

# A Corpus-based Analysis of the Aspectual Particle 了 (le) in Chinese

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**Abstract:** This study analyzes the aspectual values of the particle 了 (le) in Chinese. 1000 random sentences that contain this particle were extracted from the Chinese Web corpus 2017 Simplified (zhTenTen17) for the analysis. Based on the results, we conclude that 了 (le) can denote 3 aspects: perfective, perfect and durative. Moreover, although we treat the perfective and the perfect as two distinct aspects, double interpretation is possible when the context is not sufficiently clear. Furthermore, we have also discussed the position of 了 (le) in a sentence and the use of double 了 (le). Lastly, we have included several non-aspectual uses of 了 (le) in the discussion. We expect that this study will contribute to a better understanding of the use of 了 (le) and the aspect system of Chinese.

**Keywords:** 了 (le); aspect; aspectual particle; Chinese; corpus.

## 1. Introduction

了 (le) is one of the most commonly used aspectual particles in Chinese. Researchers point out that this particle can mark the perfective aspect (Li & Thompson, 1981; Maeth Ch., 1984; Marco Martínez, 1988; Smith, 1991), the actual aspect (Dai, 1997; Xiao & McEnery, 2004) and the perfect of result (Comrie, 1976). However, there is no commonly accepted classification of the aspectual values of 了 (le). Therefore, we see the need to conduct a more exhaustive study to analyze the aspects denoted by this particle.

## 2. Data

### 2.1. Data source

We have used the Chinese Web corpus 2017 Simplified (zhTenTen17) available on Sketch Engine as the data source for this study. The corpus consists of texts collected from the Internet, with a target size of more

than 13.5 billion words and 667 million sentences. What is more, it is POS annotated using Chinese Penn TreeBank (Xia, 2000).

We believe that, for one thing, the large size of the corpus and the variety of the language used on the Internet can guarantee the level of representativity of the data. For another, Sketch Engine is an important tool for the selection of sentences for our analysis.

## 2.2. Preliminary study

We have conducted a preliminary study to analyze the frequency of the annotations assigned to 了 (le) in the corpus. Firstly, we searched for ‘了’ in ‘CONCORDANCE’ in the basic mode. The total number of hits of this word is 142,557,529 in the corpus. However, due to the limitation of Sketch Engine, only the first 10 million hits are shown. In order to obtain a more representative sample, we chose to display random 10,000,000 hits. With the random sample, we followed the following process to study the frequency of the tags assigned to 了 (le) in the corpus: Frequency - Advanced - KWIC tags. The results are shown in Figure 1:

(8 items, 10,000,000 total frequency)

	Tag	Frequency ↓	Relative ↑	% of conc. ↑	
1	AS	8,658,246	521.80	6.07 %	...
2	SP	1,276,657	76.94	0.90 %	...
3	VV	64,501	3.89	0.05 %	...
4	AD	358	0.02	< 0.01 %	...
5	CD	108	< 0.01	< 0.01 %	...
6	NN	79	< 0.01	< 0.01 %	...
7	PU	46	< 0.01	< 0.01 %	...
8	CS	5	< 0.01	< 0.01 %	...

Figure 1: Frequency of the tags assigned to 了 (le) in the corpus zhTenTen17

As we can see, the main tags of 了 (le) are AS (aspect marker), SP (sentence-final particle) and VV (other verbs), which corresponds to our knowledge of the grammatical functions of this word in Chinese. In terms of other tags like AD (adverb), CD (cardinal number), NN (common noun), PU (punctuation) and CS (subordinating conjunction), we argue that they do not correspond to the grammatical functions of the word 了 (le). Moreover, their frequency is relatively low. We believe that these tags are included due to errors in tagging. Therefore, we will not take them into account in our analysis.

It should be noted that, in modern Chinese, 了 can function as a verb or a complement of result, for example, 做不了 (zuò bù liǎo, ‘cannot

do'), 了解 (liǎojiě, 'to understand, to learn about'), and 一了百了 (yīliǎobǎiliǎo, 'one finished, all is finished'). Nevertheless, in these cases, the character '了' is pronounced as 'liǎo' and it has different meanings and grammatical functions from the particle 了 (le), for which it is annotated with the tag VV (other verbs). Therefore, we think that these usages are not relevant for our study and should be excluded.

