12.5% (36b)
Imp Trv Vbpr	0.0% (26)	N/A	N/A	0.0% (26)	N/A	N/A	20.0% (26)	N/A	N/A	80.0% (26)	N/A	N/A
Imp Itrv Vbpr	N/A	11.1 (32)	N/A	N/A	0.0 (32)	N/A	N/A	44.4 (32)	N/A	N/A	55.6 (32)	N/A

*Same level of preference for Past, Present perfect, and Present tense.

4.6 The explanatory sequential test

To try to explain the ambiguous attitude/modality-related results of the questionnaire survey, the survey was followed by an additional test, aiming to investigate and potentially validate an ability of *le* to express emphasis in attitudinal contexts. In this test, a number of minimal pairs were used, where sentences with and without *le* were judged by the Chinese language consultants (see Sections 3.1, 3.3). Based on these

minimal pairs, both participants confirmed the ability of both verbal and sentential *le* to express emphasis and, crucially, doing this in sentences signalling the expression of attitude in relation to what was emphasized (focused on). Thus, a link between the expression of emphasis and that of attitude was revealed.

In what follows, the described link will be demonstrated, one minimal pair at a time, through a selection of tested sentences, where the two forms of expression first relate to a "temporal element" (viz., a final endpoint) (42b, 43b) and then to a "deviation from the cultural norm" (44b, 45b) (see also Section 5.1.1):

(42a)	*1949 nián 10 yuè 1 rì, tā xiě xìn gěi wǒ.*	On October 1, 1949, she wrote (a letter) to me.	(without *le*)
(42b)	*1949 nián 10 yuè 1 rì, tā xiě* ***le*** *xìn gěi wǒ.*	On October 1, 1949, she *did* write (a letter) to me!	(verbal *le*)

(43a)	*Tāmen wěituō wǒmen qù diàochá zhè jiàn shì.*	They entrusted us to investigate this matter.	(without *le*)
(43b)	*Tāmen wěituō wǒmen qù diàochá zhè jiàn shì* ***le****.*	They *did* entrust us to investigate this matter!	(sentential *le*)

As can be seen from the close translations of (42a) and (42b), both sentences describe an action that is completed, namely, the action of WRITING. Logically, therefore, that should render the use of verbal *le* redundant in (42b), based on what the marker generally expresses (i.e., the completion of an action) in sentences with telic events (see Section 2.3.1). However, its use in (42b) is, in fact, not redundant, since the function of *le* in this sentence is to emphasize that the WRITING action occurred (i.e., was completed[31]) as stated, conveying the speaker's strong conviction that the action (and the rest of the event) did, in fact, take place. In turn, this may occur in, for example, an argument where the speaker is defending the truth of what he or she is saying. Consequently, a paraphrased version of (42b) would be: *1949 nián 10 yuè 1 rì, tā* ***quèshí*** *xiě xìn gěi wǒ.* 'On October 1, 1949, she **indeed** wrote (a letter) to me.'.

31 More precisely, *le* emphasizes (emphatically asserts) the *proposition* (expressed by the clause, after the fronted temporal adverbial), and thereby singles out the completion of the action (of WRITING) by strongly focusing on the *final endpoint* of the same action. See Section 5.1.1 and the link between emphasis and focus.

The next minimal pair, (43a–b), also concerns the expression of completion, only this time, the completion of an event—specifically, the event of THEIR ENTRUSTING US TO INVESTIGATE A CERTAIN MATTER. As opposed to the situation in (42a), though, it is not an adverbial of past time (such as ”On October 1, 1949”) that indicates completion in (43a), but the sentence structure, involving two verbs where the object of the first verb is the logical subject of the second verb (see *pivotal sentences*, Zhu, 2019). Nonetheless, just as in (42b), the already existing indication of completion does not make *le* redundant in (43b) either. Nor does *le* express a change of state in this sentence, but here too, its function is to express emphasis, specifically, to emphasize that the aforementioned event is (already) completed[32]. What *le* conveys here is, therefore, the same strong conviction on the part of the speaker as in the (42b) case, that something really occurred, namely, in this latter case, the event. Consequently, *le* may be used, in this sentence as well, for the purpose of ”self defence in an argument”, and a paraphrased version of (43b) would then be: *Tāmen* ***quèshí*** *wěituō wǒmen qù diàochá zhè jiàn shì.* 'They **indeed** entrusted us to investigate this matter.'.

Next, turning to the third and fourth minimal pairs, (44a–b) and (45a–b), they are about the type of deviation (measured against the Chinese norm) that prompts a speaker's expression of ”excessiveness”, as seen in the *le*-marked sentences:

(44a)	*Tā shòu yī diǎn.*	He is a little thinner.	(without *le*)
(44b)	*Tā shòu* ***le*** *yī diǎn.*	He is a little *too* thin!	(verbal *le*)

(45a)	*Tāng xián.*	The soup is salty.	(without *le*)
(45b)	*Tāng xián* ***le****.*	The soup is *too* salty!	(sentential *le*)

In (44a), one person's body shape is compared to that of another (implicit) person, but without any judgment or evaluation on the part of the speaker. In (44b), on the other hand, *le* is used to emphasize the *shòu* 'thin' quality[33] of the man or boy referred to, to convey that according to the speaker's understanding of what the Chinese norm is, the man or boy is too (i.e., excessively) thin. Thus, a paraphrased version of (44b) would be: *Tā shì yǒu diǎn shòu de* ***chāochū zhèngcháng de shuǐpíng!*** 'He is **indeed** a little thinner than normal (= **exceeding normal limits**).'.

32 More precisely, *le* emphasizes (emphatically asserts) the *proposition* (expressed by the clause), and thereby singles out the completion of the event (of THEIR ENTRUSTING US TO INVESTIGATE A CERTAIN MATTER) by strongly focusing on the *final endpoint* of the event.

33 More precisely, *le* emphasizes (emphatically asserts) the *proposition* (expressed by the clause), and thereby singles out the ”thinness” (of the man's/boy's body shape) by strongly focusing on the quality (i.e., that of ”thinness”) whose degree is considered to *deviate* from (exceed) the Chinese norm.

Finally, just as in (44a), no judgment or evaluation on the part of the speaker is present in (45a), where only the state of the soup is described, in a neutral manner, as salty. In (45b), however—following the pattern in (44b)—the use of *le* puts an emphasis on the *xián* 'salty' quality[34] of the soup, to convey that the speaker considers the level of "saltiness" to exceed the Chinese norm, rendering the level excessive. Mirroring the pattern of (44b) once more, a paraphrased version of (45b) would then be: *Tāng shì xián de* ***chāochū zhèngcháng de shuǐpíng!*** 'The soup is **indeed** salty beyond (= **exceeding**) **normal limits**'.

34 More precisely, *le* emphasizes (emphatically asserts) the *proposition* (expressed by the clause), and thereby singles out the "saltiness" (of the soup) by strongly focusing on the quality (i.e., that of "saltiness") whose degree is considered to *deviate* from (exceed) the Chinese norm.

Chapter 5 Discussion

This chapter first addresses the RQs stated in Chapter 1, successively, with each RQ restated and answered under a separate heading (Sections 5.1-5.3.2). Then follows a discussion of the limitations of the present study (Section 5.5) and recommendations for future research (Section 5.6).

First, however, a short overview of the chapter's main points: 1. The answers to **RQ1** are given in Sections 5.1.1 and 5.1.2, with the identified main meanings of verbal *le*, sentential *le*, and double *le* (**RQ1a**), and the factors influencing the meanings expressed by the three *le* types (**RQ1b**), respectively. 2. The affirmative answer to **RQ2**, in Section 5.2, based primarily on the analysis in Section 4.6 and the discussion in Section 5.1.1.3, is that the core meaning of *le* is *modal certainty*. 3. The illustration of *le* within the CG framework, in Section 5.3, which is the answer to **RQ3** is primarily based on the answers to **RQ1** and **RQ2**, and the contents of the boxes in the semantic network (**RQ3a**) are the main *le* meanings presented in the answer to (**RQ1a**), including some additional, semantically close, terms (see Section 2.3).

5.1 The meanings of verbal *le*, sentential *le*, and double *le*

RQ1. What are the meanings of verbal *le*, sentential *le*, and double *le*, across *temporal* and *modal* dimensions (**RQ1a**), and what factors may influence these *le* meanings and how do the meanings vary depending on the factors present (**RQ1b**)?

5.1.1 Temporal and modal dimensions

Regarding **RQ1a**, based on the analysis of (a) the empirical test data, from both tests (Sections 4.1-4.4.1, 4.6), and (b) the linguistic literature, the 11 identified main meanings of verbal *le*, sentential *le*, and double *le*—across *temporal* and *modal* dimensions—are (a): Change of state, Emphasis, Tense, Attitude, Completion, Non-completion, Sequence, and Condition, and (b): Perfectivity, Basic and emphatic assertion, and Forward linking. However, these meanings have been sorted under only five headings (see below), based on the close relationship certain meanings have, as described in Chapter 2. In-depth analysis of these meanings follows below in Sections 5.1.1.1-5.1.1.5.

5.1.1.1 Perfectivity (Termination)/Completion

The ability of *le*, and predominantly verbal *le*, to express the completion of an action or an event is well documented (see Section 2.1), and was confirmed by the questionnaire survey results (Sections 4.1-4.3). Still, while *le* indeed *can* express that a point has been reached beyond which the situation cannot continue (i.e., completion), this is—again—not always the case (see Section 2.3.1). Following J.-W. Lin (2003b) and Xiao and McEnery (2004), it is argued that what is required for *le* to express completion is that the situation described in the sentence be of a *telic* type, that is, the situation is presented as having a *natural* final endpoint (C. S. Smith, 1997). When the situation is *atelic*, however, that is, when the situation is presented as having only a *potential*, but no natural, final endpoint, what *le* expresses is rather the termination of the situation described (C. S. Smith). Additionally, since both the telic and the atelic situation have two endpoints, it should be pointed out (though it may seem trivial) that for *le* to convey these meanings, the focus of *le*—in both the telic and the atelic case—has to be on the final and not the initial endpoint.

5.1.1.2 Change of state (Inchoativity)/Non-completion

Just as the ability to express completion is well accounted for in the literature on *le*, so is the ability of *le* to express a change of state (inchoativity) or the emergence of a new situation (see Section 2.1), and this was also confirmed by the survey results (Sections 4.1-4.3). The ability of *le* to express a change of state (inchoativity) is in this thesis argued to be the result of *le* directing the focus on the *initial* endpoint of a situation (see Ljungqvist Arin, 2003; see also Smith & Erbaugh 2005; J.-S. Wu, 2005), and the same focus is further argued to, under certain conditions, allow *le* to express *non-completion* (continuation) (see also C. S. Smith, 1997).

Regarding non-completion, specifically, it is argued that the focus on the initial endpoint has the effect that the situation described by the sentence will, after having started, continue indefinitely (see also Smith & Erbaugh 2005; J.-S. Wu, 2005). More specifically, what is required is that it is the *state* (expressed by the VP or the whole sentence) which is perceived to have started and not the accomplishment, achievement or activity, and that nothing in the context specifies when the state ends. In other words, it is the state that continues and not any of the three types of event (see Ljungqvist Arin, 2003; Soh & Gao,

2007). Additionally, aside from applying to states, this argument extends to situations *interpreted* as stative as well, which means that not only sentences with *state* VPs apply but, given a non-dynamic interpretation, those with *event* VPs as well (see Ljungqvist Arin, 2003).

