

LÍNGUA GESTUAL PORTUGUESA E OUTRAS LÍNGUAS DE SINAIS ESTUDOS LINGUÍSTICOS

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***Ser, Estar and Ficar* in Portuguese Sign Language and European Portuguese¹**

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Abstract

Predicative sentences have been the object of many studies for oral languages (OL), both in Syntax and Semantics: in Syntax, particularly because there are languages with null copula; in Semantics, because there are languages sensitive to the individual / stage-level nature of the predicate, as is the case of Portuguese and Spanish verbs *ser / estar*. In linguistic studies on sign languages, predicative sentences have received much less attention. In this paper, we center our attention on predicative sentences with adjectives and nominals, on the one hand, and those with locatives, on the other hand, as we compare Portuguese and Portuguese Sign Language (LGP) and other Sign Languages. While in Portuguese, verbs such as *ser; estar; ficar*; seem to have a predicative nature and to always be expressed, despite the difference between the category and the semantic nature of their predicates, in LGP the differences are much more pronounced. Data indicates that there is a null copula for SER - although two forms have been produced, SOU and NÃO-SOU -, which probably announces a process of grammaticalization. FICAR and ESTAR are null cop-

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ulas with non-locative predicates (individual or stage-level), either with adjectives or nominals, but they are expressed with locatives. The verb *ESTAR* is expressed with simultaneous mouthing /lala/ ('there-there'), and may co-occur with a locative INDEX in several constructions. The complexity of the productions suggests a full nature of the verb *ESTAR* and *FICAR*, closer to spatial verbs than to copulas.

Keywords: Predicative verbs, Portuguese, sign languages, Portuguese Sign Language, null and non-null copula, spatial verb.

1. Introduction

Predicative sentences, i.e., sentences with a predication assigned to a subject mainly by a nominal, an adjective, a participle or a prepositional phrase, have been the subject of attention of grammarians and linguists for many centuries. One of the most important and interesting aspects is the fact that there are different strategies for the expression of predicative sentences, at least at a superficial level. As Benveniste (1966), Rouveret (1998) and Stassen (2013), among many others, have signaled, in oral languages there are different solutions for the expression of predicative sentences:

(i) a nominal sentence, with juxtaposition of two terms, without a V, as in Russian² and Hungarian:

- (1) Russian
Mariya uchitel.
Mary teacher
'Mary is a teacher.'

Russian has a null copula with nominals (1), adjectives (2a) and locative PPs (2b), if the sentence is in the present:³

- (2) a) Ivan veselyj.
Ivan glad
'Ivan is glad.'⁴
- b) kniga na stole.
book on table
'The book is on the table.'

In the past (3a,b) and future (3c) tenses, however, it uses a copula:

² The occurrence of the predicative verb is much more complex than suggested, because Russian is a language with case inflection and with aspect and tense forms, with several syntactic consequences.

³ We thank Darya Antipova, a student of FLUP, for some of the data of Russian.

⁴ Note that the English *to be* followed by adjectives is always ambiguous between a stage-level and an individual-level meaning. With locative PPs there is no ambiguity (they are always stage-level predicates). This is why we will not indicate the distinction between *ser* and *estar* in all glosses, marking them only with COP in OL instead.

- (3) a) Ivan byl veselyj.
Ivan COP.3SG.PASS glad
'Ivan was glad.'
- b) Kniga byla na stole.
book COP.3SG.PASS on table
'The book was on the table.'
- c) Kniga budyt na stole.
book COP.3SG.FUT table
'The book will be on the table.'

(ii) nominal sentences, but with an inversion of the word order in comparison with an attributive construction: see the examples in (4a) versus (4b), from Irish:

- (4) Irish (Benveniste, 1966, p. 157)
- a) infer maith.
good man
'The good man.'
- b) maith infer.
man good
'The man is good.'

(iii) insertion of a particle as a signal of assertion, again distinct from the attributive meaning; see the examples (5a) versus (5b), from Tagalog (ART=article; ASS=assertive):

- (5) Tagalog (Benveniste, 1966, p. 158)
- a) aṅ báta (a)ṅ mabait.
the child ART good
'The good child.'
- b) aṅ bata (a)y mabait.
the child PART.ASS good
'The child is good.'

(iv) verbal construction, involving a form that is different from the one that expresses existence; in Irish the copula *is* is different from the existence verb *tá*:

- (6) Irish (Irslinger, 2015)
- a) Is mé an múinteoir.
COP.PRES 1SG ART teacher
'I am the teacher.'
- b) Tá trí phersa in Dia.
COP.PRES three person in god
'There are three persons in God.'