### **2.3. Method of selection of sentences**

Based on the results of the preliminary study, we have decided to analyze the use of 了 (le) tagged as aspect marker and sentence-final particle in the corpus. Thus, we have used the filter function and applied the formula ([tag="AS"])([tag="SP"]). The total number of hits that we have obtained is 9,934,903.

In order to create a sufficiently representative corpus for our analysis, we have used the function 'get a random sample' of Sketch Engine to select 1000 random sentences that contain 了 (le) tagged as AS or SP. Furthermore, we have analyzed the aspectual values of 了 (le) in the selected sentences according to the contexts.

It should be noted that, as the corpus consists of texts extracted from the Internet, some selected sentences are incomprehensible or ungrammatical. There are also 'sentences' with only disconnected words. These sentences are not valid for our analysis and have been excluded.

### **3. Results**

As a result of the selection of sentences, we have obtained in total 947 valid sentences for the study. After analyzing the aspectual value of the particle 了 (le) in each sentence with its context, we conclude that 604 (63.78 %) denote the perfective aspect while 229 (24.18 %) indicate the perfect aspect. It should be noted that in 4 sentences (0.42 %), the double interpretation is possible and therefore, 了 (le) can mark both the perfective and the perfect aspects. Moreover, 了 (le) represents the durative aspect in 46 sentences (4.86 %). Lastly, this particle has no aspectual value in 64 sentences (7.76 %), which will be discussed further on. See Figure 2 for the percentage of the aspectual values of 了 (le) in the selected sentences.

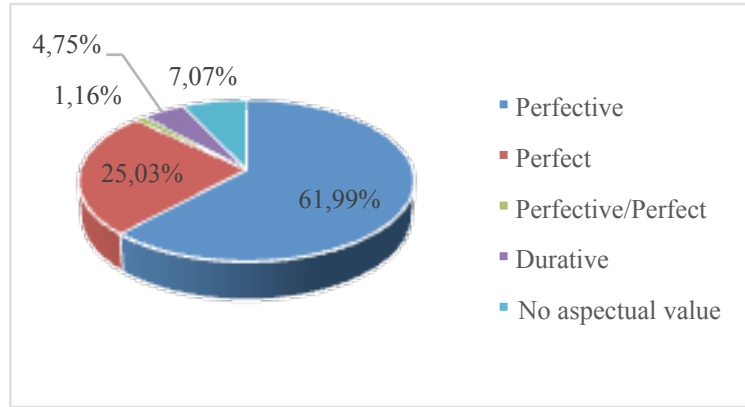


Figure 2: Percentage of the aspectual values of the particle 了 (le) in the selected sentences

#### 4. Discussion of results

Based on the results of the analysis, we have concluded that 了 (le) can mark 3 aspects in Chinese: perfective, perfect and durative. That said, in the following parts we will analyze the contextualized uses of these aspects marked by the particle 了 (le). Moreover, we will discuss the sentences with double interpretation and the cases where 了 (le) has no aspectual value.

##### 4.1. The perfective aspect marked by 了 (le)

The perfective aspect is the most common aspectual value represented by the particle 了 (le). According to the definition proposed by Comrie (1976), the perfective aspect indicates that “the whole of the situation is presented as a single unanalysable whole, with beginning, middle, and end rolled into one; no attempt is made to divide this situation up into the various individual phases that make up the action [...]” (p. 3).

In more than half of the selected sentences, 了 (le) denotes the perfective aspect, as the situations are viewed as a whole and are not divided into various phases. We can see the following example:

(1)

事发后            宫某    支付 了 方某    赔偿款    20万    元  
Shìfā hòu            Gōngmǒu zhīfù le Fāngmǒu péichángkuǎn èrshí wàn yuán  
After the incident    Gong    pay    LE Fang    compensation 200,000    yuan  
*After the incident, Gong paid Fang a compensation of 200,000 yuans.*

As we can see, as the situation took place in the past and is viewed as a whole, the particle 了 (le) marks the perfective aspect in this case. We think that the simple past tense in English can be used to describe this kind of situations. However, this is not a total equivalence, since the simple past tense indicates the time and the aspect, while 了 (le) only denotes the aspect without any reference to the time. In example (2), we can see that 了 (le) can also mark the perfective aspect in the future:

(2)

每次 挨    批评,    就 更    觉得 单位    确实 要    裁掉 我 了  
Měici āi    pīpíng,    jiù gèng    juéde dānwèi quèshí yào cáidiào wǒ le  
Each suffer criticism then more feel unit really will fire me LE  
time

*Every time I am criticized, I feel more and more that the company is really going to fire me.*

In this case, the situation 裁掉 (cáidiào, 'to fire') has not taken place. Nevertheless, as the action is viewed as a whole and is not divided, the particle 了 (le) also indicates the perfective aspect. This shows that the perfective aspect is compatible with a future time. In the selected sentences, we have noticed that structures like '要 + verb + 了' (yào + verb + perfective LE) and '快 + verb + 了' (kuài + verb + perfective LE) are commonly used to indicate that a situation will take place in a near future.