Furthermore, while some attribute to sentential *le* a meaning similar to that of verbal *le*, when used in imperative sentences (e.g., Su, 2000; Kneussel, 2005), others do not. Joining the first group, it can be argued that sentential *le* has the function of an intensifier, in the same way as verbal *le* is suggested to have, in imperatives (see Section 5.1.1.3, for that full argument). In the latter group instead, sentential *le*, when used in these sentences, is linked to the expression of a change of state/the emergence of a new situation (e.g., Chao, 1968; van den Berg & Wu, 2006). Since, however, the (second) language consultant questioned about this matter takes the same position as the latter group, and as this is also consistent with the present author's experience on site in China, it is also the position taken in this thesis. Consequently, with a meaning of sentential *le* that does not differ from when used in declarative or interrogative sentences, it suggests that, as opposed to verbal *le* (see Section 2.3.3), sentential *le* does not have the ability to affect the speech act force of imperatives. Thus, there are arguably no grounds for linking the imperative sentence type, in a unique way, to sentential *le* either.

Therefore, following the imperative verb phrase *Chī fàn!* 'Eat'! (see *subject-less* clauses, Section 5.3.1), sentential *le*, in (46) below, expresses that the new situation has arisen that dinner is now ready (see also van den Berg & Wu, 2006):

(46) Chī fàn **le**! (sentential *le*)
eat food LE
It's time to eat!

5.1.1.3 Emphasis (Emphatic assertion)/(Basic) assertion/Attitude (Modality)

The expression of emphasis by *le*, as well as that of attitude, was tested and confirmed in the explanatory sequential test (see Section 4.6). With emphasis defined as *emphatic assertion* (see Section 2.3.3), this expression by *le* therefore constitutes *qualified* assertion of a *reinforced* type, and so does the non-emphatic, *basic* type of assertion that *le* can express, and the speech act both types of expression are linked to is thus, as described in Section 2.3.3, *assertives*. More precisely, *le* is used in all three major sentence types, that is, declaratives, interrogatives and imperatives, and while—with respect to the first two—the

type used in the assertive speech act is, typically, the declarative (König & Siemund, 2007), the interrogative can arguably be linked to the assertive speech act as well. However, the difference between the use of declaratives and interrogatives, with respect to assertion, needs to be explained more fully. Specifically, while the use of the declarative when asserting a proposition was discussed in some detail in Section 2.2, the precise explanation of ”*questioning* of propositions” was referred to this Section (5.1.1.3).

Thus, starting with *polar*/*yes–no* questions, the meaning of the quoted expression is as follows: Based on the work of Searle (1969), Her et al. (2022), and Achiri-Taboh (2015), it is argued that when a speaker does not know if an asserted proposition is true (Searle, 1969), he or she seeks confirmation of the proposition from the hearer, and asks the hearer, in essence: ”Can you confirm my asserted proposition?”[35]. A Mandarin example is the following, where the proposition expressed by (or in) the question is confirmed in the answer, by the repetition of the same proposition by (or in) a declarative sentence: Q: *Tā qù* ***le*** *Zhōngguó ma?* 'Has he gone to China?' (Ho, 2005, p. 120) (or, more literally: 'He has gone to China?'). A: *Tā qù* ***le*** *Zhōngguó*. 'He has gone to China.'.

For *constituent*/*non-polar* questions, the meaning is instead as follows: Based again on the work of Searle (1969) and Her et al. (2022), it is argued that when a speaker does not know the necessary information to complete an asserted proposition truly (Searle, 1969), he or she seeks information from the hearer to fill the gap in the proposition, and asks the hearer, in essence: ”Can you give me the information needed to fill the gap in my asserted proposition?”. A Mandarin example is the following, where the gap (here: corresponding to the *wh*-element *nǎr* '*w*here') in the proposition expressed by (or in) the question is filled in the answer, by the information (here: *Zhōngguó* '(to) China') needed to complete the proposition: Q: [*Tā*] *qù nǎr* ***le****?* 'Where has he gone?' (Qian, 1999, pp. 52-53) (or, more literally: 'He has gone where?'). A: *Tā qù Zhōngguó* ***le***. 'He has gone to China.'.

Turning to the core of the present analysis of *le*, as stated in Section 2.2, assertion may be described as “commitment to the truth of (i.e., in terms of belief in) a proposition”, and this proved to be a key factor in the analysis. The reason for this is that the same description also applies to the type of modality, called *epistemic* modality, which, along with the dimension of temporality, is central to the description given here of the marker. A representative definition of this type of modality, by Mithun (2016), is therefore that ”epistemic modality indicates degrees of commitment to the truth of the proposition” (p. 232). These various degrees of commitment may, for example, be expressed through adverbs (e.g.,

35 Importantly, two different types of *illocutionary force* can exist in the same sentence (Pinkster, 2015).

probably), adjectives (e.g., *certain*), and verbs (e.g., *believe*; *may*)[36] (see Nuyts, 2001). However, in direct reference to *le*, epistemic modality is also, in some languages, frequently expressed with particles (markers), such as *laazim* ('must') and *jimkin* ('probable/possible') in Egyptian Spoken Arabic (Boye, 2012).

In terms of the scope of *le*, it is argued that the situation varies depending on whether the marker is used to express temporality (*aspectual le*) (see Section 5.1.1.4) or modality (*modal le*). Thus, based on the usual scopal properties of epistemic modals, the position taken here is that when expressing modality, the whole clausal proposition is asserted or emphasized (*wide* scope) through the use of *le* (see, e.g., Nuyts, 2016). In addition, based on the work of Paul (2015), J. Wu (2003), and Boye (2012), it is argued that this wide-scope-taking ability is applicable to modal *le* regardless of its syntactic position (see Lundvik, 2019). Crucially, however, it is further argued that when taking wide scope, modal *le* may signal two types of focus, a *narrow* one (on a propositional constituent) or a *wide* one (on the whole proposition) (see also Ouhalla, 1997; El Zarka, 2012; Repp, 2013; Repp & Spalek, 2021). Broadly speaking, the narrow focus—when expressing emphasis—is on either (A) a "temporal element" (e.g., on the final endpoint of an action or event, as in [14-15], Section 2.3.3) or (B) sentential content which represents a "deviation from the cultural norm" (see [47-48], below). The wide focus is instead on (C) sentential content representing a "deviation from what is assumed or expected" by the interlocutor or the speaker (see [49-51], below) or (D) sentential content which represents an "order" (see [52], below) or a "warning" or "dissuasion" (e.g., *Bié pèngle lúzi!* 'Don't touch the stove!', Li & Thompson, 1981).

In case (B), the mechanism behind the sense that something, in the mind of the speaker, represents a deviation is often attributed to what is considered to be the accepted Chinese cultural norm or not (see also, e.g., van den Berg & Wu, 2006). When, according to the speaker, the norm is not adhered to, this is considered a remarkable feature, and *le* is then used to emphasize (or rather focus on) the content in the sentence which represents this deviation from the norm. For example, (47) and (48), below, both illustrate the opinion (attitude) of the speaker that the limit for what is "acceptably salty" has been exceeded, and *le* is therefore used to emphasize (focus on) the "saltiness", which, according to the speaker, is deemed unacceptable (see, e.g., Z. Shi, 1988; Ljungqvist Arin, 2003). Thus, in both cases, *le* is used to express "excessiveness":

(47) Tāng *xián* **le** yī diǎn. (verbal *le* = *narrow* focus)

36 In turn, these epistemic modal expressions can be placed on an "epistemic [modal] scale" (Nuyts, 2001, p. 22; Simon-Vandenbergen & Aijmer, 2007, p. 86; Boye, 2012, p. 21), that is, a scale of epistemic modality. See the corresponding *scale of* ***strength of assertion***, in section 5.2.

soup salty LE one little

The soup is a little too salty.[37]

(48) Tāng *xián* **le**. (sentential *le* = *narrow* focus)

soup salty LE

The soup is too salty. (Chao, 1968, p. 798)

Aside from emphasizing (focusing on) what represents excessiveness, *le* is also frequently used to emphasize (focus on) sentential content which either represents something ”unusual” or ”surprising” to the speaker or which ”contradicts” what an interlocutor has said—content which thus represents a deviation from what is ”expected” or ”assumed” by the speaker or the interlocutor, respectively (see also, e.g., Li & Thompson, 1981). These examples, linked to deviation, belong to case (C), and here, the surprising content (as in [49]) or corrective content (as in [50] and [51]) is emphasized (or rather focused on) (by the speaker) by the use of sentential *le*, as in the first two cases below, or double *le*, as in the last.

(49) (to friends as they are watching a television show)

Tāmen yào zhuā tā **le**! (sentential *le* = *wide* focus)

they will grab s/he LE

(Watch — you might not believe it, but the new situation is that) they're going to grab him/her.

(Li & Thompson, p. 269)

(50) (to a friend who has asked whether the speaker needs more money to pay the salesperson)

Wǒ yǐjīng gěi tā liǎng bǎi kuài qián **le**. (sentential *le* = *wide* focus)

I already give s/he two hundred dollar money LE

(But) I already gave him/her $200 (i.e., you were wrong in thinking that I hadn't paid enough).

(Li & Thompson, p. 265)

It is, however, also possible to use a double-*le* construction for the same purpose as in (50):

(51) (protesting to someone who doesn't believe that the speaker has had enough to drink)

37 The translations of (47) and (48) represent the *modal* readings only.

Wǒ hē **le** sān bēi **le**. (double *le* = *wide* focus)
I drink LE three glass LE
(Look — I tell you) I've drunk three glasses! (Li & Thompson, p. 266)

In case (D), finally, although *le* is not normally used in *imperative* sentences, there are some cases where *le* does occur, but then it only applies to the verbal-*le* type, in terms of affecting the imperative force (see also sentential *le*, Section 5.1.1.2). One of the cases is "warnings" (which concerns *negative* imperatives), where verbal *le*, in fact, must be used, and another is imperative sentences which are "urgent orders", concerning particularly those orders expressing that one wants to "get rid of or dispose of something" (Li & Thompson, pp. 207-210). In this latter case, *le* often contrasts with the resultative verb complement *-diào* 'away; out; off', where, relatively speaking, *le* expresses more urgency (Li & Thompson). This added sense of urgency can be noted in example (52), where *le* is used to emphasize (focus on the content representing the order) that the DRINKING OF THE MEDICINE must be done with haste, which may express, for example, the speaker's feelings of concern for a sick relative:

(52) Hē **le** nèi bēi yào! (verbal *le* = *wide* focus)
drink LE that cup medicine
Drink that cup of medicine! (Li & Thompson, p. 207)

Importantly, however, as argued in Section 2.2, imperative sentences do not express truth-related content. Thus, the meaning of *le* in these sentences cannot be, at least not straightforwardly, about the speaker's commitment to the truth of a proposition either. It is, therefore, suggested that in imperatives, *le* has the function of an intensifier, but as opposed to intensifying (through emphatic assertion) the assertive force linked to declaratives and interrogatives, *le* intensifies the directive force conveyed when delivering a warning or handing out an urgent order. In support of this suggestion, it is assumed that *le* functions similarly to the epistemic modal adverbs *certainly* and *definitely*, as described by Simon-Vandenbergen & Aijmer (2007). According to the authors, these adverbs may, apart from expressing epistemic certainty, also have the function of reinforcing the speech act force of imperatives.

5.1.1.4 Tense

By the argued ability of *le* to focus on the beginning or end of a situation (see above, this Section [5.1.1]), it is further argued that it is possible to account for the ability of verbal and/or sentential *le* to (indirectly) express all the four *tenses*[38] linked to *le* in the questionnaire survey (see Chapter 4), and below[39] (again, see also Smith and Erbaugh, 2005; C. S. Smith, 2006). Regarding the scope of *le* when used to express temporality (*aspectual le*), however, the situation differs between the two *le* types. Thus, based on their temporal properties, verbal *le* is argued to have *narrow* scope over the VP (Holmer, 2000; Ljungqvist-Arin, 2003; X.-Z. Z. Wu, 2004; Lundvik, 2019), while sentential *le* has *wide* scope over the whole clause/sentence (the TP) (Holmer, 2000; Ljungqvist-Arin, 2003; Soh, 2014; Lundvik, 2019). In both cases, however, the focus signaled is a *narrow* one, on one of two temporal endpoints, namely on the final endpoint of an action (verbal *le*) or event (sentential *le*), or the initial endpoint of a state (verbal *le*; sentential *le*) (see also Ljungqvist Arin 2003; J.-S. Wu, 2005, and see Sections 2.3.1, 2.3.2). This is the general pattern, for simple sentences, but for complex sentences, the pattern differs in some respects (see Section 5.1.1.5).