(v) the generalization of an Indo-European root *es- meaning 'to be' not only as a copula but also as an existential verb, the solution of most Indo-European languages

(*sum, esse* (Latin), *ser, estar* (Portuguese and Spanish), *être* (French), *essere* (Italian)), as we will see in the following paragraphs (Rouveret, 1998, p. 19).

Among Indo-European languages with predicative verbs, Iberian Romance Languages (mainly Portuguese and Spanish) are remarkable. This is not only due to the existence of a considerable number of predicative verbs, with different aspectual values (as *ficar, permanecer, andar, começar a, acabar de...*), but also because of the opposition between *ser* and *estar*, two copulative verbs that respectively introduce individual-level predicates (Carlson, 1977, Milsark, 1977, Kratzer, 1989, also referred to as “stable / permanent predicates”, Cunha 2013, p. 598), as in (7a); and stage-level predicates (Carlson, 1977, Milsark, 1977, Kratzer, 1989, or “episodic predicates”, Cunha, 2013, p. 598), as in (7b).

- (7) European Portuguese
 a) A Maria é inteligente.
 the Mary COP.3SG.PRES intelligent
 ‘Mary is intelligent.’
 b) A Maria está cansada.
 the Mary COP.3SG.PRES. tired
 ‘Mary is tired.’

Ficar also selects stage-level predicates, but with adjectives it expresses a change of state / a resultative meaning (Cunha, 2013):⁵

- (8) A Maria ficou cansada.
 the Mary COP.3SG.PASS tired
 ‘Mary got tired.’

In Portuguese and Spanish, the verbs *estar* and *ficar* also introduce spatial locative predicates, formed by prepositional phrases (PPs), typically introduced by the preposition *em*, or by locative adverbs:

- (9) A Maria está em casa.
 the Mary COP.3SG.PRES at home
 ‘Mary is at home’
 (10) O caderno está em cima da secretária.
 the notebook COP.3SG.PRES on the table’
 ‘The notebook is on the table.’
 (11) Os meus filhos estão lá/ aqui / longe / perto.
 the my children COP.3PL.PRES there / here / faraway / near
 ‘My children are there / here / faraway / near.’

⁵ As the translations of Portuguese examples into English show, the verb *ficar* followed by an adjective with a resultative meaning may be translated by *to get*; contrarily, when followed by a locative PP, it is preferentially translated by *to stay, to remain*.

- (12) A Maria ficou em casa.
the Mary COP.3SG.PASS at home
'Mary stayed at home.'
- (13) Os meus filhos ficaram lá / além / longe / perto.
the my children COP.3PL.PASS there / here / faraway / near
'My children stayed there / here / faraway / near.'

While such verbs and such values have been often analyzed for oral languages (OL), across sign languages (SL) they remain less studied, and this is also true for Portuguese Sign Language (LGP)⁶.

Therefore, the main goal of this paper is to study the properties of predicative sentences with adjectival predicates⁷ and locatives in LGP, and to compare them with oral languages, in particular Iberian Romance languages. It is also our goal to compare LGP with other sign languages, in particular Spanish Sign Language (LSE) and Brazilian Sign Language (LIBRAS).

In order to reach this goal, our paper is organized in the following way: in Section 2, we will make a general characterization of copular / predicative verbs in OL, with a special focus on the discussion about the categorial and semantic nature of the constituent that follows the verb; herein, we will also discuss the predicate or the argument nature of locative PPs when following the verbs *estar* and *ficar*. In Section 3 we will discuss predicative verbs in some Sign languages. In Section 4 we will present a brief analysis of these verbs in LGP, based on two preliminary studies and we will discuss their main results. In Section 5 we will present our main conclusions and, finally, in Section 6 the bibliographic references.

2. General characterization of predicative verbs in oral languages

2.1 Some theoretical approaches

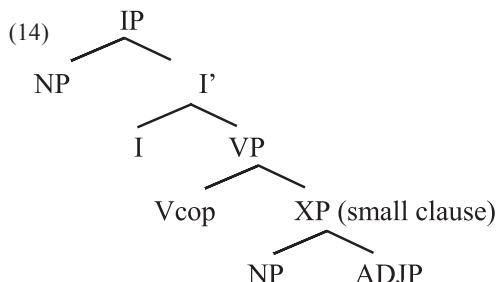
All grammarians and linguists agree that in OL there are sentences where the main predication assigned to a subject is made not by a verb but by nominals, adjectives, participles or prepositional phrases. Because of that, in languages which have predicative / copulative verbs like *to be*, *être*, *ser* / *estar*, it is commonly accepted that such verbs neither present categorial nor thematic properties similar to other verbs and that they express a meaning generally assumed to be aspectual.