In Chinese, 了 (le) can also be used to form a supposition, for example:

(3)

当 物价 超过 了 邮寄费 的 三倍, 特别是  
 贵重 物品, 一定要 对 商品 进行 报价  
 Dāng wùjià chāoguò le yóujifèi de sānbèi, tèbiéshì  
 guìzhòng wùpǐn, yídingyào duì shāngpǐn jìnxíng bàojià  
 When item exceed LE shipping DE three times especially  
 price cost  
 valuable item must to item realize price declaration

*When the price of an item exceeds three times the shipping cost, especially in the case of valuable items, the price of the item must be declared.*

In this case, although the situation 超过 (chāoguò, ‘to exceed’) has not taken place, it is interpreted as an inseparable whole. Therefore, the particle 了 (le) also denotes the perfective aspect.

#### 4.2 The perfect aspect marked by 了 (le)

Comrie (1976) argues that the perfect is different from other aspects: “it expresses a relation between two time-points, on the one hand the time of the state resulting from a prior situation, and on the other the time of that prior situation” (p. 52). In particular, Comrie (1976) includes two examples to illustrate its use in Chinese: “dōngxì guì-le” (Things have become more expensive) and “tā shēntǐ hǎo-le” (His health has become good) (p. 58).

We can also adopt the distinction proposed by Binnick (1991): the perfective aspect presents the event time included in the reference time, while in the perfect the event time precedes the reference time. Taking into account the different characteristics of the perfective and the perfect, we will treat them as two distinct aspects in this study. We can see the following example of the perfect:

(4)

退休 后 的 任志强 比 以前 更 忙 了  
 Tuìxiū hòu de Rén Zhìqiáng bǐ yǐqián gèng máng le  
 Retirement after DE Ren Zhiqiang than before more busy LE  
*Ren Zhiqiang has been busier than before after retirement.*

In this example, there exists a comparison between two periods: 退休后 (tuìxiū hòu, ‘after retirement’) and 以前 (yǐqián, ‘before’, i.e. ‘before retirement’). In other words, the event time precedes the reference time and it implies a change of state. We will notice the nuance if the particle 了 (le) is omitted:

(5)

退休 后 的 任志强 比 以前 更 忙  
Tuìxiū hòu de Rén Zhìqiáng bǐ yǐqián gèng máng  
Retirement after DE Ren Zhiqiang than before more busy  
*Ren Zhiqiang is busier than before after retirement.*

In this case, the sentence is only describing the state of the subject without emphasizing the entry into a new state. That said, we can see that the translations for the two sentences are also different. On one hand, the use of the simple present tense is sufficient for describing an actual state. On the other hand, the present perfect tense emphasizes better the comparison between the two time points and the change of state.

Furthermore, it should be noted that the reference time can also be the past or the future when the perfect aspect is used. When the reference time is the past, the past perfect tense is used in the translation, for example:

(6)

姥姥、 姥爷 不得不 因为 照顾 我 即将 远行 念书  
的 姐妹, 而 离开 居住 了 几十年 的 老屋  
Lǎolao, lǎoye bùdébù yīnwèi zhàogù wǒ jíjiāng yuǎnxíng niànshū  
de jiěmèi, ér líkāi jūzhù le jǐshínián de lǎowū  
Grandma grandpa have to for take my soon travel far study  
care of  
DE sisters so leave live LE decades DE old house  
*My grandparents had to leave the old house where they had lived for decades to take care of my sisters who were going to travel far away for studies.*

However, when the situation has not taken place and the reference time is the future, the perfect tenses will not be valid for the translation. We can see the following example:

(7)

冻上        几    个    小时    水果    就    可    以    拿    出    来    吃    了  
 Dòngshàng   jǐ    gè   xiǎoshí   shuǐguǒ   jiù   kěyǐ   ná   chūlái   chī   le  
 Freeze        a few GE hour    fruit        then can    take out    eat LE  
*Freeze the fruits for a few hours, and then you can take them out and eat them.*

In this case, as the sentence indicates a change of state that has not taken place, the modal word ‘can’ and the simple present tense are used for the translation even though this tense in English is imperfect. In this specific case, there exist a process (冻, ‘to freeze’) and a change of state (就可以..., ‘then you can...’). Therefore, the two aspects that seem to be contrary can be equivalent in the translation.