However, as stated in Section 2.3.4, the expression of tense (time) in Mandarin is contingent upon more than the occurrence of (partly) aspectual forms such as verbal and sentential *le*. This, therefore, means that knowing which particular endpoint is focused on by *le* is frequently not sufficient to determine the appropriate temporal reading of a sentence. Hence, in Table 4, examples of the (indirect) expression of Past, Present perfect, Present, and Future tense, by *le*, is shown, while the factors of *situation type* and, to some extent, also *lexical form* (see ”modal force”, Footnote 23) are added, to present a more complete picture.

38 When *le* is used to express temporality (i.e., *aspectual le*), the type of tense the marker is argued to express is *syntactic* tense (see, e.g., Sybesma, 2007; N. Huang, 2015; N. Li, 2016; Guo, 2022). Following N. Huang (2015), syntactic tense refers to a syntactic category which largely corresponds to *semantic* tense, which, in turn, relies on the model of Reichenbach (1947), and others—that is, the model involving the three times detailed in Section 2.2.4.

39 Regarding *future* tense, however, this ability is, in the default case, limited to *complex* sentences, where *le* is expressing *forward linking* (see example [56], and further below, this Section [5.1]).

Table 4: The indirect expression of tense by *le*—varying according to endpoint focus and situation type; (”modal force”)

(RT < SpT; SitT = RT): **Past tense** Final endpoint focus	([RT < SpT; SitT = RT] & [RT=SpT; SitT=RT]): **Present perfect tense**
+ Clauses with telic event VPs; (e.g., *Wǒ mǎi* ***le*** *sān běn shū.* 'I bought three books.', see [23b]) Atelic event clauses	Final and initial endpoint focus[40] + Clauses with telic event VPs; (e.g., *Wǒ mǎi sān běn shū* ***le****.* 'I have bought three books (now).', see [29b])
(e.g., *Tā dǎ* ***le*** *májiàng.* 'She played majiang.') (RT=SpT; SitT=RT): **Present tense** Initial endpoint focus	Atelic event clauses; (e.g., *Tā hē jiǔ* ***le****.* 'He has drunk wine (now).', see [11a]) State clauses with state VPs
+ Clauses with telic event VPs; (e.g., *Wǒ mǎi sān běn shū* ***le****.* 'I buy/am buying three books (now).', see [29b])	(e.g., *Wǒ pàng sān bàng* ***le****.* 'I have grown three pounds fatter (now).', see [9]) (RT=SpT; SitT > RT): **Future tense**
+ Atelic event clauses; (e.g., *Xià yǔ* ***le****.* 'It's raining (now).', see [13])	Initial endpoint focus + ”modal force”
State clauses with state VPs (e.g., *Wǒ dùzi è* ***le****.* 'I'm hungry (now).')	(e.g., *Tāmen yào zhuā tā* ***le****!* 'They're going to grab him/her (now).', see [49])

Note: See also C. S. Smith (2006)

5.1.1.5 Forward linking (Sequence; Condition)

In the case of *forward linking* in complex sentences, it is argued, based on Ljungqvist Arin (2003) and J.-S. Wu (2005), that just as in the case of the *present perfect* (see Section 5.1.1.4), *le* has a “dual function”. The details of the forward-linking function are, in turn, also based on C. S. Smith (1997), and the same function was also confirmed through the survey findings (Section 4.4).

Specifically, *le* first focuses on the *final* endpoint of a situation and then on the *initial* endpoint of another, subsequent situation. In the case of forward linking, unlike in the case of the present perfect, however, the first situation as well as the second can refer to both an event and a state. Moreover, since the

40 The expression of *present perfect* tense can, it is argued, be the result of a dual function of *le* (see also Ljungqvist Arin, 2003; J.-S. Wu, 2005). Thus, in a sentence such as the top one, sentential *le* simultaneously (“&”) focuses a) the natural *final* endpoint of the telic event VP (*mǎi sān běn shū.* 'buy three books'), realizing the Accomplishment situation type, and b) the *initial* endpoint of the resultant State of MY HAVING BOUGHT THREE BOOKS.

realization of the situation expressed by the subsequent clause is conditional upon the realization of the situation expressed by the first clause (Ljungqvist-Arin, 2003), it is argued that both the *temporal sequential le* sentence and the *conditional le* sentence concern a conditional or "conditional-like" relation.

In terms of commitment to the truth of a proposition (see Sections 2.2, 5.1.1.3) in these complex sentences, it is argued, following Edgington (2001; 2020), that by committing to the parts (to each clausal proposition) of the sentence, one commits to the sentence as a whole. Specifically, a conditional commitment to the truth of the antecedent is made, such that if the antecedent is true, then this conditional commitment has the force of a commitment to the truth of the consequent (Whitaker, 2018; Edgington, 2020, and see also Russell 2007).

5.1.2 Factors of influence and variation in meaning

RQ1. What are the meanings of verbal *le*, sentential *le*, and double *le*, across *temporal* and *modal* dimensions (**RQ1a**), and what factors may influence these *le* meanings and how do the meanings vary depending on the factors present (**RQ1b**)?

Regarding **RQ1b**, based on the analysis of the data from the questionnaire survey (Sections 4.1- 4.4), the following factors were found to influence, to varying extents, the meanings expressed by the three *le* types: (a) The syntactic position(s) of the marker, that is, which *le* type was at hand, (b) Verb type (*action* or *stative*/*adjectival* verb), (c) Quantificational status (*unquantified*; *quantified*) of the (direct) object, (d) Sentence type (*declarative*; *interrogative*; *imperative*), (e) Voice (*active* or *passive* voice), (f) Transitivity (*transitive* or *intransitive* predicate), (g) Sentence structure (*simple* or *complex* sentence). In addition, certain factors had a differentiating effect on only a part of the meanings that could be expressed, such as different types of tense, among those included in the five meaning categories studied (see Section 3.2, and three of the categories, [A]–[C], below).

Depending on which examples of the above factors were present (e.g., either *action* or *adjectival* Verb type), the general patterns of meaning variation identified ("Attitude" & "Forward linking" categories excluded due to not measuring factors of influence and lack of sufficient data, respectively) were:

(A) Completion: The data show a very strong link between the expression of Completion and *active* (Voice) *declarative* (Sentence type) sentences with *action* (Verb type) verbs, for all three *le* types. The same meaning was expressed to a markedly lesser extent in the *interrogative* (Sentence type) sentences

with *action* (Verb type) verbs, *declarative* (Sentence type) sentences with *adjectival* (Verb type) verbs, and in the *imperatives* (Sentence type), for the three *le* types (the imperatives, however, concern verbal and sentential *le* only).

(B) Change/New situation: In contrast to the very strong link to the meaning of Completion in the *active declarative* sentences with *action* verbs, the meaning of Change/New situation in the same sentences was expressed to a very small extent, for all *le* types. Instead, the data show a very strong link between the expression of Change/New situation and the *interrogative* (Sentence type) sentences with *action* (Verb type) verbs, *declarative* (Sentence type) sentences with *adjectival* (Verb type) verbs, and the *passive* (Voice) sentence, for each *le* type.

(C) Tense: Regarding the temporal reading distribution, the most salient general pattern was related to Sentence type. Thus, what could be seen was markedly *more even* tense rates and/or a *greater number* of tenses in the *interrogative* categories than in the corresponding *declarative* categories, for the three *le* types. Based on the post-survey follow-up with some of the participants, these results could, however, be indicative of another factor than Sentence type per se. Namely, these participants expressed feeling more uncertain when judging the interrogative categories than the declarative ones.

Another pattern involved The syntactic position of the marker, in that the number of tenses was *smaller* and the tense rates were *less even* in the active declarative *verbal-le* categories with a *transitive* predicate than in the corresponding sentential-*le* and double-*le* categories.

A third one was linked to Quantificational status of the object and Transitivity, where the number of tenses was *smaller* and/or the tense rates were *less even* in the (*transitive*) active declarative categories with an *unquantified* object than in both the corresponding active categories with a *quantified* object and in the categories with an *intransitive* verbal predicate, for all three *le* types.

Individually, there was also a clear variation in the most preferred tense alternative (temporal reading) between the *le* types, not only in the tense that was most frequently the most preferred but also in the distribution among the numbered *le* categories. Hence, for example, in the categories with an *intransitive verbal* predicate ([24a]; [30a]; [35a]), the most preferred tense was different for all *le* types.

Finally, individually, the *le* types exhibited the profiles described below (imperatives excluded due to lack of double-*le* versions and complex sentences due to lack of sufficient data), based on the expression by each *le* type, of the described meanings, and Sensitivity to Factors of influence/Consistency of expressed meaning. Specifically, the expressions of Completion and Change/New situation are based on only the most salient (high) and consistent rates in the Co and Ch categories (see figures in bold, Tables 1

& 2), while that of Tense is based on the tense alternative, for each *le* type, which was most frequently the most preferred (see figures in bold, Table 3). Additionally, Consistency of expressed meaning is based on the distribution of all most preferred temporal alternatives, among the numbered *le* categories, for each *le* type. For example, for verbal *le*, only the change from *action* verb (*verbal* predicate) to *adjectival* verb (predicate) changed the preference for *past* tense over another alternative, whereas more factors influenced sentential and double *le*:

Verbal *le*: **most strongly** expressing *completion*, and *past* tense (= most preferred alternative in 6 out of 8 *le* categories); **second most strongly** (with double *le*) expressing *change/new situation* (in 3 out of 3 *le* categories); **least influenced** by various factors (1 factor: Verb type) and, therefore, the **most consistent** in its expressed type of tense;

Sentential *le*: **least strongly** expressing *completion*, and **most strongly** *present perfect* (= most preferred alternative in 4 [+ 1 shared with past/present tense] out of 8 *le* categories); **most strongly** expressing *change/new situation* (in 2 out of 3 *le* categories); by a very small margin, **most influenced** by various factors (4 factors: Quantificational status of the object, Transitivity, Verb type, (partly) Sentence type) and, therefore, the **least consistent** in its expressed type of tense;

Double *le*: **second most strongly** expressing *completion*, and **most strongly** *present perfect* (= most preferred alternative in 4 out of 8 *le* categories); **second most strongly** (with verbal *le*) expressing *change/new situation* (first, second, and third in 3 *le* categories); by a very small margin, **less influenced** by various factors (3 factors: Voice, Transitivity, Sentence type) and, therefore, slightly **more consistent** in its expressed type of tense **than** sentential *le*.

NB: These profiles are, in particular for sentential *le* and double *le*, based on very even Tense data, and for the Co and Ch categories used, the differences between the three *le* types are small and partly negligible (again, see Tables 1 & 2).

5.2 The core meaning of *le*: A descriptive grammatical perspective

RQ2. Is there a *core* meaning shared by verbal *le*, sentential *le*, and double *le*, and if so,
what is this common core meaning?

With regard to **RQ2**, the data revealed, first of all, that along with the ability to express, for example, *completion* and a *change* (*of state*), the ability to also express *emphasis* is a central characteristic of both

verbal *le* and sentential *le* (See Chapter 4). The same was also indicated or implied for double *le*, by the part of the data involving this *le* type (See Sections 4.1–4.3). Second, although expressing completion (perfectivity) and a change of state is the normal case for the three types of *le*, the ability to also express emphasis proved crucial in the attempt to identify a shared core between the types. The reason is that this ability constitutes indirect evidence that *le* is an *assertive marker*—that is, in simple terms, a marker that expresses *certainty*—where a proposition is asserted by the speaker. More precisely, however, as mentioned in the introduction to this chapter, the specific core meaning is *modal certainty*, which includes both emphasis and certainty. See also the following discussion.