Since Stowell (1981) it has been assumed that in the syntax of such constructions in OL, copulative / predicative verbs select a small clause, whose predicate is cate-

⁶ We will use the term 'Língua Gestual Portuguesa' because it was the one adopted by the Portuguese Deaf community and the Constitution of the Portuguese Republic. See also Amaral et al. (1994).

⁷ In Portuguese and Spanish, verbal participles like *O vaso está quebrado* 'The vase is broken' or *O homem está preocupado* 'The man is worried' are governed by the same semantic restriction as adjectives (mainly by the individual / stage-level distinction). Our study will mainly focus on adjectives, while nominal predication will be secondary, due to the small number of nominal predicates in our LGP data.

gorially diversified and establishes a relation of predication with the DP subject; the subject normally raises to the surface subject position, in (14) the specifier of IP, giving rise to an SVO pattern. See Duarte (2003) for Portuguese, for both *ser* and *estar*.



The same type of structure could be shared by OL with a null copula.

In both cases, this sort of approach raises many related questions: Are copulative verbs “synonymous”, and is the only difference between them the category of the predicates (NP, ADJP, PP, ADVP) beyond their lexical semantic meaning? Is there any syntactic property corresponding to the semantic properties that distinguish predicative verbs? How is the licensing of a predicative verb achieved, be it null or overt?

Different answers have been presented for these questions. In Generative Syntax, there has been a category solution: Costa (1998, p. 151), despite adopting the classical distinction between individual and stage-level predicates, argues for a different nature of the small clause depending on whether it is selected by *ser* or by *estar*: *estar* would select TP, *ser* just a small clause, without T:

- (15) Ser: - [_{SC}
 Estar: - [_{TP} [_{SC}

In recent studies within Principles and Parameters Theory or the Minimalist Program, the attempt has been to describe the difference between *ser* and *estar* in terms of syntactic features: Luján (1981); Fernandez Leboráns (1995); Zagona (2010); Gallego & Uriagereka (2009); Camacho (2012); Brucart (2012), for Spanish, offer accounts that adopt this line of reasoning⁸.

As we have no possibility of presenting all these proposals here, we will limit ourselves to briefly presenting the ones by Zagona and by Brucart for Spanish. We will thus share some of their ideas, specifically the idea that the alternation between *ser* and *estar*, generally assumed to be the effect of semantic factors – the individual/stage-level meanings of the predicates and the perfective/imperfective temporal

⁸ Luján (1981) proposes that *ser* selects a predicate with the [- perfective] feature and *estar* selects a predicate [+ perfective], in the sense that a [+perfective] predicate indicates “a delimited period of time whose beginning and end are both known or assumed or at least one of them is”. On the contrary, “[- perfective] holds for an unbounded period of time.” (p. 176, *apud* Camacho, 2012, p. 464). According to the author, these features are more related to lexical aspect than to situation aspect. For Fernandez Leboráns (1999), *estar* selects a transition to an ending state. Camacho (2012, p. 464), albeit agreeing with these authors on the idea that “the notion of event boundary is relevant for the distribution of *estar*”, argues that “*estar* selects for the beginning of a state”. He therefore proposes that it is the feature INCH [+inchoative] that distinguishes *estar* from *ser*.

properties of the predicates – may be the result of syntactic differences. For Zagona (2012)⁹ an uninterpretable feature, [*uP*], is responsible for the complements of *estar* (PPs and Aspect Phrases) and for the contexts in which the predicate is temporally delimited. According to her, *estar* always combines with a constituent that expresses some sort of location, whereas *ser* is the “elsewhere” or the unmarked copula. More specifically, *estar* selects an uninterpretable locative feature (a trace of a location feature associated with Latin *stare* ‘stand’, from which *estar* derives) that must be checked through a complement with certain aspectual properties, as shown in (16):

- (16) *estar* [v [*uP*]....] (Zagona, 2015, p. 305)

Zagona explicitly assumes that, in Spanish, it is the preposition *en* that licenses *estar*.

Brucart (2010, 2012) is inspired by Gallego & Uriagereka (2009), according to whom *estar* is the result of the combination of *ser* with an abstract preposition of terminal coincidence (i.e., *estar* = *ser* + *P_T*), and in this sense the approach is similar to Zagona’s. Analyzing the structure of the predicative domain, Brucart assumes den Dikken (2007)’s notion of attributive relation RP, the Relator Phrase, which is a linker that corresponds to the notion of small clause or PredP. Brucart goes further and argues that the predicative verb is merged above the small clause, in vP or AspP (as in Zagona, 2012). Bringing together all these influences, Brucart (2012) builds a unitary analysis of *ser* and *estar*, starting from the idea that these localization constructions denote an abstract path: while *estar* is the result of an interpretable feature of terminal coincidence (*R_T*), *ser* is the default, “elsewhere” or unmarked copula, characterized by a feature of central coincidence (*R_C*).