#### 4.3 Position of the particle 了 (le) in a sentence

Furthermore, it is worth discussing the validity of the distinction of the aspectual values of 了 (le) according to its position in a sentence. In the literature, some researchers distinguish the uses of this particle based on this criterion: le<sub>1</sub> versus le<sub>2</sub> (Shen, 2004; Zou, 2015); verbal le versus sentential le (Ljungqvist, 2003; Soh & Gao, 2006); actual aspect marker le versus the change-of-state marker le (Xiao & McEnery, 2004); the perfective le versus the currently relevant state le (Li & Thompson, 1981). In the corpus zhTenTen17 used for this study, 了 (le) is also tagged with the binary method: aspect marker versus sentence-final particle. Nevertheless, various researchers claim that the sentence-final particle 了 (le) also has its aspectual value (Shen, 2004; Xiao & McEnery, 2004).

Based on the results of our analysis, we found that the sentence-final particle 了 (le) can denote both the perfective and the perfect aspects. In examples (4) and (7), we already show that it can mark the perfect aspect. And we can see the following example where the sentence-final 了 (le) marks the perfective aspect:



(8)

正 考虑 这 事 呢, 王超 的 电话 打 过来 了  
Zhèng kǎolǜ zhè shì ne, Wáng de diànhuà dǎ guòlái le  
Chāo  
ZHENG think this matter NE Wang DE phone make come LE  
Chao call in

*When (I was) thinking about this matter, a call from Wang Chao came in.*

Moreover, the perfect marker 了 (le) does not always occur at the end of a sentence. See the following example:

(9)

日益 发达的 互联网 让 员工 有 了 更多的 选择  
Rìyì fādáde hùliánwǎng ràng yuángōng yǒu le gèngduōde xuǎnzé  
Increasingly developed Internet let employee have LE more choice

*The growing Internet has given employees more choices.*

To sum up, it is not valid to classify the aspectual values of the particle 了 (le) only depending on its position in a sentence, given that both the perfective 了 (le) and the perfect 了 (le) can occur in the middle or at the end of a sentence. As Xu (2021) points out, the distinction of the uses of 了 (le) (i.e. the completeness of an action or the coming about of a new state) depends on its occurrence with different situation types, and the particle itself “actually functions the same way in semantics” (p. 109). In addition, we found that certain verbs can facilitate or enable the use of the perfect marker 了 (le), that is, as various researchers have stated, the lexical aspect can interact with the grammatical aspect (Comrie, 1976; Smith, 1991; Ljungqvist, 2003; Guo, 2015; Zou, 2015). The following is a compilation of typical verbs used with the perfect aspect in the selected sentences:

- Increase: 提高 (tígāo, ‘to improve’), 提升 (tíshēng, ‘to improve’), 上升 (shàngshēng, ‘to increase’), 长 (zhǎng, ‘to grow’), 拓宽 (tuòkuān, ‘to widen’), 增强 (zēngqiáng, ‘to strengthen’), 加强 (jiāqiáng, ‘to strengthen’), 增加 (zēngjiā, ‘to add’), 加大 (jiādà, ‘to enlarge’);
- Decrease: 降低 (jiàngdī, ‘to decrease’), 节省 (jiéshěng, ‘to save’), 减少 (jiǎnshǎo, ‘to reduce’), 下跌 (xiàdiē, ‘to drop’);