The contention about the importance of the expression of emphasis is in turn based on the following argument: emphasis can be seen as an ”emphatic/intensified assertion”, made by a speaker, of his or her commitment to the truth of his or her proposition, and conversely, a weaker form of emphasis can be seen as a “basic/less forceful form of assertion”, on behalf of the speaker. Thus, a link between basic assertion (of a proposition) and emphasis (of a proposition) can be demonstrated, based on the common basic feature of assertion. Support for this argument and link was provided in Sections 2.3.3 and 5.1.1 (see definitions of emphasis, [basic] assertion, and epistemic modality), and on that basis, the more precise definition of the core meaning of *le* is as follows: *Le* is an assertive marker which can express two types of assertion. The basic type of assertion is comparable to making a firm statement that something is true/real (as perceived by the speaker), by the use of a predicate such as ”believe” (in the sense: ”definitely believe”), while the stronger type is comparable to stating the same by the use of a predicate such as ”be certain” (in the sense: ”absolutely certain”) (see also Langacker, 2009)[41].

Hence, for example, ”I **definitely believe** I have seen her before.”—representing the first type of assertion—conveys less certainty/conviction, on the part of the speaker, than ”I am **absolutely certain** I have seen her before.”—representing the second type. In turn, both predicates/assertions can be placed on a *scale of* ***strength of assertion***[42] (see Givón, 1989; 2001), where the predicate/assertion with relatively *less* strength (i.e., ”believe”/basic assertion) is placed lower than that with relatively *more* strength (i.e., ”be certain”/emphatic assertion) (see Givón, 1989).

In conclusion, this also means that to transition from ”firmly judging something to be the case”, by the use of basic-assertion *le* (see [59]; [60], below), to ”the absolute certainty or conviction that something is the case”, by the use of stronger-assertion *le* (see [57]; [58], below), you move up the scale of strength of

41 Alternatively, assertion with *basic* assertion *le* can be compared to prefacing a statement with ”I assert that...”, while assertion with *emphatic* assertion *le* can be compared to doing it with ”I categorically assert that...” (see also Palmer, 2001).

42 See also the corresponding *epistemic modal scale* in Section 5.1.1.3.

assertion—and in the reverse relationship, naturally, you move in the opposite direction. Importantly, however, both types of assertion are *qualified* (modalized) assertions, and regardless of the level of strength, such assertions always convey less certainty/conviction than *unqualified* (unmodalized) ones (Simon-Vandenbergen & Aijmer, 2007; MacFarlane, 2014; Jaszczolt, 2020) (see Section 2.2 for definitions). Thus, the core meaning of *le* is found to be *modal certainty*, the definition of which is: qualified assertion of basic or emphatic type, or alternatively: high or highest degree of ”speaker certitude concerning the truth of [a] proposition” (Simon-Vandenbergen & Aijmer, 2007, p. 38).

The following Mandarin examples (57)–(60) (all with a default *completive* reading), corresponding to the English ones above, represent both of the aforementioned positions on the scale and both types of assertion:

(57) *Tā **yǐjīng** qù **le** fēijīchǎng*. 'He has **already** gone to the airport!': Verbal *le* emphasizes (emphatically asserts) the proposition (expressed by the clause), and thereby singles out the completion of the action (of GOING) by strongly focusing on the *final* endpoint of the same action (for the basis of this argument, see Section 5.1.1). This focus, in turn, has the effect of highlighting that the *action* of GOING is already completed (see also examples in Section 4.6, and Zhu, 2019). Furthermore, since the emphatic type of assertion equals the “highest subjective certainty” (see also Givón, 1989), excluding expressions of *presupposition* (where a proposition is “not asserted but rather taken for granted”, Givón, 2001, p. 370), it holds the top position among qualified assertions on the scale of strength of assertion. Likewise, it holds the same position on the epistemic modal scale, there representing “absolute certainty” (Nuyts, 2016, p. 38).

(58) *Tā **yǐjīng** qù fēijīchǎng **le***. 'He has **already** gone to the airport!': The analysis and description of this sentential-*le* sentence are identical to those of the verbal-*le* sentence above, with the only difference that the *action* (of GOING) is to be replaced by the *event* (of HIS GOING TO THE AIRPORT).

(59) *Tā qù **le** fēijīchǎng*. 'He went to the airport.': With *yǐjīng* ('already') removed from (lacking in) the sentence, it can be argued that the element that prompts the expression of emphasis, via verbal *le*, is also removed, since now there is no temporal adverb left, whose signaled final endpoint the extra focus can be added to. Without *le*, however, the location in time of the GOING *action* is unspecified (see Smith & Erbaugh, 2005), meaning that the past-time reading of the action is still the result of *le* expressing (singling

out) its completion. The basis for this expression is argued to be the same as in the (57) sentence (see, also, Section 5.1.1), and so, the focus on the *final* endpoint is still in place as a result of *le* asserting the proposition (expressed by the clause), only now with less assertive force, as the expression of emphasis is no longer at hand. The type of assertion that remains is, therefore, of a more basic kind, but its position on the scale of strength of assertion and on the epistemic modal scale is still argued to be near the top, just below that of "emphatic assertion *le*".[43]

(60) *Tā qù fēijīchǎng* ***le***. 'He went to the airport.': same conditions as (58).

5.3 The CG representation of *le*

RQ3. Is it possible to capture all *le* meanings in a *polysemy network* model (**RQ3a**) and, if a common core meaning for *le* exists, to capture it in a CG diagram (**RQ3b**)?

As stated in Chapter 1, *le* is considered in this thesis to be polysemous, and the representation of the marker in Section 5.3.1 is, therefore, in line with "the polysemy approach" (as described by, e.g., Hansen, 1998; Allan, 2021), and was specifically done using Langacker's (2008) *semantic network* model. The primary reason (aside from adhering to Langacker's [1991] definition of polysemy) for favouring this approach is the linking of the various senses of *le* to the process of *grammaticalization* ("the change whereby lexical items and constructions come in certain linguistic contexts to serve grammatical functions and, once grammaticalized, continue to develop new grammatical functions", Hopper & Traugott, 2003, p. xv). In other words, the multifunctionality and, therefore, polysemy of *le* is considered to be linked to the diachronic development from the lexical source *liao* ('finish', 'complete') (see Section 2.1) to today's modern *le* types (see also Traugott & Dasher, 2002; Simon-Vandenbergen & Aijmer, 2007; Traugott, 2010).

5.3.1 The three *le* types

Regarding **RQ3a**, the identified main meanings of the three *le* types investigated in this thesis were captured in a polysemy network (see Figure 18, and the text below, for details). The basic premise for this

43 Compare the Hidatsa "Period" particle *c* (expressing *assertion*) and "Emphatic" particle *ski* (expressing *strong assertion*) (Palmer, 2001), and their—*c* and *ski* both—expression of "full support" (total certainty) according to Boye (2012, p. 60).

was: With *le* defined as a marker with the core meaning of *modal certainty*, the present study suggests that the more fundamental meanings as well as more specific ones, such as a particular type of tense or a certain kind of attitude, can all be accounted for. Thus, while every specific meaning of *le* is not depicted in this network, since the exact inventory of all conventionally accepted senses of a lexical item or grammatical marker is impossible to predict (Langacker, 1991), it is nonetheless suggested that all *le* meanings can be derived from the same core meaning given in the network.

Before proceeding further with this network, however, there is a key CG-based definition that needs to be explained: Based on the aforementioned definition of *le* in descriptive grammatical terms, the position taken in this thesis is that *le*, in CG terms, is a grammatical marker, the core meaning of which is to express (*le* encodes) the speaker's "*epistemic judgment of certainty* in regard to the object of thought"[44]. An *epistemic judgment* concerns the degree to which "the object of thought"—defined in this thesis as a "clausal proposition" (i.e., a proposition expressed by a clause)—is judged by the speaker to be true, that is, to match the speaker's conception of reality (Langacker, 2008). Hence, an *epistemic judgment of certainty* (strongly) asserts that the speaker accepts "the object of thought" as true, that is, as real[45].

With regard to *le*, the judgment refers to the *basic* (non-emphatic) type of assertion or the *intensified* (emphatic) type (see Sections 2.3.3 and 4.6), depending on the speaker's degree of certainty about the truth of the clausal proposition[46]. In addition, the clauses expressing propositions include the subject-less type and the one-word type, such as *Kāihuì le.* (Kneussel, 2005, p. 259) 'The meeting has started.' and *Chūntiān le.* (Kneussel, p. 173) 'Spring has come.', respectively.

Returning to the network model, it consists of the senses of polysemous expressions (including, e.g., multi-sense morphemes, words, or phrases), where these senses are analyzed as "nodes in a network, linked to one another by various sorts of categorizing relationships" (Langacker, 1991, p. 266). One such relationship holds between a *schema* and a sense (node) that *elaborates* the schema, where a schema may be defined as a "linguistic generalization" instantiated by (abstracted from) a more specific sense (node) (Langacker, 2008, p. 57), and elaboration, as a characterization with "greater precision and detail" (Langacker, 1991, p. 267). The relationship, therefore, amounts to one of specialization and is symbolized by a solid arrow ("→") (Langacker, 1991). A second kind of relationship is *extension* from a *prototype*, symbolized by a dashed arrow ("⇢") (Langacker, 1991), where a prototype may be defined as a sense (node) that—relative to others in the network—is more "entrenched and more readily activated"

44 The arguments for this CG definition are discussed in Section 5.3.2.
45 Compare "a high degree of epistemic support" (Boye, 2012, p. 166) and "a high degree of epistemic certainty" (Simon-Vandenbergen & Aijmer, 2007, p. 170).
46 See Section 5.2.

(Langacker, 2008, p. 226), while extension implies "some conflict" between the categorizing sense (i.e., a prototype) and the sense (node) it categorizes (Langacker, 2009, p. 4).

Furthermore, the boxes in the networks are drawn with varying line thickness, where those with heavier lines represent more prototypical senses. Hence, the most prototypical sense in a network is represented by the box with the heaviest lines.

So, if we now look at the depiction of the *le* types in more detail, shown in Figure 18 below is a semantic network, based on the CG principles and definitions laid out by Langacker (1991, 2008). The highest-level schema in the network captures the core meaning of *le* ("Modal schema"), shared by the three *le* types, and the two lower-level schemas represent the most prototypical *le* sense ("Basic/Non-emphatic assertion") and its extension ("Emphasis"), respectively. Relative to the said *le* prototype, this extension is an alternate sense which occurs in a narrower range of contexts. Moving further into the network, the lower-level schemas, in turn, give rise to additional extended senses in either the temporal or the modal domain, or both (see also De Wit & Brisard, 2014). These extensions ("Perfectivity"; "Change of state"; "Attitude") then become prototypes for new extensions ("Completion"; "Tense "; "Non-completion"; "Forward linking"), which themselves become prototypes for yet more extensions, in a pattern of which what is depicted is only a fragment (as previously explained).

In addition, the boxes enclosing "Perfectivity" and "Change of state" are drawn with heavier lines to indicate the higher degree of prototypicality of these senses relative to the others in the temporal domain. Importantly, however, this higher degree is not linked to the frequency data from the survey, but instead to the dominance of these senses described in the literature review (in Section 2.1), and to the fundamental position of these senses in the expression of temporality by *le*, described primarily in Sections 2.3 and 5.1.1.