The following schemas represent this idea (Brucart, 2012, p. 18):

- (17) a) [_{vP} *estar* [_{RP} ... *R_T* ...]] (as in *A Maria está cansada*, ‘Mary is tired’)
 b) [_{vP} *ser* [_{RP} ... *R_C* ...]] (as in *A Maria é inteligente*, ‘Mary is intelligent’)

Because *estar* may combine with predicates that express a terminal coincidence feature, it may be employed in examples such as (18), (19) and (20); therefore, Brucart, contra Zagona, shows that the terminal coincidence feature is not necessarily related to the preposition *en* (Spanish)/ *em* (Portuguese):

- (18) A Maria esteve divertida.
 the Mary COP.3SG.PASS fun
 ‘Mary was [having] fun.’
- (19) A Maria esteve a estudar toda a tarde.
 the Mary COP.3SG.PASS to study all the afternoon
 ‘Mary was studying all afternoon.’

⁹ In a previous version of her study (Zagona, 2010), one of the ideas was that the distinction between *ser* and *estar* is the result of a syntactic process that gives rise to two *spell-outs* (*ser* and *estar*) of a functional and abstract verb SER. This idea is less present in later versions of the author’s research.

- (20) A manifestação está na praça.
 the manifestation COP.3SG.PRES in the square
 ‘The protest is in the square.’
 (in the sense that the protest is going on right now at the square)

Although these two analysis have differences, both authors coincide in the idea that *ser* is the unmarked copula, *estar* behaves as a fully predicative verb, and that *ser* and *estar* are different because they are licensed by different features of the predicates.

2.2 *Estar* and *ficar* with adjectives and with locative PPs: different verbs or the same predicative nature?

With these theoretical considerations as a framework, let us now try to answer the following question: Are *estar* and *ficar* the same verb or different verbs when followed by adjectives and when followed by locatives?

In literature three distinct answers have been presented: i) *estar* and *ficar* with locative spatial expressions are not copulative verbs but rather full lexical verbs that select arguments; ii) *estar* and *ficar* are both copulative verbs; iii) they have a double status (for a presentation see Rebouças, 2019).

We see that the answer to this question is strictly related to the argument / predicate nature of the locative PP that may follow *estar* and *ficar*.

There are reasons to believe that adjectives and locative PPs do, in fact, have a different nature (beyond the category status):

1 - Locative PPs co-occurring with *estar* cannot cliticize, contrarily to adjectives (cf. Camacho, 2012, p. 471, for Spanish, a situation that is similar to Portuguese); see the difference between (21), which is grammatical with the clitic “o” replacing an ADJP, versus (22), which is ungrammatical, because “o” is replacing a (locative) PP:

- (21) O cão está contente, mas o gato não o está.
 the dog COP.3SG.PRES glad but the cat not it_{cl} COP.3SG.PRES
 ‘The dog is glad, but the cat is not.’
- (22) ??/* O cão está na casa, mas o gato não o está.
 the dog COP.3SG.PRES at home, but the cat not it_{cl} COP.3SG.PRES

With *ficar* (‘stay/get’), the results of pronominalization / cliticization are similar with locative PPs and non-locatives: both the PP and the adjective predicate cannot cliticize through the pronoun “o”, as (23 a) and (23 b) illustrate, while a null predicate, as in (24), can appear in both contexts:

- (23) a) * O cão ficou contente, mas o gato não o ficou.
 the dog COP.3SG.PASS glad, but the cat not it_{cl} COP.3SG.PASS
- b) * O cão ficou em casa, mas o gato não o ficou.
 the dog COP.3SG.PASS at home, but the cat not it_{cl} COP.3SG.PASS

- (24) O cão ficou contente / em casa, mas o gato não ficou.
 the dog COP.3SG.PASS glad / at home, but the cat not COP.3SG.PASS
 ‘The dog was glad / at home, but the cat was not.’

That is, with *estar* an adjective behaves differently from a locative PP regarding pronominalization / cliticization, while with *ficar* both types of predicates behave in the same way.

2 - A locative PP can be deleted with *estar* in Portuguese, whereas a non-locative predicate cannot (cf. Camacho, 2012, p. 471, for Spanish):

- (25) O Pedro está em casa? / O Pedro está - ?
 the Peter COP.3SG.PRES at home? / the Peter is -
 ‘Is Peter at home? Is Peter -?’
- (26) O Pedro está cansado? / *O Pedro está - ?
 the Peter COP.3SG.PRES tired? / the Peter is - ?
 ‘Is Peter tired? / Is Peter - ?’