- Realization: 实现 (shíxiàn, 'to realize'), 实行 (shíxíng, 'to implement'), 产生 (chǎnshēng, 'to produce'), 形成 (xíngchéng, 'to form'), 成为 (chéngwéi, 'to become'), 搭建 (dājiàn, 'to establish'), 赋予 (fùyǔ, 'to give'), 启动 (qǐdòng, 'to initiate'), 萌生 (méngshēng, 'to emerge'), 创造 (chuàngzào, 'to create');
  - Push: 推进 (tuījìn, 'to push forward'), 促进 (cùjìn, 'to promote'), 推动 (tuīdòng, 'to push forward'), 调动 (diàodòng, 'to motivate'), 方便 (fāngbiàn, 'to facilitate');
  - Cause: 提供 (tígōng, 'to offer'), 引发 (yǐnfā, 'to cause'), 激起 (jīqǐ, 'to provoke');
  - State or position: 占据 (zhànjù, 'to occupy'), 达到 (dá dào, 'to reach'), 突破 (tūpò, 'to exceed'), 进入 (jìnrù, 'to enter into a new state'), 步入 (bùrù, 'to enter into a new state'), 征服 (zhēngfú, 'to conquer'), 筹集 (chóují, 'to accumulate'), 爱上 (àishàng, 'to fall in love with');
  - Change: 保持 (bǎochí, 'to maintain'), 保存 (bǎocún, 'to preserve'), 改变 (gǎibiàn, 'to change'), 受到 (shòudào, 'to suffer; to receive'), 颠覆 (diānfù, 'to overturn');
  - Possession: 有 (yǒu, 'to have'), 拥有 (yōngyǒu, 'to possess'), 享有 (xiǎngyǒu, 'to enjoy'), 具备 (jùbèi, 'to possess');
  - Loss: 失去 (shīqù, 'to lose'), 没有 (méiyǒu, 'not to have, to use up').
- As Smith (1997) states, “[A]ccomplishments consist of a process and an outcome, or change of state” (p. 26) and this kind of situation is dynamic, telic and durative. That said, we argue that the words in this list belong to the category of accomplishments. Therefore, we can conclude that accomplishments facilitate the use of the perfect aspect marked by the particle 了 (le).

#### 4.4 Double interpretation of the particle 了 (le)

Although we have discussed the distinction between the perfective and the perfect aspects based on the relation between the reference time and the event time, in some cases, a double interpretation is still possible as the context is not sufficiently clear. See the following example:

(10)

幸好， 墙体 外观 的 改造 得到 了 邻居 的 支持  
 Xìnghǎo, qiángtǐ wàiguān de gǎizào dédào le línjū de zhīchí  
 Fortunately wall exterior DE renovation get LE neighbor DE support  
*Fortunately, they got (have got) support from the neighbors for the renovation of the exterior of the wall.*

As we can see, the context is not very clear in this example. If we consider that the event time is included in the reference time, that is to say, the sentence narrates a simple fact that took place in the past and that does not have current relevance, the aspect is perfective. Nevertheless, if we want to emphasize the current relevance, the event time ('to get') precedes the reference time (which coincides with the speech time), and therefore, 了 (le) denotes the perfect aspect.

The interpretation of this kind of sentences can be quite subjective. However, it should be noted that, in real communication, the context is usually clear enough to help to determine the aspect denoted in a sentence. A double interpretation only occurs when the context is not sufficiently clear or when the aspect of a situation is not emphasized.

Furthermore, the semantic characteristics of the verbs can also facilitate the double interpretation. The typical verbs with a double interpretation in the selected sentences are 获得 (huòdé, 'to get'), 取得 (qǔdé, 'to obtain'), 超过 (chāoguò, 'to exceed') and 加/增加/添加 (jiā/zēngjiā/tiānjiā, 'to add'). The common characteristic of these verbs is that they not only mark an event, but also imply the entry into a new state. Thus, when combined with the particle 了 (le), they can denote either the perfective or the perfect aspect.

#### 4.5 Sentences with double 了 (le)

Researchers have discussed the semantic contribution of the use of double 了 (le) in a sentence. For example, Soh and Gao (2006) claim that "[D]ouble -le sentences provide a completive reading to telic events (achievements, accomplishments with a completive marker or a numeral object), and a terminative reading to atelic events (activities, accomplishments without a completive marker or a numeral object)" (p. 116).

In our analysis, we have also found the use of double 了 (le) in the selected sentences and we believe that it is also necessary to analyze its aspectual values. See the following two examples:

(11)

这个 '习惯' 坚持 了 十 多 年 了  
Zhègè 'xíguàn' jiānchí le shí duō nián le  
This 'habit' persist LE more than ten year LE  
*This has been (my) 'habit' for more than 10 years.*

(12)

孩子	躺在	一直	昏迷不醒	的	母亲	身边
哭	了	将近	一个	小时	了	
Háizi	tǎngzài	yīzhí	hūnmíbùxǐng	de	mǔqīn	shēnbiān
kū	le	jiāngjìn	yíge	xiǎoshí	le	
Child	lie in	the whole time	unconscious	DE	mother	side
cry	LE	about	one	hour	LE	