What the profiles of the three *le* types show, however (see Section 5.1.2), is that the differences between the types with respect to "Completion" (Perfectivity) and "Change of state", based on the most salient and consistent survey rates, are very small, providing further support for the unified treatment of the *le* types in this thesis, including in the common network in Figure 18. Moreover, based on the present study, a semantic network limited to only *double le* lacks senses in the domain of *complex sentences*, due to the lack of connection between the ability to express "forward linking" and double *le*.

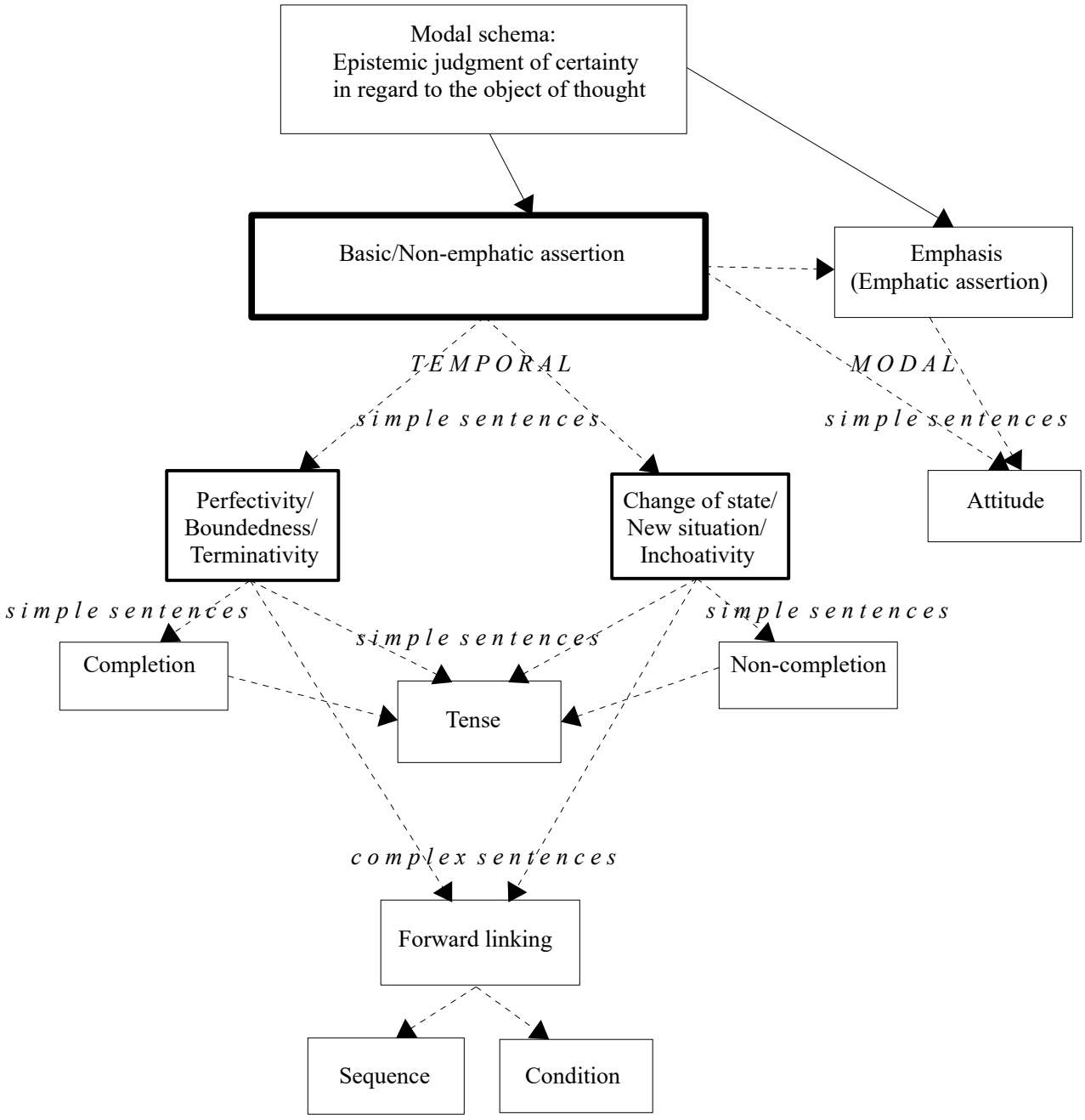

Figure 18: A semantic network for the three types of *le*.

5.3.2 The core meaning of *le*

Regarding **RQ3b**, the common core meaning for *le* described in Sections 5.2 and 5.3.1 was captured in a CG diagram (see Figure 19, below). Before looking at this diagram, however, the CG-based definition of

this core meaning, given in Section 5.3.1, needs to be clarified: The definition draws on Langacker's (2008) view of what (emphatically assertive) adverbs such as ”undoubtedly” express (see also ”probably”, in Section 5.1.1.3, and see next paragraph): In the following sentence (c), ”the adverb *undoubtedly* describes something inherent in neither the event itself nor its participants. Rather it expresses the speaker’s epistemic judgment in regard to the clausal proposition. [...] (c) *Undoubtedly they made the wrong decision.*” (p. 362). Consequently, based on the chosen adverb in (c), the proposition ”they made the wrong decision”, in the same sentence, is judged by the speaker to be true and the degree of his or her certainty is the highest possible (on the epistemic modal scale).

A corresponding Mandarin example is the following (from Section 4.6): *Tāmen wěituō wǒmen qù diàochá zhè jiàn shì* ***le***. 'They *did* entrust us to investigate this matter!'. Thus, in this sentence, *le* expresses the speaker's *epistemic judgment of certainty* in regard to the proposition “tāmen wěituō wǒmen qù diàochá zhè jiàn shì”. In other words, *le* is here used to express an emphatic assertion of the proposition, which makes the marker comparable to an emphatically assertive adverb such as *quèshí* 'indeed' (as described in Section 4.6).

The CG characterization of an (emphatically) assertive adverb (a *result adverb*), and of *le* is shown in Figure 19. Notably, however, while the strength of C's (see Section 2.4) commitment to ”the object of thought” may vary—depending on whether, for example, a predicate of moderately strong commitment such as “believe” or an adverb of very strong commitment such as ”undoubtedly”, is used—all epistemic judgments of *certainty* invoke the same final phase of the ”epistemic control cycle” (Langacker, 2009, p. 261). Hence, so does the epistemic judgment indicated by *le*, meaning that not only emphatic assertion *le* but also basic assertion *le* is represented by Figure 19. In this figure, *le* profiles (puts in focus) the situation of an *actual speaker*, C_0, controlling a clausal proposition (expressed by a finite clause). The label C represents a *conceptualizer* and the proposition, along with the attachment/link to it, are indicated by heavy lines. The control is demonstrated by the proposition being in C_0's epistemic dominion (D_0), that is, in C_0's conception of reality (see *elaborated reality*, below).

The label tr represents the *trajector*, that is, the *primary focus* (the most focused element within the profiled situation), which here is the proposition. In turn, the proposition is represented by the/another diagram, which also represents finite clauses in a schematic way (see also Langacker, 2009), inside the heavy lines. Specifically, a second conceptualizer is involved, labeled C, who is a *virtual* (imagined/generalized) entity/individual only, invoked by the elements tense and modality, for the purpose of relating a profiled *process* (**p**) (i.e., an event or situation/state) to C and an imagined speech event, and to

an imagined time and place of speaking. **p**, following consideration by C, can have both an inclination status and a result status[47] in relation to C and C's epistemic dominion (D), that is, to C's conception of reality (see *basic reality*, below).

Overall, this means that the speaker (C_0) adopts an assertive epistemic stance toward a proposition, which itself incorporates an epistemic stance, of some kind, toward a process (**p**). Importantly, though, *le* is a marker of ”propositional attitude”, which means that it is primarily the stance toward the proposition that applies, while the stance toward the process is applicable only by *inference* (Langacker, 2009). This is because **p** is only *virtually* grounded, meaning not “situated in time and reality with reference to a particular conceptualizer” (p. 268). Hence, the correspondence lines (vertical dots) in Figure 19 indicate that C_0 only weakly identifies with C. Furthermore, the two epistemic stances do not involve the same type of *reality*, that is, epistemic dominion (D_0; D), even though they both involve ”the *latest* [emphasis added] stage of reality's evolution” (Mortelmans, 2003, p. 154). In the case of a process, the reality involved—*basic reality*—is defined as ”the accepted history of realized occurrences” (Langacker, 2009, p. 163), that is, what a conceptualizer ”accepts as having happened or obtained up through the present moment” (Langacker, p. 160). In the case of a proposition, however, the reality involved—*elaborated reality*—concerns ”the set of propositions the conceptualizer currently holds to be valid” (Langacker, p. 131).

Additionaly, Figure 19 applies to one full clausal proposition only, that is, not to elements of a clausal proposition or to multiple-clause propositions. Moreover, the double dashed arrow represents the considerable strength of C_0's attachment to the trajector proposition, and the field/scope of awareness for C is represented by F, and for C_0, therefore, by F_0.

47 Which status applies is dependent on the presence or absence of certain modals, inside the finite clause (Langacker, 2009). In the presence of such modals, the status of **p** is *inclination*, while in their absence, the status is *result*. Examples: “She *may* be upset.” (inclination), “She is upset.” (result) (Langacker, p. 264).

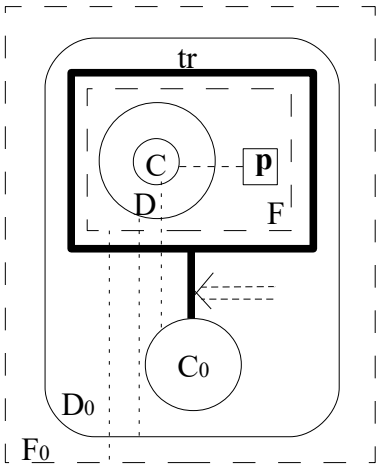

Figure 19: CG diagram representing the core meaning of the grammatical marker *le*. The core meaning of *le* is to express the speaker's (C0's) "*epistemic judgment of certainty* in regard to the object of thought", and "the object of thought" in Figure 19 is the (full) clausal proposition, indicated by heavy lines and represented by the profiled process, **p**, which has an inclination/result status in relation to C and D.

5.4 Summary

The above discussion demonstrated that *le* is an assertive marker, that is, a marker that expresses *qualified assertion*. The definition of *qualified assertion* and *epistemic modality* is the same: "commit the speaker (in varying degrees) to something's being the case, to the truth of the expressed proposition" (see Section 2.2) and "commitment to the truth of (i.e., in terms of belief in) a proposition") (see Section 5.1.1.3), respectively. In other words, *qualified assertion* equals *epistemic modality.*

The specific type of *qualified assertion* that *le* expresses is of the *reinforced* type, which is why the assertion (basic *and* the emphatic) expressed by *le* is labeled *modal certainty*, as opposed to, for example, modal probability. In turn, *modal certainty* is synonymous with the CG designation "epistemic judgment of certainty in regard to the object of thought" (see Section 5.3.1), and based on the position of this epistemic modal sense, at the top of the semantic network (Figure 18), the network illustrates that the *modal* sense is the *primary* one, while the temporal senses, further down in the network, are less primary.

Moreover, the sequence of things is that *le emphasizes* (emphatically asserts), or *asserts* with basic assertion, the *proposition* (expressed by the clause), and thereby singles out, for example, the completion of an action or event by strongly/a little less strongly *focusing on* the final *endpoint* of that same action/event.

In other words, the qualified assertion/expression of epistemic modality is primary, and the expression of temporality, by expressing completion (perfective aspect), is a consequence of the primary expression.

The latter finding is potentially far-reaching as it shows that by approaching the linguistic object *le* from the vantage point of *modality*, a greater understanding of this marker also has value outside of Chinese linguistics. This offers additional support for the unconventional claim by Jaszczolt (2009) that ”the primitive building block in the conceptualization of time” (p. 4) is modality, a position which, however, is also implicit in, for example, De Wit and Brisard's (2014) study of the English present progressive.

