

## THE ROLE OF NARRATIVE STRUCTURE IN THE ACQUISITION OF EUROPEAN PORTUGUESE PERFECTIVE AND IMPERFECTIVE MORPHOLOGY BY L1 MANDARIN CHINESE LEARNERS

O PAPEL DA ESTRUTURA NARRATIVA NA AQUISIÇÃO DA MORFOLOGIA PERFETIVA E IMPERFETIVA DO PORTUGUÊS EUROPEU POR APRENDENTES COM L1 MANDARIM

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**ABSTRACT:** The study of the acquisition of L2 tense-aspect and the development of aspectual distinctions has been conducted according to various theoretical hypotheses, among which the Discourse Hypothesis stands out nowadays. In order to examine the relationship between the use of perfective/imperfective morphology and the narrative grounding, the present study is oriented by three research questions: (1) what is the temporal base like in the past narratives produced by L1 Mandarin Chinese learners of European Portuguese? (2) is the choice of perfective and imperfective verbal morphology influenced by the narrative grounding? (3) do the learners of different proficiency levels mark the narrative grounding with different verbal forms? On the basis of a quantitative analysis on the data collected from the narratives produced by 12 L1 Mandarin Chinese learners of European Portuguese, the results revealed that the temporal base for narratives is clearly perfective-imperfective and that the foreground was mostly marked by the perfective morphology, whereas the imperfective tended to be used to mark the background, irrespective of the learners' proficiency levels.

**Keywords:** Perfective/imperfective morphology; Mandarin Chinese learners of European Portuguese; Discourse Hypothesis; narrative structure; Portuguese as Second Language.

**RESUMO:** Os estudos acerca da aquisição do tempo e aspecto em L2 foram elaborados de acordo com várias diferentes hipóteses, entre as quais se destaca a Hipótese de Discurso. Tendo como objetivo verificar a relação entre o uso da morfologia perfectiva/imperfectiva e a base narrativa, o presente estudo é orientado pelas três questões: (1) como é que é a base temporal das narrativas produzidas por aprendentes de Português Europeu com L1 Chinês Mandarim? (2) a escolha da morfologia perfectiva e imperfectiva está influenciada pela base narrativa? (3) os aprendentes de diferentes níveis marcam a base narrativa com diferentes formas verbais? Baseados numa análise quantitativa a que se procedeu a partir dos dados recolhidos dos narrativos produzidos por 12 aprendentes de Português Europeu com L1 Chinês Mandarim, os resultados demonstraram que a base temporal dos narrativos é aparentemente caracterizada pela

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perfectividade e imperfectividade e que o *foreground* foi marcado pela morfologia perfectiva na maioria dos casos, ao passo que se usou normalmente a morfologia imperfectiva a marcar o *background*, independentemente do nível de proficiência.

**Palavras-chave:** Morfologia perfectiva/imperfectiva; aprendentes de Português Europeu com L1 Chinês Mandarim; Hipótese de Discurso; estrutura narrativa; Português como Língua Segunda.

## 1 Introduction

As studying tense-aspect systems is considered to be one of efficient ways to gain a better understanding of the process of the second language acquisition, the development of L2 tense-aspect has been an intensively discussed topic recently and many empirical studies have been carried out under different specific theoretical approaches. According to the importance these approaches place on the factors like pragmatic, semantic, textual, input, cognitive and syntactic, the approaches can be classified into six major theoretical hypotheses, respectively (SALABERRY; AYOUN, 2005): Baslang Speech Hypothesis, Aspect Hypothesis, Discourse Hypothesis, Distributional Bias Hypothesis, Default Past Tense Hypothesis and Minimalist Hypothesis. The present investigation is conducted to examine the Discourse Hypothesis, based on the data from written narrative produced by 12 L1 Mandarin Chinese learners of European Portuguese.

In fact, narrative analysis has been carried out in many different areas of social sciences and “from a variety of analytical perspectives and methodologies, depending on disciplinary priorities and research foci” (THORNBORROW, 2012, p.51). From the perspective of tense and aspect in second language acquisition, the Discourse Hypothesis proposes that in the narrative grounding, learners use different verbal forms to mark the foreground situations and background situations (BARDOVI-HARLIG, 1994). To examine the Discourse Hypothesis, the present study intends to analyze data from 12 L1 Mandarin Chinese learners of European Portuguese.

As for the organization of this article, it is divided into six sections. In section 2, some basic concepts about tense-aspect system in European Portuguese and Mandarin Chinese are presented. In section 3, some issues in the definition of narrative grounding are discussed, as well as other previous empirical studies conducted under the Discourse Hypothesis. In section 4, the present research is introduced and its results are presented in section 5. In section 6, the research questions are further discussed according to the results that we obtained. Finally, some conclusions and suggestions for future studies are given in section 7.

## 2 Tense-Aspect Systems in European Portuguese and Mandarin Chinese

### 2.1 Time, tense and aspect

In human languages, the concept of time is generally expressed by two different categories: tense (verbal, for example) and aspect (AYOUN; SALABERRY, 2008). These two categories can be encoded in different linguistic forms according to different languages and they

can influence each other, demonstrating some underlying internal relations between them.