*The child lying beside his unconscious mother had been crying for about an hour.*

We can see that in both examples, the situation is an accomplishment with a numeral object. If we apply the theory proposed by Soh and Gao (2006), the double 了 (le) provides a completive reading to the telic events. Moreover, the perfect of persistent situation proposed by Comrie (1976) can also explain the use of the double 了 (le). In particular, it is used to “describe a situation that started in the past but continues (persists) into the present” (Comrie, 1976, p. 60). Thus, we argue that the use of the double 了 (le) in these sentences indicate the perfect aspect. However, due to the limited number of hits in the selected sentences with double 了 (le), we are not able to analyze its use with other kinds of situations.

#### 4.6 The durative aspect marked by 了 (le)

In our analysis, we have identified the durative aspect marked by 了 (le), although it is a less common aspect denoted by this particle. This may seem contradictory, as 了 (le) is traditionally seen as a perfective marker (cf. Li & Thompson, 1981; Smith, 1991, 1997). However, as claimed by Comrie (1976), imperfectivity and durativity are two distinct concepts, as “imperfectivity means viewing a situation with regard to its internal structure (duration, phasal sequences)”, while “durativity simply refers to the fact that the given situation lasts for a certain period of time (or at least, is conceived of as lasting for a certain period of time)” (p.41). Therefore, the perfective marker 了 (le) can also occur with a durative action.

Dai (1997) has compared 了 (le) with the durative marker 着 (zhe), claiming that they are not interchangeable. We can check the examples proposed by the author:

**Table 1:** Examples proposed by Dai (1997) about the distinction between 了 (le) and 着 (zhe)

着 (zhe)	了 (le)
墙上挂着一幅画。 Qiáng shàng guà zhe yì fú huà. <i>There is a painting hanging on the wall.</i>	墙上挂了一幅画。 Qiáng shàng guà le yì fú huà. <i>There is a painting hanging on the wall.</i>
墙上挂着的是一幅画。 Qiáng shàng guà zhe de shì yì fú huà. <i>What hangs on the wall is a painting.</i>	*墙上挂了的是一幅画。 Qiáng shàng guà le de shì yì fú huà. (Ungrammatical sentence)
一幅画在墙上挂着。 Yì fú huà zài qiáng shàng guà zhe. <i>A painting hangs on the wall.</i>	*一幅画在墙上挂了。 Yì fú huà zài qiáng shàng guà le. (Ungrammatical sentence)

As stated by Dai (1997), these examples confirm that 了 (le) and 着 (zhe) are not interchangeable, given that it is not possible to get correct sentences with 了 (le) if the order of the words is changed. Thus, the author argues that the two particles keep their distinct semantic characteristics in the use. From our perspective, the analysis of Dai (1997) is reasonable and it is undeniable that these two particles have different semantic characteristics. However, we believe that the durative aspect marked by 了 (le) is obvious in the sentence ‘墙上挂了一幅画’. From a pragmatic viewpoint, this sentence emphasizes more the durative aspect instead of the perfectivity. In other words, we pay more attention to the durative state caused by 挂 (guà, ‘to hang’) instead of the completeness of the action itself. Moreover, the method used in the analysis of Dai (1997) does not seem precise. As the order of the words is changed and some other elements are added into the sentences of the second and the third group, the emphasis of the sentences can be changed. However, at least in the first group, both sentences indicate the durative aspect.

In the selected sentences, we have found similar cases where 了 (le) denotes the durative aspect, for example:

(13)

他的小店里，挂了许多张女儿的习作  
Tā de xiǎodiàn lǐ, guà le duō zhāng nǚér de xízuò  
He DE small store inside hang LE many ZHANG daughter DE works  
*Many of his daughter's works hang in his small store.*

As we can see, in this example, the action 挂 (guà, ‘to hang’) combined with 了 (le) is not considered as an accomplishment. Instead, it indicates a state. Thus, it denotes the durative aspect. We can see another example:

(14)

目前，公寓里住了700多名农民工  
 Mùqián, gōngyù lǐ zhù le qībǎi duō míng nóngmíngōng  
 Currently apartment inside live LE 700 more MING migrant worker  
*Currently, more than 700 migrant workers live in the apartments.*

住 (zhù, ‘to live’ or ‘to reside’) is a stative, durative and atelic situation. Thus, it is a state and 了 (le) is used to denote the durative aspect. In this specific case, we argue that 了 (le) is interchangeable with the imperfective marker 着 (zhe).