With *ficar* ‘stay’ the behavior is similar, perhaps more demanding than with *estar* in terms of contextual conditions and in terms of prosody:

- (27) O Pedro ficou em casa? / ?O Pedro ficou -? / O Pedro ficou..., não veio?
 the Peter COP.3SG.PASS at home? / the Peter stayed -? / Peter stayed..., not came?
 ‘Peter stayed at home? / Did Peter stay -? / Peter stayed..., did he not come?’
- (28) Pedro ficou cansado? / *O Pedro ficou - ?
 the Peter COP.3SG.PASS tired? / the Peter got- ?
 ‘Did Peter get tired? / Did Peter get- ?’

In English, as the translations and glosses show, the isolated use of *stay* with a null but recoverable locative is perhaps more acceptable than in Romance languages, because *stay* is not a predicative verb in this language, but rather a lexical verb.

At first sight, these differences seem to show that the nature of the relation between *estar* / *ficar* and a locative PP, on the one hand, and between *estar* / *ficar* and an adjective, on the other hand, might be different. For Spanish, Camacho (2012, p. 471) even proposes that a locative PP predicate relates to the V *estar* as an adjunct.

However, these behaviors – both the (im)possibility of cliticization and the (im)possibility of deletion – may be the result of different categories of the predicate and not the result of a different nature of *estar* or *ficar* when they are followed by an adjective or by a locative PP.

The related question is then the following: may a locative PP be a predicate or not? Brucart (2012, p. 13) shows that locative prepositional expressions may always be used as secondary predicates, as in the following examples:

- (29) Eu quero a Maria em casa às 11h.
 1SG want.1SG.PRES the Mary at home at the 11h
 ‘I want Mary at home by 11 p.m.’

- (30) Com a Maria *em casa*, começaremos a jantar.
with the Mary at home, begin. 1pl.fut to dinner
'With Mary at home, we will begin dinner.'
- (31) Através do Skype vejo a Maria *em casa*.
through the Skype, see. 1sg the Mary at home
'Through Skype, I am seeing Mary at home.'

The examples show that a locative PP is also a predicate in these three different contexts and, therefore, we will assume that the verbs *estar* and *ficar*, be they followed by adjectives or by locative PPs, are always predicative verbs in EP and in similar OL.

Of course, the two verbs are still characterized by some distinct properties: *estar* is a copula licensed by an interpretable feature of terminal coincidence, according to Brucart (2012), while *ficar* has a locative meaning when followed by a locative PP and a resultative meaning when followed by adjectives (Rebouças, 2019, among others).

One may also see the distributional parallelism between the examples (32a and b); (32c and d):

- (32) a) A Maria está cansada. (Raposo, 2013, p. 1330)
the Mary COP.3SG.PRES tired
'Mary is tired'
- b) A Maria ficou cansada. (Raposo, 2013, p. 1330)
the Mary COP.3SG.PASS tired
'Mary was (got) tired'
- c) O carro está no parque subterrâneo.
the car COP-3SG.PRES in the park underground
'The car is in the underground park.'
- d) O carro ficou no parque subterrâneo. (Duarte, 2003, p. 538)
the car COP-3SG.PASS in the park underground
'The car remained in the underground park.'

This parallelism justifies, therefore, a similar structure for examples such as (33c), where the feature R_T is expressed by the PP, in particular the preposition *em* (here contracted with the definite article "o") and its complement:

- (33) [_{vP} estar [_{RP} ... R_T ...]] (as in *O carro está no parque subterrâneo*
'The car is in the underground park.')

To sum up: in 2.1. we have seen that Portuguese and Spanish have two different predicative verbs, *ser* and *estar*, the former used with individual-level predicates, the latter used with stage-level predicates. Although there are different analysis, we have shared the view by Zagona and Brucart, who state that *ser* is the unmarked copula and that *ser* and *estar* are different because they are licensed by different features of the predicates.

Estar and *ficar* can also be followed by locative PPs. In 2.2. we have shown that, despite some syntactic differences between adjectives and locative PPs, in both cir-

cumstances these verbs have a predicative status, and locative PPs are always predicates, even in secondary predicate constructions.

With all this in mind, in the next paragraphs, we will study predicative verbs in sign languages and in LGP in particular, in order to verify whether these global conclusions may be maintained or whether predicative verbs with locatives behave differently than predicative verbs with adjectives and nominals in these manual-visual languages.

3. Previous studies on predicative verbs in sign languages

Predicative verbs in sign languages have received little attention in linguistic studies. Padden (1988, 1990), in his well-known typology of verbs, refers to spatial verbs, which do not carry person, number or aspect markers but accept locative affixes. These affixes are included in the syntactic space, since they represent the spatial Locus (e.g., pôr ‘put’, ir ‘go’, vir ‘come’). However, he does not relate this class with predicative verbs.