5.5 Limitations

A limitation in the present study, with regard to the questionnaire survey, was the small sample size, since a larger group of participants would have allowed better generalizability. Moreover,
the scope of the questionnaire may have caused fatigue among the participants, which may have increased the risk of mistakes or careless errors. Therefore, to reduce such a risk, a less extensive questionnaire or, alternatively, fewer questions per test round would have been beneficial. To optimize the survey overall, a pilot study would also have been preferable. Due to the difficulties in finding truly suitable (responsible with a good ear for languages) participants, however, this turned out to be difficult to achieve. Lastly, a more extensive post-survey follow-up would have been ideal.

5.6 Recommendations for Future Research

One unexpected finding of the survey was the marked difference in temporal profile (based on the number of temporal readings, and/or the reading rates) between the declarative and interrogative sentences. This difference is not described in the literature that forms the basis of the present study. It would therefore be interesting to investigate whether the same difference also exists with a new (and preferably larger) sample of participants, and—if so—also try to find out what causes the difference.

Furthermore, it would also be interesting to investigate what factors determine, for a native Chinese speaker, whether he or she interprets a *le* sentence as expressing (primarily) temporality or modality. Relatedly, it would be of value to find out what motivates a speaker to use *le* to express emphasis, particularly in cases where this expression does not depend on the meaning *le* usually expresses being

already expressed in the *le*-less sentence. This could then help to better determine what motivates the expression of the different degrees of assertion. An example of a sentence where it is difficult to determine what is expressed is the following: *Chènshān xiǎo le sān cùn*. 'The shirt has shrunk three *cun*.' (temporal reading) or 'The shirt is three *cun* too small for me.' (modal reading) (see also example sentences in Section 4.6).

In addition, it would also be interesting to investigate what (aside from *rhythm*/appropriate *total le amount*, and the like) makes a native Chinese speaker use *le* or refrain from it, in sentences where *le* is acceptable to use, both on grammatical and idiomatic grounds. This investigation could then, among other things, include Complex sentences, with the aim of finding out what motivates the use of *le* for Forward-linking purposes.

Chapter 6 Conclusion

The present study has been carried out to present a new characterization of the notoriously enigmatic Mandarin Chinese grammatical marker *le*. Most importantly, the aim has been to find the true core meaning of the marker, such that all the marker's uses, whether temporal or modal and regardless of syntactic position or positions, could be accounted for. Through dialogues with native Chinese speakers, prior to starting the thesis work in earnest, and through the initial study of linguistic literature, the existence of features shared by all three *le* types was discovered. This discovery led to the working hypothesis, in support of the one-morpheme position, underlying the research questions in this thesis. In turn, the investigation of these RQs combined quantitative (a descriptive statistical analysis, based on a questionnaire survey) and qualitative (a linguistic literature review, a minimal pair analysis, a CG description/analysis) measures.

Regarding the central question of a shared core between the three *le* types, the present study suggests that *le* has the core meaning of *modal certainty*, that is, *le* expresses a high, or the highest, degree of speaker certitude concerning the truth of a proposition. This shared meaning was therefore shown to occur in all studied instances of the marker, without exception. Hence, the results of the present study lend support to the one-morpheme position, and specifically to considering *le* as a *polysemous* marker. The results further show that all three *le* types can express temporality as well as modality, and importantly that the modal properties are the primary ones.

Future studies of other linguistic objects and phenomena, and in languages other than Mandarin and English, will hopefully provide further support for these modal accounts of time, including the described interconnections between tense, aspect, and epistemic modality.

In conclusion, this thesis has contributed to new empirical and theoretical knowledge on the topic of the Mandarin Chinese marker *le*. Most crucially, through the identified core meaning of the marker, an assertive step has been taken towards a greater understanding of the marker's semantics.

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Appendices

Capital-letter pairs in Appendix A-D are the pseudonyms for the 10 participants.

Appendix A

<u>The indirect ability of *le* to express *tense*</u>:

Active sentences – transitive

(23a) Verbal *le*: 我买了书。= **past** 100.0% (10/10): CC: 1; DN: 1; BC: 1; CP: 1; FZ: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1.
(29a) Sentential *le*: 我买书了。= **past** 77.8% (7/9): CC: 1; DN: 1; BC: 1; CP: 0; FZ: 1; AG: 1; FT: 1; JS: 1; **present** 22.2% (2/9): SZ: 1; MN: 1.
(34a) Double *le*: 我买了书了。= **past** 70.0% (7/10): CC: 1; DN: 1; BC: 1; CP: 1; FZ: 1; AG: 1; MN: 1; **present perfect** 10.0% (1/10): FT: 1; **present** 20.0% (2/10): SZ: 1; JS: 1.

(23b) Verbal *le*: 我买了三本书。= **past** 70.0% (7/10): DN: 1; CP: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; **present** 30.0% (3/10): CC: 1; BC: 1; FZ: 1.
(29b) Sentential *le*: 我买三本书了。= **past** 30.0% (3/10): BC: 1; JS: 1; MN: 1; **present perfect** 40.0% (4/10): DN: 1; CP: 1; SZ: 1; FT: 1; **present** 30.0% (3/10): CC: 1; FZ: 1; AG: 1.
(34b) Double *le*: 我买了三本书了。= **past** 50.0% (5/10): CC: 1; BC: 1; FZ: 1; SZ: 1; MN: 1; **present perfect** 40.0% (4/10): DN: 1; CP: 1; FT: 1; JS: 1; **present** 10.0% (1/10): AG: 1.

Interrogative sentences – transitive

(25a) Verbal *le*: 你吃了晚饭吗？ = **past** 55.6% (5/9): CC: 1; DN: 1; CP: 1; FZ: 1; SZ: 0; MN: 1; **present perfect** 33.3% (3/9): BC: 1; AG: 1; FT: 1; **present** 11.1% (1/9): JS: 1.
(31a) Sentential *le*: 你吃晚饭了吗？ = **past** 50.0% (4/8): CC: 1; CP: 0; FZ: 1; SZ: 0; JS: 1; MN: 1; **present perfect** 25.0% (2/8): AG: 1; FT: 1; **present** 12.5% (1/8): BC: 1; **future** 12.5% (1/8): DN: 1.
(36a) Double *le*: 你吃了晚饭了吗？ = **past** 33.3% (3/9): CC: 1; DN: 1; CP: 1; FZ: 0; **present perfect** 22.2% (2/9): FT: 1; MN: 1; **present** 44.4% (4/9): BC: 1; SZ: 1; AG: 1; JS: 1.

Active sentences – intransitive (verb predicate)

(24a) Verbal *le*: 他去了那儿。= **past** 55.6% (5/9): DN: 1; CP: 0; FZ: 1; SZ: 1; AG: 1; FT: 1; **present perfect** 11.1% (1/9): MN: 1; **present** 33.3% (3/9): CC: 1; BC: 1; JS: 1.

(30a) Sentential *le*: 他去那儿了。= **past** 44.4% (4/9): BC: 1; CP: 0; FZ: 1; FT: 1; MN: 1; **present** 55.6% (5/9): CC: 1; DN: 1; SZ: 1; AG: 1; JS: 1.

(35a) Double *le*: 他去了那儿了。= **past** 40.0% (4/10): CC: 1; BC: 1; FZ: 1; MN: 1; **present perfect** 50.0% (5/10): CP: 1; SZ: 1; AG: 1; FT: 1; JS: 1; **present** 10.0% (1/10): DN: 1.

Interrogative sentences – intransitive

(25b) Verbal *le*: 她来了我家吗? = **past** 44.4% (4/9): DN: 1; CP: 1; SZ: 0; FT: 1; MN: 1; **present perfect** 33.3% (3/9): FZ: 1; AG: 1; FT: 1; **present** 33.3% (3/9): CC: 1; BC: 1; JS: 1.

(31b) Sentential *le*: 她来我家了吗? = **past** 33.3% (3/9): DN: 1; CP: 1; SZ: 0; MN: 1; **present perfect** 33.3% (3/9): FZ: 1; AG: 1; FT: 1; **present** 33.3% (3/9): CC: 1; BC: 1; JS: 1.

(36b) Double *le*: 她来了我家了吗? = **past** 25.0% (2/8): DN: 1; CP: 0; FZ: 0; SZ: 1; **present perfect** 25.0% (2/8): AG: 1; FT: 1; **present** 37.5% (3/8): CC: 1; BC: 1; MN: 1; **future** 12.5% (1/8): JS: 1.

Active sentences – intransitive (adjective predicate)

(24b) Verbal *le*: 他瘦了一点儿。= **present perfect** 40.0% (4/10): DN: 1; CP: 1; AG: 1; MN: 1; **present** 60.0% (6/10): CC: 1; BC: 1; FZ: 1; SZ: 1; FT: 1; JS: 1.

(30b) Sentential *le*: 他瘦一点儿了。= **past** 10.0% (1/10): FZ: 1; **present perfect** 80.0% (8/10): CC: 1; DN: 1; BC: 1; CP: 1; AG: 1; FT: 1; JS: 1; MN: 1; **present** 10.0% (1/10): SZ: 1.

(35b) Double *le*: 他瘦了一点儿了。= **past** 20.0% (2/10): CP: 1; FZ: 1; **present perfect** 70.0% (7/10): DN: 1; BC: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; **present** 10.0% (1/10): CC: 1.

Active sentences – intransitive (adjective predicate)

(24c) Verbal *le*: 今天的风浪比来的时候小了很多。= **past** 10.0% (1/10): MN: 1; **present perfect** 40.0% (4/10): BC: 1; CP: 1; AG: 1; JS: 1; **present** 50.0% (5/10): CC: 1; DN: 1; FZ: 1; SZ: 1; FT: 1.

(30c) Sentential *le*: 今天的风浪比来的时候小很多了。= **past** 20.0% (2/10): BC: 1; FT: 1; **present perfect** 40.0% (4/10): CP: 1; AG: 1; JS: 1; MN: 1; **present** 30.0% (3/10): CC: 1; DN: 1; SZ: 1; future 10.0% (1/10): FZ: 1.

(35c) Double *le*: 今天的风浪比来的时候小了很多了。= **past** 10.0% (1/10): BC: 1; **present perfect** 50.0% (5/10): CP: 1; SZ: 1; AG: 1; FT: 1; JS: 1; **present** 40.0% (4/10): CC: 1; DN: 1; FZ: 1; MN: 1.

Passive sentences

(23c) Verbal *le*: 我被查了两票。= **past** 60.0% (6/10): CC: 1; DN: 1; CP: 1; SZ: 1; FT: 1; MN: 1; **present perfect** 20.0% (2/10): AG: 1; JS: 1; **present** 20.0% (2/10): BC: 1; FZ: 1.

(29c) Sentential *le*: 我被查两票了。= **present perfect** 90.0% (9/10): CC: 1; DN: 1; BC: 1; CP: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; **present** 10.0% (1/10): FZ: 1.

(34c) Double *le*: 我被查了两票了。= **past** 10.0% (1/10): CC: 1; **present perfect** 70.0% (7/10): DN: 1; BC: 1; CP: 1; AG: 1; FT: 1; JS: 1; MN: 1; **present** 20.0% (2/10): FZ: 1; SZ: 1.

Imperative sentences – transitive

(26) Verbal *le*: 倒了它！ = **present** 20.0% (2/10): FT: 1; JS: 1; **future** 80.0% (8/10): CC: 1; DN: 1; BC: 1; CP: 1; FZ: 1; SZ: 1; AG: 1; MN: 1.

Imperative sentences – intransitive

(32) Sentential *le*: 走了！ = **past** 11.1% (1/9): DN: 1; CP: 0; **present** 44.4% (4/9): DN: 1; BC: 1; SZ: 1; JS: 1; **future** 55.6% (5/9): CC: 1; FZ: 1; AG: 1; FT: 1; MN: 1.