Tense is a deictic and external category which aims to “relates the time of the situation referred to some other time, usually to the moment of speaking” (COMRIE, 1976, pp.1-2). The time axis to which the situation described by the sentence is anchored can be divided into three stretches: past, present and future. In this case, the distinction between (1a), (1b) and (1c) in French is temporal in nature:

(1) a. *Elle a écrit une lettre à ses parents hier.*

‘She wrote a letter to her parents yesterday.’

b. *Elle écrit une lettre à ses parents maintenant.*

‘She is writing a letter to her parents now.’

c. *Elle écrira une lettre à ses parents demain.*

‘She will write a letter to her parents tomorrow.’

The tenses in (1) locate respectively the situation of writing a letter to her parents before, at (or around), and after the moment of speaking.

In contrast, the distinction between (2a) and (2b) in French is aspectual in nature:

(2) a. *Je suis revenue en autobus hier.*

‘I returned by bus yesterday.’

b. *Je revenais en autobus chaque jour.*

‘I used to return by bus every day.’

As we can observe, both situations described by the sentences in (2) are located in the past, but in (2a) the returning by bus is considered as a completed event which does not exist in the present time. (2b) represents the returning by bus as an ongoing situation and may indicate a continuation of returning by bus into the present. It may even allow a habitual reading in some contexts. Therefore, aspect is a non-deictic and internal category that represents “the different ways of viewing the internal temporal constituency of a situation” (COMRIE, 1976, p.3). However, the range of the term “aspect” not only includes the grammaticalized viewpoints, as in (2), but also refers to different situation types. That means that aspect can be classified into two categories: grammatical aspect and lexical aspect, respectively (SMITH, 1991).

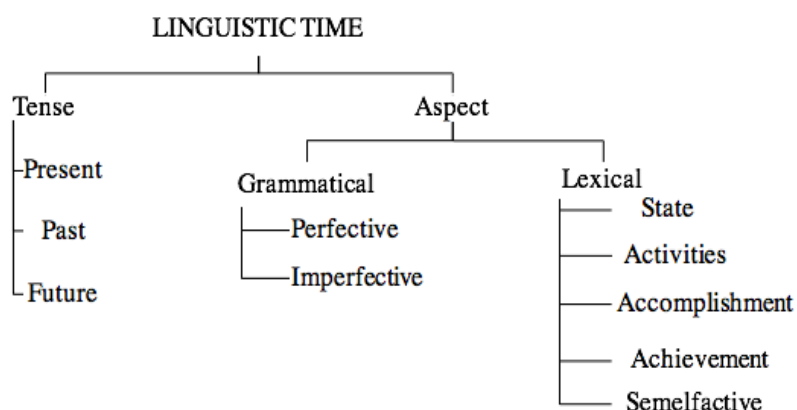
As for grammatical aspect, there are two main types, perfective (cf. (2a)) and imperfective (cf. (2b))<sup>3</sup>. Perfective aspect focuses on a situation in its entirety with its initial point and final endpoint, while imperfective aspect only concentrates on part of a situation, including neither initial nor final endpoints (SMITH, 1991). Thus, it should be noted that the difference between perfective aspect and imperfective aspect is usually “restricted to past time reference. With

<sup>3</sup> For some languages (English, Spanish and Mandarin Chinese, for example), one should also distinguish between perfective aspect and perfect aspect, once “the perfect aspect refers to times later than the situation and places emphasis on the resultant phases (or states) of situations rather than on inceptive phases” (COMRIE, 1976, p.12).

present and future time reference, the distinction is neutralized, namely the same form can be used both in perfective and imperfective contexts [...]” (SQUARTINI, 1995, p.118-119).

Lexical aspect, unlike grammatical aspect, refers to temporal properties of situations and such aspectual information can be obtained through inherent semantic properties of some other linguistic factors, like verbs and its complements, time adverbials (temporal and spatial) and so on (MOENS, 1987). Taken into consideration these temporal properties of situations such as dynamism, durativity and telicity, the lexical aspect normally can be distinguished into five types: state, activity, accomplishment, achievement and semelfactive (SMITH, 1991).

In this sense, the relation between tense and aspect can be represented as in Figure 1:



**Figure 1** Tense and aspect (adapted from COMRIE, 1976 and AYOUN; SALABERRY, 2008)

From typological perspective, different languages may vary in ways of the expression of temporality, which can be a grammaticalization process or a lexicalization process. According to Klein and Ping (2009), there are six main ways that are used to codify the linguistic time in human languages: (1) verb tense; (2) grammatical aspect; (3) lexical aspect; (4) time adverbials; (5) aspect markers; (6) pragmatic principles. In the following section, a descriptive analysis will be made about tense-aspect systems of European Portuguese and Mandarin Chinese, aiming to detect some differences and similarities between these two languages in this regard.

## 2.2 Tense and aspect in European Portuguese and Mandarin Chinese

As shown in Table 1, temporality is mainly expressed morphologically, lexically and syntactically in European Portuguese (AYOUN; SALABERRY, 2008; OLIVEIRA, 2013). In other words, there are three principal specific processes in European Portuguese to express temporality: tense making, time adverbials and periphrastic tenses. However, Mandarin Chinese does not have any verbal inflectional morphology in its temporality system and the temporal localization of situations are generally indicated by lexical information (time adverbials, negation adverbials, resultative verb complements (RVC) and aspect markers) and pragmatic principles (ERBAUGH; SMITH, 2005).