However, as we will see, some sign languages have locative markers associated to predicative verbs. Some questions are therefore justified:

- (i) Do sign languages present the same variety of expression of predicative verbs, similar to OL, as we have seen in the Introduction?
- (ii) To what extent are predicative verbs related to spatial verbs?
- (iii) Do sign languages express predicative verbs and, if yes, are they true copula verbs or are they similar to full verbs?

We will now present how some sign languages build predicative sentences, with nominals, adjectives and locatives.

American Sign Language (ASL) has a null copula, as in (34). Aarons (1994), building on Liddell (1980), analyzes several contexts of ellipsis, verbal deletion and null copula, and argues that the Non-Manual Marker (NMM) ‘hn’ (‘head nod’) is mandatory in contexts where a V was suppressed or in null copula constructions, as in (34).

- (34) _____^{hn}
JOHN DOCTOR
‘John is doctor.’

In ASL head nods have also been argued to be edge markers for signs, phrases, and sentences (Wilbur, 2000, p. 229). This is important because in this Sign language, traditionally assumed to have a null copula, some sort of Non-Manual Component characterizes predicative constructions.

Jantunen (2007) has studied equative sentences (identificational sentences) in Finnish Sign Language (FinSL), a type of sentence practically absent in our corpus of LGP. He studied different types of equative sentences that obey to a general form (NP) NP + (PI+) NP, where the first NP in parentheses constitutes an optional marked topic and PI is a mouth gesture that represents a semantically opaque and optional sign, an element of modal certainty that may be in a process of grammaticalization into a copula.

Important for our research is the fact that this sign may also be used in predicative non-equative sentences, like (35):

- (35) NAINEN PI KAUNIS
 woman PI beautiful
 ‘The woman is beautiful.’ (Jantunen, 2007, p. 21; *Suvi* 466/3)

According to Jantunen and regarding (35), the sign PI is best analyzed as underlining the signer’s personal certainty about the beauty of the woman.

Summarizing, in FinSL the sign PI used in equative sentences and in certain predicative sentences is considered a modal device, expressing certainty, and, according to Jantunen (2007), this sign may be in a process of grammaticalization into a copula. As we will see below, in Spanish Sign Language (LSE), a similar process seems to be occurring in predicative sentences with locatives.

For LSE, Herrero-Blanco & Salazar-García (2005, p. 288) show that there are different types of non-verbal predicative constructions, as they noticed that in examples like (36) there is null copula:

- (36) a) 3sg MY FRIEND¹⁰
 he/she my friend
 ‘{he /she} is my friend.’
 b) CAT ANIMAL
 cat animal
 ‘A cat is an animal.’

With the locative meaning, the same authors point out that there is no verb, but there is an (indirect) deictic sign with a locative non-referential value, which they represent by the gloss ‘THERE(i)’ (Herrero-Blanco & Salazar-García, 2005, p. 300), as in (37).

- (37) a) MY FRIEND ALICANTE THERE(i)
 my friend Alicante there
 ‘My friend is in Alicante.’
 b) CAR GARAGE THERE(i)
 car garage there
 ‘The car is the garage’
 c) MEETING OFFICE THERE(i)
 meeting office there
 ‘The meeting is in the office.’

This sign is realized with the index finger of the dominant hand performing a diagonal movement from the dominant to the non-dominant side, ending at a point away from the body (Herrero-Blanco & Salazar-García, 2005, p. 299). This indirect deixis sign, even without an identified referential function, must follow the predicate, not only with human entities, like MY FRIEND in (37a), but also with non-human entities, such as CAR in (37b), and even with events, as MEETING in (37c).

In all examples in (37), the indirect deixis sign THERE(i) behaves like a copula, it is semantically empty or at least redundant, and it does not co-occur with verbs that

¹⁰ We will maintain the examples, glosses and translations as in the original.

incorporate the semantic feature of locative, as *STAY*. Compare the grammaticality of (38a), which involves a sign that is a copula (with a similar behavior of the Spanish *estar*), with the ungrammaticality of (38b), where the sign *STAY*, a true verbal predicate, which is not semantically empty (with a continuative meaning close to *ficar*), cannot co-occur with *THERE(i)* (Herrero-Blanco & Salazar-García, 2005, p. 301).

- (38) a) MY FRIEND GARAGE THERE(i)
 my friend garage there
 ‘My friend is in the garage.’
 b) MY FRIEND GARAGE STAY *THERE(i)
 my friend garage stayed there

Such indirect deictic sign contrasts with the direct deictic sign, as in (39a, b), where no copula is realized, but where the deictic signs, due to the proximity or distance of the location, carry a true referential value and yield a strong visual effect.