The ability of *le* to express *completion/non-completion* of an action or a state:

Active sentences – transitive

(23a) Verbal *le*: 我买了书。= **Completed** 100.0% (10/10): CC: 1; DN: 1; BC: 1; CP: 1; FZ: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; **Not Completed** (0%)
(29a) Sentential *le*: 我买书了。= **Completed** 100.0% (9/9): CC: 1; DN: 1; BC: 1; CP: 0; FZ: 1; AG: 1; FT: 1; JS: 1; SZ: 1; MN: 1; **Not Completed** (0%)
(34a) Double *le*: 我买了书了。= **Completed** 100.0% (10/10): CC: 1; DN: 1; BC: 1; CP: 1; FZ: 1; AG: 1; MN: 1; FT: 1; SZ: 1; JS: 1; **Not Completed** (0%)

(23b) Verbal *le*: 我买了三本书。= **Completed** 100.0% (10/10): DN: 1; CP: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; CC: 1; BC: 1; FZ: 1; **Not Completed** (0%)
(29b) Sentential *le*: 我买三本书了。= **Completed** 80.0% (8/10): BC: 1; JS: 1; MN: 1; DN: 1; FT: 1; CC: 1; FZ: 1; AG: 1; **Not Completed** 20.0% (2/10): CP: 1; SZ: 1.
(34b) Double *le*: 我买了三本书了。= **Completed** 90.0% (9/10): CC: 1; BC: 1; FZ: 1; SZ: 1; MN: 1; DN: 1; CP: 1; JS: 1; AG: 1; **Not Completed** 10.0% (1/10): FT: 1.

Interrogative sentences – transitive

(25a) Verbal *le*: 你吃了晚饭吗? = **Completed** 66.7% (6/9): CC: 1; DN: 1; CP: 1; FZ: 1; SZ: 0; MN: 1; JS: 1; **Not Completed** 33.3% (3/9): BC: 1; AG: 1; FT: 1.
(31a) Sentential *le*: 你吃晚饭了吗? = **Completed** 37.5% (3/8): CC: 1; CP: 0; FZ: 1; SZ: 0; MN: 1; **Not Completed** 62.5% (5/8): DN: 1; BC: 1; AG: 1; FT: 1; JS: 1.
(36a) Double *le*: 你吃了晚饭了吗? = **Completed** 66.7% (6/9): CC: 1; DN: 1; CP: 1; FZ: 0; FT: 1; SZ: 1;

AG: 1; **Not Completed** 33.3% (3/9): BC: 1; JS: 1; MN: 1.

Active sentences – intransitive (verb predicate)

(24a) Verbal *le*: 他去了那儿。= **Completed** 100.0% (9/9): DN: 1; CP: 0; FZ: 1; SZ: 1; AG: 1; FT: 1; MN: 1; CC: 1; BC: 1; JS: 1; **Not Completed** 0%

(30a) Sentential *le*: 他去那儿了。= **Completed** 77.8% (7/9): BC: 1; CP: 0; FZ: 1; FT: 1; CC: 1; DN: 1; SZ: 1; AG: 1; **Not Completed** 22.2% (2/9): JS: 1; MN: 1.

(35a) Double *le*: 他去了那儿了。= **Completed** 90.0% (9/10): CC: 1; BC: 1; FZ: 1; MN: 1; CP: 1; SZ: 1; AG: 1; JS: 1; DN: 1; **Not Completed** 20.0% (2/10): FT: 1; MN: 1.

Interrogative sentences – intransitive

(25b) Verbal *le*: 她来了我家吗？ = **Completed** 88.9% (8/9): DN: 1; CP: 1; SZ: 0; FT: 1; MN: 1; FZ: 1; AG: 1; CC: 1; BC: 1; **Not Completed** 33.3% (3/9): DN: 1; JS: 1; MN: 1.

(31b) Sentential *le*: 她来我家了吗？ = **Completed** 100.0% (9/9): DN: 1; CP: 1; SZ: 0; MN: 1; FZ: 1; AG: 1; FT: 1; CC: 1; BC: 1; JS: 1; **Not Completed** 0%

(36b) Double *le*: 她来了我家了吗？ = **Completed** 62.5% (5/8): DN: 1; CP: 0; FZ: 0; SZ: 1; FT: 1; CC: 1; BC: 1; **Not Completed** 37.5% (3/8): AG: 1; JS: 1; MN: 1.

Active sentences – intransitive (adjective predicate)

(24b) Verbal *le*: 他瘦了一点儿。= **Completed** 70.0% (7/10): DN: 1; CP: 1; AG: 1; CC: 1; BC: 1; FZ: 1; FT: 1; **Not Completed** 30.0% (3/10): SZ: 1; JS: 1; MN: 1.

(30b) Sentential *le*: 他瘦一点儿了。= **Completed** 70.0% (7/10): FZ: 1; CC: 1; CP: 1; AG: 1; JS: 1; MN: 1; SZ: 1; **Not Completed** 30.0% (3/10): DN: 1; BC: 1; FT: 1.

(35b) Double *le*: 他瘦了一点儿了。= **Completed** 80.0% (8/10): CP: 1; FZ: 1; DN: 1; BC: 1; AG: 1; JS: 1; MN: 1; CC: 1; **Not Completed** 20.0% (2/10): SZ: 1; FT: 1.

Active sentences – intransitive (adjective predicate)

(24c) Verbal *le*: 今天的风浪比来的时候小了很多。= **Completed** 50.0% (5/10): CC: 1; BC: 1; SZ: 1; FT: 1; MN: 1; **Not Completed** 60.0% (6/10): MN: 1; CP: 1; AG: 1; JS: 1; DN: 1; FZ: 1.

(30c) Sentential *le*: 今天的风浪比来的时候小很多了。= **Completed** 70.0% (7/10): BC: 1; FT: 1; CP: 1; AG: 1; MN: 1; CC: 1; SZ: 1; **Not Completed** 30.0% (3/10): DN: 1; FZ: 1; JS: 1.

(35c) Double *le*: 今天的风浪比来的时候小了很多了。= **Completed** 50.0% (5/10): BC: 1; CP: 1; AG: 1; CC: 1; MN: 1; **Not Completed** 50.0% (5/10): DN: 1; FZ: 1; SZ: 1; FT: 1; JS: 1.

Passive sentences

(23c) Verbal *le*: 我被查了两票。= **Completed** 100.0% (10/10): CC: 1; DN: 1; CP: 1; SZ: 1; FT: 1; MN: 1; AG: 1; JS: 1; BC: 1; FZ: 1; **Not Completed** 0%

(29c) Sentential *le*: 我被查两票了。= **Completed** 50.0% (5/10): CC: 1; CP: 1; FT: 1; MN: 1; FZ: 1; **Not Completed** 60.0% (6/10): DN: 1; BC: 1; SZ: 1; AG: 1; JS: 1; MN: 1.

(34c) Double *le*: 我被查了两票了。= **Completed** 60.0% (6/10): CC: 1; AG: 1; JS: 1; MN: 1; FZ: 1; SZ: 1; **Not Completed** 50.0% (5/10): DN: 1; BC: 1; CP: 1; FT: 1; MN: 1.

Imperative sentences – transitive

(26) Verbal *le*: 倒了它！ = **Completed** 0%; **Not Completed** 100.0% (10/10): FT: 1; JS: 1; CC: 1; DN: 1; BC: 1; CP: 1; FZ: 1; SZ: 1; AG: 1; MN: 1.

Imperative sentences – intransitive

(32) Sentential *le*: 走了！ = **Completed** 22.2% (2/9): DN: 1; SZ: 1; **Not Completed** 88.9% (8/9): DN: 1; CP: 0; BC: 1; JS: 1; CC: 1; FZ: 1; AG: 1; FT: 1; MN: 1.

Appendix B

<u>The ability of *le* to express *change/emergence of a new situation*</u>:

(23a) Verbal *le*: 他买了书。= **Yes:** 71.4% (5/7): CC: 0; DN: 1; BC: 1; CP: 1; FZ: 1; AG: 1; FT: 0; JS: 0; **No:** 28.6% (2/7): SZ: 1; MN: 1.

(29a) Sentential *le*: 他买书了。= **Yes:** 62.5% (5/8): CC: 1; BC: 1; CP: 0; FZ: 1; AG: 1; FT: 1; JS: 0; **No:** 37.5% (3/8): DN: 1; SZ: 1; MN: 1.

(34a) Double *le*: 他买了书了。= **Yes:** 42.9% (3/7): BC: 1; CP: 1; AG: 1; **No:** 57.1% (4/7): CC: 0; DN: 1; FZ: 1; SZ: 1; FT: 0; JS: 0; MN: 1.

(23b) Verbal *le*: 他买了三本书。= **Yes:** 57.1% (4/7): CC: 1; DN: 1; BC: 1; CP: 0; AG: 1; FT: 0; JS: 0; **No:** 42.9% (3/7): FZ: 1; SZ: 1; MN: 1.

(29b) Sentential *le*: 他买三本书了。= **Yes:** 20.0% (1/5): AG: 1; **No:** 80.0% (4/5): CC: 0; DN: 1; BC: 0; CP: 0; FZ: 1; SZ: 1; FT: 0; JS: 0; MN: 1.

(34b) Double *le*: 他买了三本书了。= **Yes:** 28.6% (2/7): CC: 1; BC: 1; **No:** 71.4% (5/7): DN: 1; CP: 0; FZ: 1; SZ: 1; AG: 1; FT: 0; JS: 0; MN: 1.

(23c) Verbal *le*: 我被查了两票。= **Yes:** 85.7% (6/7): CC: 1; DN: 1; BC: 1; CP: 0; SZ: 1; AG: 1; FT: 0; JS: 0; MN: 1; **No:** 14.3% (1/7): FZ: 1.

(29c) Sentential *le*: 我被查两票了。= **Yes:** 87.5% (7/8): CC: 1; BC: 1; CP: 1; FZ: 1; SZ: 1; AG: 1; FT: 0; JS: 0; MN: 1; **No:** 12.5% (1/8): DN: 1.

(34c) Double *le*: 我被查了两票了。= **Yes:** 85.7% (6/7): CC: 1; BC: 1; CP: 0; FZ: 1; SZ: 1; AG: 1; FT: 0; JS: 0; MN: 1; **No:** 14.3% (1/7): DN: 1.

(24a) Verbal *le*: 他去了那儿。= **Yes:** 66.7% (6/9): BC: 1; CP: 1; FZ: 1; SZ: 1; AG: 1; FT: 1; JS: 0; **No:** 33.3% (3/9): CC: 1; DN: 1; MN: 1.

(30a) Sentential *le*: 他去那儿了。= **Yes:** 75.0% (6/8): CC: 0; BC: 1; CP: 1; FZ: 1; AG: 1; FT: 1; JS: 0; MN: 1; **No:** 25.0% (2/8): DN: 1; SZ: 1.

(35a) Double *le*: 他去了那儿了。= **Yes:** 50.0% (4/8): CC: 1; BC: 1; CP: 1; AG: 1; FT: 0; JS: 0; **No:** 50.0% (4/8): DN: 1; FZ: 1; SZ: 1; MN: 1.

(24b) Verbal *le*: 他瘦了一点儿。= **Yes:** 100.0% (9/9): CC: 1; DN: 1; BC: 1; CP: 0; FZ: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; **No:** 0% (0/9).

(30b) Sentential *le*: 他瘦一点儿了。= **Yes:** 88.9% (8/9): CC: 1; DN: 1; BC: 1; CP: 1; FZ: 1; AG: 1; FT: 1; JS: 0; MN: 1; **No:** 11.1% (1/9): SZ: 1.

(35b) Double *le*: 他瘦了一点儿了。= **Yes:** 100.0% (6/6): CC: 0; DN: 1; BC: 1; CP: 0; FZ: 1; SZ: 1; AG: 1; FT: 0; JS: 0; MN: 1; No: 0% (0/6).