**Table 1** Expression of temporality in European Portuguese and Mandarin (YANG, 2020)<sup>4</sup>

Temporal localization	European Portuguese	Mandarin Chinese
<b>Past</b>	<i>Pretérito perfeito simples</i>	Marker <i>LE</i>
	<i>Pretérito imperfeito</i>	Marker <i>GUO</i>
	<i>Pretérito mais-que-perfeito</i> <sup>5</sup>	RVC
	<i>Presente do indicativo</i>	Negation adverbial <i>MEI</i>
	<i>Condicional</i>	Time adverbials
	Time adverbials	
<b>Present</b>	<i>Presente do indicativo</i>	Marker <i>ZAI</i>
	Time adverbials	Marker <i>ZHE</i>
		Neuter aspect $\emptyset$
		Time adverbials
<b>Future</b>	<i>Futuro do indicativo</i>	Modal verbs
	<i>Presente do indicativo</i>	Future-oriented verbs
	Time adverbials	Negation adverbial <i>BU</i>
		Time adverbials

Table 2 presents a summary of grammatical aspect in European Portuguese, adapted from the Spanish description by García Fernández (1998, p.58) and the Catalan description by Comajoan (2005, p.41). The following discussion will concentrate on perfective and imperfective aspects, which are typically realized through the inflectional morphology of the *pretérito perfeito simples* (PPS) and the *pretérito imperfeito* (PI) in European Portuguese (YANG; OLIVEIRA; SILVA, 2020).

Semantically, the PPS in European Portuguese can be used with all different situation types (lexical aspects) without any aspectual alteration, giving the information about the starting point and the endpoint of the situation described by the phrase (CUNHA, 2013). The PI, for its part, is an anaphoric tense usually used with a reference time point (OLIVEIRA, 2013), indicating neither the start nor the end of situations. Furthermore, this tense allows the transformation of events (especially atelic events) into habitual states.

<sup>4</sup> In Table 1, the pragmatic principles are not taken into consideration.

<sup>5</sup> Without any specific indication, *pretérito mais-que-perfeito*, *futuro do indicativo* and *condicional* may refer to both simple form and composed form.

**Table 2** European Portuguese aspect, morphology and values (adapted from GARCÍA FERNÁNDEZ, 1995, p.58; COMAJOAN, 2005, p.41)

Aspect	Morphology	Values
<b>Perfective</b>	<i>Pretérito perfeito simples</i> and <i>Pretérito mais-que-perfeito</i>	Terminative Resultative Experiential
<b>Imperfective</b>	<i>Presente do indicativo, Pretérito perfeito composto</i> and <i>Pretérito imperfeito</i>	Habitual Continuous Durative Progressive
<b>Neutral</b>	<i>Futuro do indicativo</i> and <i>Condicional</i>	the same as imperfective

Syntactically, like Catalan and Spanish, the PPS (and other perfective forms) allows for the use of bounded quantified expressions in European Portuguese, as shown in (3):

(3) Ontem ele viu/\*via televisão durante duas horas.

‘Yesterday he watched [PPS]/\*[PI] television for two hours.’

In discourse, perfective forms can build narrative sequence (i.e., in chronological order) by default (COMAJOAN, 2005), while imperfective forms are often used to mark background events. In the case of European Portuguese, this property will be more evident if we take into consideration different combinations of the PPS and the PI in adverbial clauses of time with *quando*, ‘when’ (YANG; OLIVEIRA; SILVA, 2020), as in (4):

(4) a. Quando eu chegava a casa tarde, os meus pais ficavam zangados.

‘When I arrived [PI] home late, my parents used to become [PI] angry.’

b. Quando eu almoçava, a minha mãe chegou.

‘When I was having lunch [PI], my mother arrived [PPS].’

c. Quando o professor entrou na sala de aula, os alunos pararam de falar.

‘When the professor entered [PPS] into the classroom, the students stopped [PPS] talking.’

In (4), each combination of the PPS and the PI represents one type of temporal relations: habituality (cf. (4a)), temporal inclusion (cf. (4b)) and temporal sequence (cf. (4c)).

Regarding Mandarin Chinese, it also makes a distinction between perfective and imperfective aspect (even between perfective and perfect, but it does not seem directly relevant to the present study). Although Mandarin Chinese has no grammaticalized tense, “the distinction between perfective versus imperfective viewpoints is clearly marked [...]” (LIU, 2015, p.288). There are four commonly recognized aspect markers in Mandarin Chinese: the simple perfective marker *LE* (cf. (5a)), the experiential perfective maker *GUO* (cf. (5b)), the progressive marker *ZAI* (cf. (5c)) and the durative marker *ZHE* (cf. (5d)):

- (5) a. Wo xie-le        xin.  
       I    write-LE    letter.  
       ‘I wrote a letter.’
- b. Wo qu-guo      baxi.  
       I    go-GUO    Brazil.  
       ‘I have been to Brazil.’
- c. Wo zai    xie    xin.  
       I    ZAI    write    letter.  
       ‘I am writing a letter.’
- d. Ta zuo-zhe, wo zhan-zhe.  
       He sit-ZHE, I    stand-ZHE.  
       ‘He sits and I stand.’