- (39) a) MY BOOK HERE(d)
 my book here’
 ‘My book is here.’
 b) BOSS OFFICE THERE(d)
 boss office there
 ‘The boss’s office is there.’

To sum up, in nominal predicative sentences there is no copula in LSE, as in (36); in locative constructions, a sign of indirect deixis “*THERE(i)* has undergone a process of grammaticalization by which it has stopped being a deictic element to become a non-verbal predicativizing copula” (Herrero-Blanco & Salazar-García, 2005, p. 300).

In Brazilian Sign Language (LSB or LIBRAS), not only stage-level predicates but also individual-level predicates have null copula, as shown in (40), presented by Veloso (2008, p. 122).

- (40) a) MARIA PROFESSORA
 Mary teacher
 ‘Mary is a teacher.’
 b) HOJE MUITO QUENTE
 today very warm
 ‘Today is very warm.’
 c) LIVRO VELHO
 book old
 ‘The book is old.’

With locative predicates, the data is similar and the copula is null, as in (41) (Veloso, 2008, p. 123):

- (41) a) MULHER CASA
woman house
‘The woman is in the house.’
- b) livro MESA
book table
‘The book is on the table’

There is, however, some variation. Veloso assumes that for some deaf who received oral education “there is a verb normally translated as the [locative] *estar* (...) despite the argument that its use is not absolutely necessary” (Veloso, 2008, p. 124, our translation). This sign *ESTAR* is represented in Figure 1, originally presented in Quadros & Karnopp (2004, pp. 183,184), which shows this sign as used in (42), from data collected in Rio Grande do Sul.

- (42) MULHER ESTAR HOSPITAL¹¹
woman v hospital
‘The woman is in the hospital’



Figure 1: sign for *ESTAR*

(Source: Quadros & Karnopp, 2004, pp. 123, 124; reproduced by Veloso, 2008, p. 124.)

According to the same author, there is also another sign for *ESTAR*, presented in the dictionary by Lira & Souza (2006); however, this sign (reproduced in Figure 2) is also used with the meaning of *FICAR* and “the verb interpretation is more related to a permanent than to a transitional state.” (Veloso, 2008, p. 125, our translation).



Figure 2: sign for *ESTAR* with meaning of *FICAR*

(Source: Lira & Souza, 2006; reproduced by Veloso, 2008, p. 125.)

Finally, in *LIBRAS* there is also a verb that corresponds to *SER* used with an emphatic value: it could be used, for instance, in a context “where a deaf (A) asks to another deaf (B) to take a book from a bookshelf. B indicates several books and A produces *NO, NO, NO* as for several books. When B indicates the right book, A produces

¹¹ In the original: MULHER <BICICLETA CAIR> ESTAR HOSPITAL, ‘the woman who fell from her bike is in the hospital’, containing a relative clause. We have deleted this clause, because it is not relevant for our discussion.

the emphatic *SER*, which can be interpreted as ‘that’s the one’.” (Veloso, 2008, p. 125, our translation).

Summarizing: although there is some variation, data from LIBRAS shows a similarity between locative copulative sentences and non-locative copulative sentences, namely the use of null copula in both cases. That is, there is no sign for *SER* (but there may be a sign for an emphatic *SER*); there is no mandatory sign for *ESTAR*, but some deaf people may use the sign *ESTAR* with the meaning of *FICAR*.

4. Predicative verbs in Portuguese Sign Language

In order to analyze the (possible) use of predicative verbs in LGP, we have conducted two studies that will be presented in the following sections.

4.1. Study I

In this section we will present Study I, related to copulative sentences with *ESTAR* and *FICAR* in LGP, with locative and non-locative interpretation. In section 4.1.1. we will present the methodology and in section 4.1.2. we will describe the results.

4.1.1. Data and methodology

In Study I¹², we collected a sample composed of productions of four deaf informants and one hearing informant. In Table 1, the characteristics of the participants are presented.

Table 1 – Participants’ characteristics in study I

Participants	Age	Gender	Age of LGP acquisition	Degree of Hearing Loss	Profession
1	34	M	birth	Profound	LGP teacher
2	41	M	6 years	Profound	Factory employee
3	30	M	6 years	Profound	Unemployed
4	39	F	12 years	Moderately severe	Educational action assistant
5	34	F	15 years	----	LGP teacher

For the elicitation of the LGP productions, we presented some simple declarative sentences to the informants, written in Portuguese and serving as a visual verbal stimulus, like the ones presented in (43).

¹² Study I was already presented in a poster in the *I Meeting on LGP and other Sign languages*, November, 26-27, 2015, Porto (Choupina et al., 2015).