#### 4.7 Non-aspectual uses of 了 (le)

Although we tried to select sentences where 了 (le) functions as an aspect marker, we have identified other non-aspectual uses of this word. The most common usage is the attitudinal boundary proposed by Ljungqvist (2003): “Mandarin le can be used to convey a boundary or a contrast between for example what agrees with the speaker and what does not, between expectation and reality, between a wrong and a correct assumption, etc.” (p. 74). See the following example:

(15)

绳子太细了，整个直径可能不足4厘米  
 Shéngzi tài xì le, zhěnggè zhíjìng kěnéng bùzú sì límǐ  
 Rope too thin LE entire diameter probably less than 4 cm  
*The rope is so thin that its diameter is probably less than 4 cm.*

As we can see, in this example, 了 (le) does not mark the aspect of an event. Instead, it implies that the characteristic of the subject exceeds an attitudinal boundary. The structure ‘太 + adjective + 了’ (tài + adjective + le) is very commonly used to indicate the attitudinal boundary in Chinese.

Apart from the attitudinal boundary, 了 (le) can also imply emotions and attitude, as well as soften the tone, for example:

(16)

再见 了, 秦岭 野生 动物园  
Zàijiàn le, qínlíng yěshēng dòngwùyuán  
Goodbye LE Qingling wildlife zoo  
*Goodbye, Qinling Wildlife Park.*

In this case, 了 (le) has no indispensable grammatical or semantic function, but rather implies a feeling of regret and helps to soften the tone. In some cases, 了 (le) is used to deny the need (in combination with ‘不用’, búyòng) and the possibility of an event (in combination with ‘不会再’, búhuì zài) or to prevent a situation from persisting or repeating (in combination with ‘别再’, biézài, or ‘不要再’, búyào zài). See the following examples:

(17)

你的事情 我也 不用 多 说 了  
Nǐde shìqíng wǒ yě búyòng duō shuō le  
Your matter I also need not more talk about LE  
*I don't need to talk about your matters anymore.*

(18)

三 年 之内 不会 再 写 武侠 了  
Sān nián zhīnèi búhuì zài xiě wǔxiá le  
Three year within will not more write martial arts LE  
*I won't write any more martial arts (novels) within the next three years.*

(19)

好啦, 天哥哥 你 就 不要 再 说 了  
Hǎo la, Tiān gēge nǐ jiù búyào zài shuō le  
All right Brother Tian you just don't more say LE  
*All right, Brother Tian, say no more.*

## 5. Conclusions

Based on the analysis of 947 sentences containing 了 (le) extracted randomly from the Chinese Web corpus 2017 Simplified (zhTenTen17), we have identified three aspects marked by this particle: perfective, perfect and durative. The perfective aspect is the most common aspect represented by 了 (le), while the durative aspect is the least common one. We conclude that the aspectual value of 了 (le) does not depend on its position in the sentence. Both the perfective 了 (le) and the perfect 了 (le) can occur in the middle or at the end of a sentence. What is more, when the context is not sufficiently clear, there can be a double interpretation. We also argue that the double 了 (le) can indicate the perfect aspect when it is used with an accomplishment with a numeral object. Furthermore, when 了 (le) denotes the durative aspect, its function is similar to that of the imperfective marker 着 (zhe). In some cases, the two particles are interchangeable.

Lastly, we have also found some non-aspectual uses of 了 (le). The most common one is the attitudinal boundary represented by this word. Besides, 了 (le) is also used to soften the tone, to deny the need or possibility of an event, or to prevent a situation from persisting or recurring.

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## Appendix

Sentences selected for the analysis, extracted from the Chinese Web corpus 2017 Simplified (zhTenTen17) available on Sketch Engine. <https://www.sketchengine.eu/zhtenten-chinese-corpus>



### Abbreviations

AD	adverb
AS	aspect marker
CD	cardinal number
CS	subordinating conjunction
DE	particle 的 (de)
GE	measure word 个 (gè)
LE	particle 了 (le)
MING	measure word 名 (míng)
NE	particle 呢 (ne)
NN	common noun
PU	punctuation
SP	sentence-final particle
VV	other verbs
ZHANG	measure word 张 (zhāng)
ZHENG	progressive marker 正 (zhèng)

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