Thus, if we take into account some aspect values of the Mandarin Chinese aspect markers mentioned above, it will be possible to draw up a partial correspondence between European Portuguese and Mandarin Chinese in terms of different aspect values, as illustrated in Table 3:

**Table 3** Mapping of features of aspect for the perfective and imperfective in European Portuguese and Mandarin Chinese (adapted from YANG; OLIVEIRA; SILVA, 2020)

Values	Forms in European Portuguese	Forms in Mandarin Chinese
Simples perfective	PPS	Marker <i>LE</i>
Experiential	PPS	Marker <i>GUO</i>
Progressive	PI	Marker <i>ZAI</i>
Habitual	PI	Neuter aspect $\emptyset$
Continuous	PI	Marker <i>ZHE</i>
Durative	PI	Marker <i>ZHE</i>

However, in Mandarin Chinese, besides these aspect markers, some bounding expressions also contribute to the expression of perfectivity, such as resultative verb complements (RVC), expressions of event quantification and prepositional phrases with a bounding effect (LI, 2019).

In discourse, just like in European Portuguese, the correlation between perfectivity/imperfectivity and narrative grounding is also found in Mandarin Chinese (LI, 2019). As for the encoding of foreground information, explicit means, like temporal adverbials and perfective aspect marker *LE*, are usually used. However, both explicit (temporal adverbials, imperfective aspect markers, or their combinations) and implicit means (situation types or contextual support) can be used for the encoding of background information in Mandarin Chinese (YANG, 2002).

### 3 Narrative structure and distribution of verbal morphology

#### 3.1 Narrative structure: foreground and background

According to Thornborrow (2012), narrative discourse is pervasive in most contexts for social interaction, which can account for and display the human condition and experience. The definition of narrative has been discussed in several studies recently. From a linguistic perspective, a narrative is considered to be a “verbal technique for recapitulating experience, in particular, a technique of constructing narrative units which match the temporal sequence of that experience” (LABOV; WALETZKY, 1967, p.13). Basically, a narrative discourse contains its own texture and structure.

The term “texture” refers to the fact that some situations in a narrative discourse may be much more salient than others because of some linguistic factors, such as semantic properties and grammatical aspect (SILVA-CORVALÁN, 1983).

As for the structure of a narrative discourse, it generally includes two different parts: the foreground and the background. Although it seems that there is no absolute definition of the two concepts (HOPPER, 1979; DRY, 1983; GIVÓN, 1984; REINHART, 1984; BARDOVI-HARLIG, 2000), Givón (1984) proposes that the foreground and the background have its own features that may concern various linguistic notions, such as tense, sequentiality, durativity, perfectivity, modality, activeness and syntax, as in Table 4:

**Table 4** Features of foreground and background (GIVÓN, 1984, *apud* COMAJOAN, 2005, p.44)

Features	Foreground	Background
Tense	Past	Present, future, habitual
Sequentiality	In-sequence	Out-of-sequence, anterior, perfect
Durativity	Compact/punctual	Durative/continuous
Perfectivity	Perfective/completive	Imperfective/incompletive



<b>Modality</b>	Realis	Irrealis
<b>Activeness</b>	Action/event	State
<b>Syntax</b>	Main clauses	Subordinate clauses

The foreground-background contrast is better viewed as a spectrum or continuum in which saliency is a matter of degree, the different degrees being expressed through an interplay of the semantic and grammatical oppositions available in the language.

Apart from this distinction given by Givón (1984), Reinhart (1984) also analyzed some typical characteristics of the foreground, proposing then a set of “temporal criteria”. According to the temporal criteria, the foreground of a narrative discourse can be defined from three perspectives, that is, “narrativity (temporal continuity)”, “punctuality” and “completeness”, as summarized below:

Narrativity (or Temporal Continuity): only narrative units, i.e., textual units whose order matches the order of the events they report, can serve as foreground.

Punctuality: units reporting punctual events can serve more easily as foreground than units reporting durative, repetitive, or habitual events.

Completeness: a report of a completed event can serve more easily as foreground than a report of an ongoing event. (REINHART, 1984, p.801)

Dry (1983) suggested that in comparison with the background information, the foreground information in a narrative should be new rather than given, which can contribute to moving time forward in the actual story timeline. Later, Bardovi-Harlig (2000) proposed that the foreground, in respect of the texture of a narrative, must be salient and relevant for offering new information and its localization in a narrative discourse is relatively flexible, which can be before, around or after the background.

Therefore, the latest study of Li (2019), based on the previous studies, concluded that the foregrounded events tend to be dynamic, more salient to the plot development and able to form the main storyline and move the narrative time forward by succeeding one another in the same order as they occur in the real world, whereas the backgrounded events are less salient, not temporally ordered (occur with each other or with foregrounded events) and “play a supporting role by adding descriptions of participants, scene-setting material, and evaluative commentary that does not immediately and crucially contribute to the main story” (LI, 2019, p.166).

To sum up, the distinction between foreground and background depends on many different linguistic factors of a narrative grounding. However, as for the present study, which attempts to examine the influence of a narrative discourse on the choice of past tense verbal morphology, the criterion of chronological order should be given preference (COMAJOAN, 2005).

### *3.2 Discourse Hypothesis: relationship of verbal morphology and narrative structure*

The concept of the “Discourse Hypothesis” was first put forward by Bardovi-Halig (1994), which predicts that “learners use emerging verbal morphology to distinguish foreground from background in narratives” (BARDOVI-HALIG, 1994, p.43). Recently, the Discourse Hypothesis has been examined and developed in many empirical studies in different languages, such as in Spanish (SILVA-CORVALÁN, 1983; LAFFORD, 1996; GÜELL, 1998), in French (VÉRONIQUE, 1987; BRONCKART; BOURDIN, 1993), in Italian (GIACALONE RAMAT, 2002), in Catalan (COMAJOAN, 2005).