(24c) Verbal *le*: 今天的风浪比来的时候小了很多。= **Yes:** 88.9% (8/9): CC: 1; BC: 1; CP: 1; FZ: 1; SZ: 1; AG: 1; FT: 0; JS: 1; MN: 1; **No:** 11.1% (1/9): DN: 1.

(30c) Sentential *le*: 今天的风浪比来的时候小很多了。= **Yes:** 88.9% (8/9): CC: 1; DN: 1; BC: 1; CP: 0;

FZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; **No:** 11.1% (1/9): SZ: 1.

(35c) Double *le*: 今天的风浪比来的时候小了很多了。= **Yes:** 100.0% (9/9): CC: 1; DN: 1; BC: 1; CP: 0; FZ: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; **No:** 0% (0/9).

(25a) Verbal *le*: 你吃了晚饭吗? = **Yes:** 90.0% (9/10): CC: 1; DN: 1; BC: 1; CP: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; **No:** 10.0% (1/10): FZ: 1.

(31a) Sentential *le*: 你吃晚饭了吗? = **Yes:** 100.0% (10/10): CC: 1; DN: 1; BC: 1; CP: 1; FZ: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; **No:** 0% (0/10).

(36a) Double *le*: 你吃了晚饭了吗？ = **Yes:** 100.0% (9/9): CC: 1; DN: 1; BC: 1; CP: 0; FZ: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; **No:** 0% (0/9).

(25b) Verbal *le*: 她来了我家吗? = **Yes:** 100.0% (9/9): CC: 1; DN: 1; BC: 1; CP: 0; FZ: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; No: 0% (0/9).

(31b) Sentential *le*: 她来我家了吗？ = **Yes:** 100.0% (9/9): CC: 1; DN: 1; BC: 1; CP: 0; FZ: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; **No:** 0% (0/9).

(36b) Double *le*: 她来了我家了吗? = **Yes:** 88.9% (8/9): CC: 1; DN: 1; BC: 1; CP: 0; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; **No:** 11.1% (1/9): FZ: 1.

(26) Verbal *le*: 倒了它！ = **Yes:** 80.0% (8/10): FT: 1; JS: 1; CC: 1; DN: 1; BC: 1; CP: 1; FZ: 1; SZ: 1; No: 20.0% (2/10): AG: 1; MN: 1.

(32) Sentential *le*: 走了！ = **Yes:** 88.9% (8/9): DN: 1; SZ: 1; CP: 0; BC: 1; JS: 1; CC: 1; FZ: 1; FT: 1; MN: 1; **No:** 11.1% (1/9): AG: 1.

NB: Yes means that *le* can express *change/emergence of a new situation*, and **No** that it cannot. In addition, in (23a), (29a), (34a), (23b), (29b), and (34b), 他 'he' is used instead of 我 'I', for variation.

Appendix C

<u>The ability of *le* to express *emphasis; attitude* (*modality*)</u>:

(27a) Double *le*: 他买了三本书了。太好了！ 70.0% **"positive"** (7/10): BC: 1; CP: 1; FZ: 1; SZ: 1; FT: 1; JS: 1; CC: 1 + (0/10); 30.0% **"negative"** (3/10): DN: 1; AG: 1; MN: 1 + (0/10).
(27b) Sentential *le*: 他买三本书了。太好了！ 80.0% **"positive"** (4/10): BC: 1; SZ: 1; JS: 1; CC: 1 + (4/10): CP: 1; FZ: 1; AG: 1; MN: 1; 20.0% **"negative"** (2/10): DN: 1; FT: 1 + (0/10).
(27c) Verbal *le*: 他买了三本书。太好了！ **90.0% "positive" (7/10)**: DN: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; CC: 1 + **(2/10)**: BC: 1; CP: 1; **10.0% "negative" (1/10)**: FZ: 1 + **(0/10)**.

(28a) Sentential *le*: 终于！ 他买三本书了。60.0% **"positive"** (4/10): BC: 1; SZ: 1; JS: 1; CC: 1 + (2/10): CP: 1; MN: 1; 40.0% **"negative"** (2/10): FZ: 1; AG: 1 + (2/10): DN: 1; FT: 1.
(28b) Verbal *le*: 终于！ 他买了三本书。**100.0% "positive" (3/10)**: CP: 1; SZ: 1; JS: 1 + **(7/10)**: DN: 1; BC: 1; FZ: 1; AG: 1; FT: 1; MN: 1; CC: 1; **0% "negative" (0/10)** + **(0/10)**.
(28c) Double *le*: 终于！ 他买了三本书了。70.0% **"positive"** (5/10): BC: 1; FZ: 1; SZ: 1; AG: 1; MN: 1 + (2/10): JS: 1; CC: 1; 30.0% **"negative"** (2/10): CP: 1; FT: 1 + (1/10): DN: 1.

(33a) Sentential *le*: 他买三本书了。真(的)太多了！ **62.5% "positive" (2/8)**: FZ: 1; AG: 1; FT: 0; JS: 0 **+ (3/8)**: DN: 1; MN: 1; CC: 1; **37.5% "negative" (2/8)**: CP: 1; SZ: 1 **+ (1/8)**: BC: 1.
(33b) Double *le*: 他买了三本书了。真(的)太多了！ 50.0% **"positive"** (2/8): DN: 1; FT: 0; JS: 0; MN: 1 + (2/8): CP: 1; AG: 1; 50.0% **"negative"** (2/8): FZ: 1; CC: 1 + (2/8): BC: 1; SZ: 1.
(33c) Verbal *le*: 他买了三本书。真(的)太多了！ 50.0% **"positive"** (1/8): FT: 0; JS: 0; CC: 1 + (3/8): DN: 1; FZ: 1; MN: 1; 50.0% **"negative"** (3/8): BC: 1; CP: 1; AG: 1 + (1/8): SZ: 1.

(37a) Sentential *le*: 我买三本书了。这就够了！ 80.0% **"positive"** (2/10): CP: 1; FZ: 1 + (6/10): DN: 1; BC: 1; SZ: 1; FT: 1; JS: 1; MN: 1; 20.0% **"negative"** (2/10): AG: 1; CC: 1 + (0/10).
(37b) Verbal *le*: 我买了三本书。这就够了！ 80.0% **"positive"** (2/10): BC: 1; MN: 1 + (6/10): CP: 1; SZ: 1; AG: 1; FT: 1; JS: 1; CC: 1; 20.0% **"negative"** (2/10): DN: 1; FZ: 1 + (0/10).
(37c) Double *le*: 我买了三本书了。这就够了！ **90.0% "positive" (5/10)**: DN: 1; AG: 1; JS: 1; MN: 1; CC: 1 + **(4/10)**: BC: 1; FZ: 1; SZ: 1; FT: 1; **10.0% "negative" (1/10)**: CP: 1 + **(0/10)**.

Appendix D

<u>The ability of *le* to express *forward-linking* (*sequence; condition; time*)</u>:

(38) Verbal *le*: 吃一点吧，吃了就会有力气，有了力气就很快好了。

Verbal *le* (吃了 *chī* ***le***) and Verbal *le* (有了 *yǒu* ***le***), in the above complex sentence, both mark *Condition* (*If/In case...*) in **100.0% (10/10)** of the cases.

> Sequence: **Yes:** 50.0% (5/10): BC: 1; CP: 1; AG: 1; FT: 1; MN: 1; CC: 0; DN: 0; FZ: 0; SZ: 0; JS: 0; **No:** 0% (0/10).
> **Condition** (*If/In case...*)**: Yes: 100.0% (10/10)**: CC: 1; DN: 1; BC: 1; CP: 1; FZ: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; **No: 0% (0/10)**.
> Time (*When/Whenever...*): **Yes:** 10.0% (1/10): CP: 1; CC: 0; DN: 0; BC: 0; FZ: 0; SZ: 0; AG: 0; FT: 0; JS: 0; MN: 0; **No:** 20.0% (2/10): BC: 1; AG: 1; CC: 0; DN: 0; CP: 0; FZ: 0; SZ: 0; FT: 0; JS: 0; MN: 0.

(39) Verbal *le*: 丢了东西，我会整星期不安。

Verbal *le* (丢了 *Diū* ***le***), in the above complex sentence, marks *Time* (*When/Whenever...*) in **80.0% (8/10)** of the cases.

> Sequence: **Yes:** 50.0% (5/10): BC: 1; CP: 1; AG: 1; FT: 1; MN: 1; CC: 0; DN: 0; FZ: 0; SZ: 0; JS: 0; **No:** 0% (0/10).
> Condition (*If/In case...*): **Yes:** 70.0% (7/10): DN: 1; BC: 1; FZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; CC: 0; CP: 0; SZ: 0; **No:** 10.0% (1/10): CP: 1; CC: 0; DN: 0; BC: 0; FZ: 0; SZ: 0; AG: 0; FT: 0; JS: 0; MN: 0.
> **Time** (*When/Whenever...*)**: Yes: 80.0% (8/10)**: CC: 1; DN: 1; BC: 1; CP: 1; SZ: 1; AG: 1; JS: 1; MN: 1; FZ: 0; FT: 0; **No: 0% (0/10)**.

(40) Verbal *le*: 我下了车就看见卖荧光棒的了。

Verbal *le* (下了 *xià* ***le***), in the above complex sentence, marks *Sequence* (*just as/(right) after*) in **100.0% (10/10)** of the cases.

> **Sequence: Yes: 100.0% (10/10)**: CC: 1; DN: 1; BC: 1; CP: 1; FZ: 1; SZ: 1; AG: 1; FT: 1; JS: 1; MN: 1; **No: 0% (0/10)**.
> Condition (*If/In case...*): **Yes:** 10.0% (1/10): CP: 1; CC: 0; DN: 0; BC: 0; FZ: 0; SZ: 0; AG: 0; FT: 0; JS: 0; MN: 0; **No:** 20.0% (2/10): BC: 1; AG: 1; CC: 0; DN: 0; CP: 0; FZ: 0; SZ: 0; FT: 0; JS: 0; MN: 0.
> Time (*When/Whenever...*): **Yes:** 30.0% (3/10): CP: 1; AG: 1; MN: 1; CC: 0; DN: 0; BC: 0; FZ: 0; SZ: 0; FT: 0; JS: 0; **No:** 10.0% (1/10): BC: 1; CP: 0; CC: 0; DN: 0; FZ: 0; SZ:

0; AG: 0; FT: 0; JS: 0; MN: 0.

(41) Sentential *le*: 你口渴了就喝点果汁。

Sentential *le* (口渴了 *kǒukě* ***le***), in the above complex sentence, marks *Condition* (*If/In case*...) in **80.0% (8/10)** of the cases.

> Sequence: **Yes:** 20.0% (2/10): CP: 1; AG: 1; CC: 0; DN: 0; BC: 0; FZ: 0; SZ: 0; FT: 0; JS: 0; MN: 0; **No:** 10.0% (1/10): BC: 1; CP: 0; AG: 0; CC: 0; DN: 0; FZ: 0; SZ: 0; FT: 0; JS: 0; MN: 0.
> **Condition** (*If/In case*...)**: Yes: 80.0% (8/10)**: CC: 1; DN: 1; BC: 1; CP: 1; AG: 1; FT: 1; JS: 1; MN: 1; FZ: 0; SZ: 0; **No: 0% (0/10)**.
> Time (*When/Whenever*...): **Yes:** 60.0% (6/10): CP: 1; FZ: 1; SZ: 1; AG: 1; FT: 1; JS: 1; CC: 0; DN: 0; BC: 0; MN: 0; **No:** 10.0% (1/10): BC: 1; CP: 0; CC: 0; DN: 0; FZ: 0; SZ: 0; AG: 0; FT: 0; JS: 0; MN: 0.

Double *le*: No examples found.