Bronckart and Bourdin (1993) analyzed the relationship between use of verbal morphology by L2 speakers, types of text (narrative, report, letter and explanation) and grounding in French, Italian, Catalan, German and Basque. As for the narrative, if we calculate the relative percentages of different verbal tenses in the narrative, we can determinate which verbal tenses serve as temporal bases for the narrative grounding in each language, as shown in Table 5:

**Table 5** Temporal bases for the narrative in French, Italian, Catalan, German and Basque (adapted from BRONCKART; BOURDIN, 1993)

Temporal base in the narrative	
<b>French</b>	Perfective / Imperfective
<b>Italian</b>	Perfective / Imperfective
<b>Catalan</b>	Perfective / Imperfective
<b>German</b>	Perfective
<b>Basque</b>	Syntactic past / Past in -TU <sup>6</sup>

As we can observe in Table 5, in romance languages (French, Italian and Catalan), the temporal base for narratives is clearly perfective-imperfective.

Lafford (1996) and Güell (1998) 's studies permit us to analyze the use of verbal morphology by narrative grounding in relation to proficiency level, revealing that perfective morphology developed much more in the foreground than in the background while the imperfective morphology was used with more frequency in the background. In another study with the same approach, Giacalone Ramat (2002) analyzed the data about the use of L2 Italian morphology from four L1 English speakers who had studied Italian for about two years and this study also proved that the foreground was dominated by perfective form (about 70%) and the imperfective form coded the background (about 50%).

In order to understand how perfective and imperfective morphology emerges in the

<sup>6</sup> Regarding the verbal morphology in Basque, Bronckart and Bourdin (1993) summarize that “en basque enfin, deux systèmes de conjugaison coexistent: un ensemble restreint de verbes [...] relèvent de la conjugaison « synthétique » [...] Les autres verbes relèvent de la conjugaison « périphrastique»: ils sont composés d’une forme non conjuguée (participe non accompli en -TU, participe non accompli en -TZEN, participe futur en -KO) et d’un auxiliaire porteur d’indications de temps et/ou de mode, et de personne ” (p.103-104).

process of L2 learning, Comajoan (2005) took the previous studies as a point of departure and analyzed three L1 English speakers in the United States who came from a class of Catalan as a foreign language and did not have any previous knowledge of Catalan. According to the results obtained from three elicitation tasks (video narratives, storybook narratives and a folktale) during a period of seven months (two semesters), the longitudinal data of this study showed that the perfective forms emerged before the imperfective forms and the foreground was mostly marked by perfective morphology, whereas the imperfective emerged usually in the background. However, it should be noticed that this trend is not found in all the participants and the texture was not always marked with perfective-imperfective contrast, for it was also marked with a present-preterite contrast. Thus, Comajoan (2013) claimed that the individual differences request us to take into account some factors when we pretend to examine the Discourse Hypothesis, such as previous language proficiency and the type of narrative task.

In short, these previous studies, based on different types of learners and tasks, provide us with some evidence of the role of narrative structures in the use of past morphology. However, none of the studies focuses on L1 Mandarin Chinese speakers or the use of perfective and imperfective forms in Portuguese (especially in European Portuguese).

## 4. The study

### 4.1 Research questions

Purposing to analyze, on the basis of the Discourse Hypothesis, the use of perfective and imperfective morphology of European Portuguese by L1 Mandarin Chinese learners, the present study is oriented by three research questions:

(i) What is the temporal base like in the narratives produced by L1 Mandarin Chinese learners of European Portuguese? Does any individual difference exist?

(ii) Is the choice of perfective and imperfective verbal morphology influenced by the narrative grounding? Does any individual difference exist, either?

(iii) Do the learners of different proficiency levels mark the narrative grounding with different verbal forms?

### 4.2 Participants

The participants ( $n = 12$ ) were all second-year Chinese students who majored in Portuguese Language and Culture from a university in Beijing. Among these students, nine were female and three were male. The ages of these participants ranged from 19 to 22 with an average age of 19.6 years old.

All of the participants speak Mandarin Chinese as L1 and have learned English in classroom setting for at least 10 years in China. They all started to learn European Portuguese only after entering university, so they had been studying Portuguese for only one year and a half by the time of this study. None of them had been to Portuguese-speaking countries for learning Portuguese and they were just rigorously instructed in the Portuguese environment of a

classroom by teachers who are from mainland China and also Portuguese-speaking countries. Before carrying out the present research, all participants provided us with a self-assessment on their written proficiency skills in European Portuguese. The assessment was based on Common European Framework of Reference of Languages (CEFR) that describes language proficiency in six levels: A1 (beginners), A2 (elementary users), B1 (intermediate users), B2 (upper intermediate users), C1 (advanced users), and C2 (proficient users). The results showed some differences between them, 2 participants regarded themselves as A1, 5 participants regarded themselves as A2 and 5 participants regarded themselves as B1, as in Table 6:

**Table 6** Participants' self-assessed written proficiency level in European Portuguese

	Written proficiency level
Participant 1	A2
Participant 2	A2
Participant 3	A2
Participant 4	B1
Participant 5	A1
Participant 6	B1
Participant 7	A1
Participant 8	B1
Participant 9	B1
Participant 10	A2
Participant 11	A2
Participant 12	B1

### 4.3 Task

One personal narrative elicitation task was used in this study. The participants were requested to write a past narrative about their most interesting experience of childhood in class and the task duration was 40 minutes. They did the task in the proctored environment without interruptions and they could not use any instrument for searching.

### 4.4 Data analysis

First, all of the manuscripts of narratives were transcribed in the computer by the researchers. Then all of the verbs forms in each narrative were coded for verbal morphology: *Pretérito perfeito simples (PPS)*, *Pretérito imperfeito (PI)*, *Presente do indicativo (Presente)* and *Pretérito mais-que-perfeito (PMQP)*. Last, all of the narratives were coded for grounding: foreground and

background.

## 5. Results

The length of the participants' productions varied. The number of words ranged from 105 to 356 with an average of 159.

*5.1 Research question 1: What is the temporal base like in the past narratives produced by L1 Mandarin Chinese learners of European Portuguese? Does any individual difference exist?*

With regard to the temporal base in the narratives, the quantification of all propositions was carried out for each narrative and then the relative percentage of total occurrences of each tense was calculated per text, as illustrated in Table 7:

**Table 7** Individual distribution of verbal tenses in the narratives

	TNP	PPS (%)	PI (%)	Presente (%)	PMQP (%)
P1	24	4.17	79.17	12.5	4.17
P2	17	76.47	17.65	5.88	0
P3	47	31.91	51.06	17.02	0
P4	35	77.14	20	2.86	0
P5	19	63.16	15.79	21.05	0
P6	18	44.44	55.56	0	0
P7	18	50	44.44	5.56	0
P8	19	52.63	26.32	21.05	0
P9	17	70.59	29.41	0	0
P10	16	87.5	12.5	0	0
P11	24	54.17	29.17	8.33	8.33
P12	21	66.67	28.57	4.76	0
<b>TOTAL</b>	<b>275</b>	<b>53.82</b>	<b>36</b>	<b>9.09</b>	<b>1.09</b>

*P = participant; TNP=total number of propositions*

As we can observe in Table 7, the PPS and the PI are the two main verbal tenses that were used in the narratives produced by these participants without any individual difference, corresponding to 53.82% and 36 %, respectively. Generally, the PPS was used with higher frequency than the PI. However, this tendency was not registered in the narratives produced by

participants 1, 3 and 6, who used the PI more than the PPS.

In (6), there are some examples chosen from the narratives, showing the general tendency of the temporal base:

(6) a. Uma coisa muito interessante aconteceu quando eu estava na escola primária. (P8)

‘An interesting thing happened [PPS] when I was [PI] in the primary school.’

b. A minha mãe voltou, mas ela não pôde abrir a porta. (P11)

‘My mother came back [PPS], but she could not [PPS] open the door.’

Moreover, the use of the *Present* also represented a relatively high percentage in the narratives of participants 3, 5 and 8, corresponding to 17.02%, 21.05% and 21.05%, respectively. Some examples in these narratives are presented in (7):

(7) a. Por exemplo, Córdoba tem uma mesquita combinada com uma catedral. (P3)

‘For example, there is [Presente] a mosque together with a cathedral in Cordova.’

b. Cada inverno, realiza vários eventos sobre isto. (P5)

‘Every winter, they hold [Presente] various events about that.’

c. Parece que a consequência já é óbvia, os ovos quebraram. (P8)

‘It seems [Presente] that the consequence is [Presente] already obvious, the eggs broke [PPS].’

*5.2 Research question 2: Is the choice of perfective and imperfective verbal morphology influenced by the narrative grounding? Does any individual difference exist, either?*

In order to verify the general relationship between the choice of perfective/imperfective morphology and the narrative grounding, the relative percentage of total occurrences of each verbal morphology was calculated both in the foreground and background of all narratives, as shown in Table 8:

**Table 8** General distribution of perfective/imperfective morphology in the narratives

	Perfective		Imperfective		Total (%)
	PPS (%)	PMQP (%)	PI (%)	Presente (%)	
Foreground	39.27	0.73	6.91	1.09	48
Background	14.55	0.36	29.09	8	52

Table 8 shows that the foreground accounted for 48% of all narratives, whereas the background represented 52%. In relation to the perfective morphology, it was dominant in the foreground, which represented 40%, much higher than in the background (14.91%). However, the imperfective forms were mostly used to mark the background (37.09%), in contrast with its occurrences in the foreground (8%).

The examples in (8) are some sentences in the narratives in which this tendency was observed (F indicates foreground while B indicates background):

(8) a. Fui passar uma noite com os meus pais. Diverti-me muito. (P5)

'I spent [PPS-F] one night with my parents. I had [PPS-F] a good time.'

b. Um dia voltei para casa da escola e não tinha nada para fazer depois de terminar os trabalhos de casa, então procurei alguns brinquedos novos. (P7)

'One day, I came back [PPS-F] home from the school and I did not have [PI-B] anything to do after finishing homework, so I looked for [PPS-F] some new toys.'

However, there are also some examples of the narratives in which this tendency was not registered, as in (9):

(9) a. Então quero sair e disse isso à minha mãe. (P2)

'Then I want [Present-F] to leave and I told [PPS-F] that to my mother.'

b. Tive uma infância muito aborrecida. Estudava todos os dias quando era criança. (P5)

'I had [PPS-B] a very boring childhood. I used to study [PI-B] every day when I was [PI-B] a child.'

Therefore, in order to examine if there is any individual difference in this regard, the results of each participant are presented in Table 9:

**Table 9** Individual distribution of the perfective/imperfective morphology by the narrative grounding

		Foreground				Background			
		Perfective		Imperfective		Perfective		Imperfective	
PPS (%)	PMQP (%)	PI (%)	Presente (%)	PPS (%)	PMQP (%)	PI (%)	Presente (%)		

P1	4.17	4.17	37.5	8.33	0	0	41.67	4.17
P2	52.94	0	0	0	23.53	0	17.65	5.88
P3	14.89	0	4.26	0	17.02	0	46.81	17.02
P4	48.57	0	2.86	2.86	28.57	0	17.14	0
P5	42.11	0	0	0	21.05	0	15.79	21.05
P6	38.89	0	5.56	0	5.56	0	50	0
P7	44.44	0	0	0	5.56	0	44.44	5.56
P8	42.11	0	5.26	0	10.53	0	21.05	21.05
P9	64.71	0	0	0	5.88	0	29.41	0
P10	62.5	0	0	0	25	0	12.5	0
P11	50	4.17	20.83	0	4.17	4.17	8.33	8.33
P12	47.62	0	0	0	19.05	0	28.57	4.76

As for the foreground, most participants marked the foreground in their narratives with perfective forms (especially the PPS), which was not valid only in the narrative of participant 1 (perfective 8.34% and imperfective 45.83% concerning the foreground). There are some examples taken from this narrative in (10):

(10) a. Um dia, nós íamos uma montanha e jogávamos até muito tarde à noite. (P1)

‘One day, we went [PI-F] to a mountain and played [PI-F] until very late at night.’

b. Depois, chegava à casa. Os meus avós criticavam-me. (P1)

‘After that, I arrived [PI-F] home. My grandparents criticized [PI-F] me.’

With regard to the background, only participants 4 and 10 chose more perfective forms than imperfective forms to mark the background in their narratives (for participant 4, perfective 28.57% and imperfective 17.14%; for participant 10, perfective 25% and imperfective 12.5%). In (11), some examples taken from these two narratives are shown:

(11) a. Cada um dos nossos exames precisou a assinatura dos pais. (P4)

‘Each of our exams needed [PPS-B] the parents’ signature.’

b. Esta notícia foi frustrante para mim. (P10)

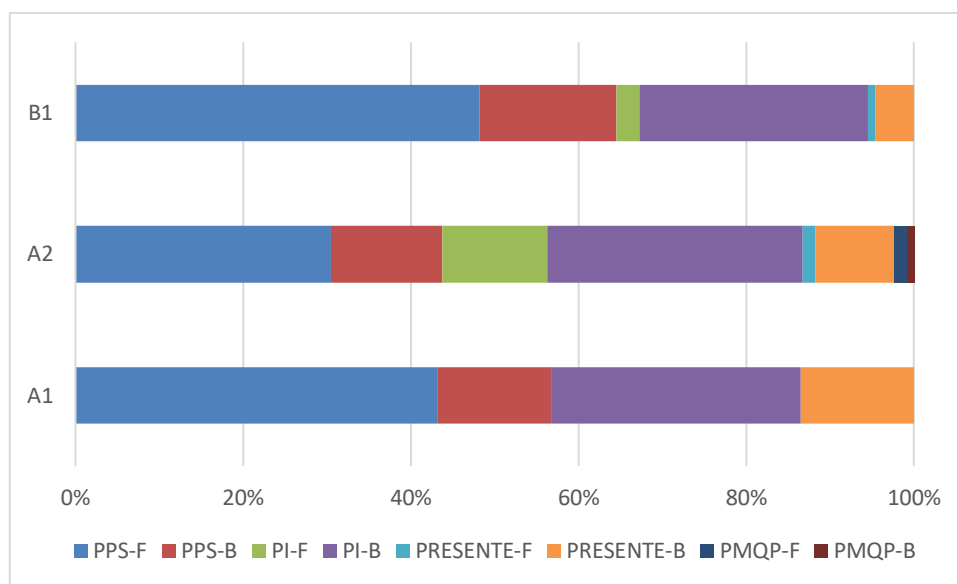
‘This news was [PPS-B] frustrating to me.’

*5.3 Research question 3: Do the learners of different proficiency levels mark the narrative grounding with different verbal forms?*

With the purpose of verifying if the dominate verbal forms in the narrative grounding



change as the proficiency level in European Portuguese improves, it was on the basis of the self-assessed proficiency level that the distribution of the perfective/imperfective forms in the background and foreground was recalculated, as illustrated in Figure 2:



**Figure 2** Distribution of the perfective/imperfective morphology in the narrative grounding by self-assessed proficiency level

Figure 2 revealed that no matter what proficiency level the learners were, all the learners preferred to mark the foreground with the perfective forms and the background with the imperfective forms. That is to say, as the self-assessed proficiency level improved, the perfective morphology (especially the PPS) still remained more associated with foreground information while the imperfective morphology (the PI) also still was preferable to demoting situations into the background.

Concerning the other imperfective form, the *Presente*, Figure 2 demonstrated that as the learners became more proficient, they tended to produce less the *Presente* both in the foreground and in the background.

## 6. Discussion

### 6.1 Construction of temporal base in narrative discourse

In terms of the temporal base in the past narratives produced by L1 Mandarin Chinese learners of European Portuguese, the perfective verbal form, PPS and the imperfective form, PI, tend to be the two main kinds of simple past morphology in the past narratives. This tendency actually existed in all the narratives, irrespective of the proficiency level, therefore, it corroborates the findings of other studies on the acquisition of past morphology in different romance languages.

Nonetheless, it should be pointed out that the use of present morphology (the *Presente*) also represented a high percentage in some cases. In a sense, this can be considered as the result of the incomplete acquisition of past morphology by the L1 Mandarin Chinese learners. According to Oliveira and Silva (2019), the use of the *Presente* rather than the PPS or the PI is especially observed in some temporal subordinate clauses and sequences of clauses. However, taken into consideration the narrative grounding, it is noted in this study that a majority of its occurrences was aimed at the encoding of background information and as the proficiency level improved, the *Presente* was gradually substituted by an imperfective simple past morphology, the PI.

Therefore, it may be inferred that the imperfective morphology develops much more slowly in comparison with the perfective. However, unlike the results from Lafford (1996) or Comajoan (2005), we cannot determine if the perfective emerges before the imperfective or both emerge within the same period during the process of second language acquisition, since this research did not collect longitudinal data from the same participants.

At this point, we may conclude that:

- (1) the temporal base for past narratives produced by L1 Mandarin Chinese learners is clearly perfective-imperfective, which is mainly composed of the PPS and the PI;
- (2) the *Presente* also occurs in the past narratives with a relatively high frequency, which may be explained by the incomplete acquisition of the PI;
- (3) when the *Presente* appears, it tends to be used to mark the background in past narratives, especially for the learners with low language proficiency. When the proficiency improves, the learners usually produce less the *Presente*;
- (4) for L1 Mandarin Chinese learners of European Portuguese, they seem to have more difficulties in the use of the imperfective verbal forms and therefore, it can be inferred that the development of the perfective morphology and the imperfective morphology is probably not at the same stage in the process of second language acquisition and the imperfective morphology perhaps develops more slowly than the perfective.

## 6.2 Relationship between the use of perfective/imperfective morphology and narrative structure

The results regarding use of perfective and imperfective morphology in narrative grounding provided evidence that no matter at which proficiency level, the L1 Mandarin Chinese learners of European Portuguese mostly marked the foreground with perfective morphology, whereas the imperfective was used to mark the background with more frequency.

Nonetheless, as we can observe, this relationship between morphology and narrative grounding varied according to participant. For example, some participants tended to associate the foreground with imperfective forms and others produced more perfective forms when marking the background. Moreover, it seemed that there was not any positive correlation between the use of morphology and language proficiency level, in other words, the pairs foreground-perfective and background-imperfective did not exist more obviously as the proficiency level improved.

So, in order to explain the individual differences, as many researchers have indicated (GIVÓN, 1984; FLEISCHMAN, 1990; LISKIN GASPARRO, 2000; CAMAJOAN, 2005;

YANG, OLIVEIRA; SILVA, 2019), apart from the proficiency in second language, many other internal and external factors should be taken into consideration, such as previous language proficiency, types of narrative tasks and some linguistic devices.

More precisely, for example, all the participants in the present study not only had knowledge of Mandarin Chinese and European Portuguese, but also had knowledge of English. However, it was not possible to determinate if any language transfer occurred for the following reasons: (1) no contrastive analysis on the tense and aspect in Mandarin and European Portuguese was carried out under the narrative analysis; (2) the data collected in the present study is relatively small and is not longitudinal; (3) the method of self-assessment of language proficiency has limitations; (4) apart from European Portuguese, the knowledge of other languages (like English) should also be evaluated.

Moreover, although only one task was used in this study, it should be noted that some differences in the results will be detected if different narrative tasks, different procedures of data collection or different kinds of material are used. For instance, according to Comajoan (2005), existed some notable differences in the results collected from two types of retelling task - narrative in the storybook and narrative in the video retelling: for the narrative in the storybook, the participants had more processing time and this task provided more opportunities for background information in comparison with the narrative in the video retelling, which might explain the higher production of the past imperfective morphology.

In short, it is usually stated that the form-function relationship of perfective/imperfective morphology and narrative grounding is associated with cognitive and universal principal, considered as one of the methods to satisfy the speakers' communicative need (GIVÓN, 1984; ANDERSEN; SHIRAI, 1994; COMAJOAN, 2005). However, the explanation for the acquisition of this relationship should be multidimensional (ANDERSEN, 2002), for the results in any study depend on its research methodology (such as types of task, material itself and so on) and the distinction foreground-background of a narrative is also related to many internal factors like word order, clause type and local/nonlocal pronominalization (FLEISCHMAN, 1990), besides the perfective/imperfective morphology.

## 7. Conclusion and directions for further research

In this study, we intended to examine the acquisition of European Portuguese perfective and imperfective morphology by L1 Mandarin Chinese learners under the Discourse Hypothesis (BARDOVI-HARLIG, 2000). The data showed that irrespective of the second language proficiency level (based on self-evaluations), the learners' past narratives were marked clearly with a perfective-imperfective contrast. Moreover, the individual results support our main research hypothesis, namely, the learners tended to produce more perfective forms to mark foreground information while imperfective forms seem more associated with background information.

This study leaves open the following questions: (1) how does European Portuguese perfective/imperfective morphology develop in the process of second language acquisition? (2) how does the learners' previous language proficiency influence the acquisition of European Portuguese perfective/imperfective morphology? It is pertinent to continue this line of research with expanding data, diversifying research methodology and focusing on establishing the relationship between learner profiles and language development.

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