(43) Sentences-stimulus examples

- a) Os meus filhos estão na escola.
‘My children are in school.’
- b) Ontem, eu fiquei em casa.
‘Yesterday I stayed at home.’
- a) Eles ficaram em Lisboa.
‘They stayed in Lisbon.’
- b) O bebé está com medo.
‘The baby is afraid.’
- c) Hoje, a Joana está bonita.
‘Today Joana is beautiful.’
- d) O rapaz ficou em pânico.
‘The boy was (lit. stayed) in panic.’
- e) A senhora ficou pálida.
‘The lady was / got pale.’

The productions by the informants were recorded on video and transcribed into LGP glosses. Here we have the main results of our first experiment.

In total, 50 LGP productions were registered, 15 with locative meaning and 35 with predicative meaning (stage-level predicates, non-locative). Table 2 represents the distribution of the signs equivalent to Portuguese *estar* and *ficar*.

Table 2 - Productions in LGP in Study I

Verbs	Locative meaning	Predicative meaning (stage-level predicates)	Total
<i>Estar</i> in Portuguese	5	20	25
<i>Ficar</i> in Portuguese	10	15	25
Total	15	35	50

4.1.2. Results

A) Locative meaning: in sentences with *estar em* and *ficar em* with locative meaning, the signers used manual signs which may be interpreted as a verbal form, as indicated in (44).

- (44) a) FILHO POSS₁ DOIS ESCOLA ESTAR-EM¹³ (signer 3, study I)
 child my two school v-LOC
 ‘My two children are in school.’

¹³ /lala/ = mouthing (see figure 3).

- b) ESCOLA FILHO POSS₁ INDEX_x^{/lala/} ESTAR-EM (signer 1, study I)
 school son my INDEX.LOCI(X) V-LOC
 ‘My son is in school.’
- c) ONTEM CASA INDEX₁ FICAR-EM^{cll} CASA (signer 3, study I)
 yesterday home 1SG V-LOC home
 ‘Yesterday I stayed at home.’
- d) INDEX_{3pl} FICAR-EM^{cll} LISBOA (signer 3, study I)
 3pl V-LOC Lisbon
 ‘They stay in Lisbon.’

All the informants produced locative predicates in sentences like those in (44), although with different forms. For *ESTAR*, in (44a, b), two variants were observed: variant A (Figure 3) was used by 4 of the 5 participants. In this variant A, the signer uses just one hand with an ‘Open Hand’ handshape, oriented towards a non-specific Locus in space, with a repeated wiggling of his fingers. In variant B, the signer used both hands, palm oriented downwards and with a short movement, without repetition, followed by a suspension. In both variants, the sign is accompanied by a Non-Manual Marker (NMM), the mouthing /lala/ ‘there-there’ (Figure 3).

In the sentences with *FICAR* (44c and d), the LGP productions were quite homogeneous: 4 out of 5 signers used variant A with the “F” handshape (Figure 4), a configuration from the LGP manual alphabet, with an oblique movement followed by a suspension, towards a non-specific Locus in the syntactic space in front of the signer. The remaining signer produced the verb with an ‘Open Hand’ handshape, similar to the one used for *ESTAR*, but without repetition and without a NMM, as in variant B for *FICAR*.

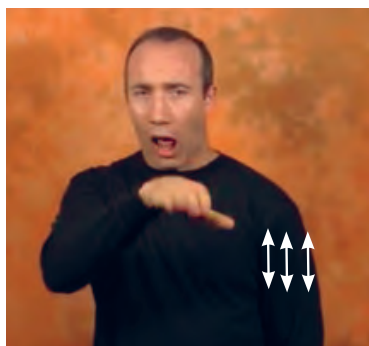


Figure 3 - Sign for *ESTAR* – Variant A (locative meaning) (Source: Spread the Sign, <https://www.spreadthesign.com/pt/>)

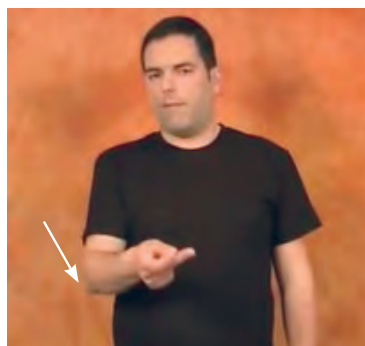


Figure 4 - Sign for *FICAR* – Variant A (locative meaning) (Source: Spread the Sign, <https://www.spreadthesign.com/pt/>)

Starting from these results, we can conclude that locative *ESTAR* and *FICAR* are distinct verbs in LGP. In the realization of the two verbs, we have noticed a difference in the expression of a NMM: i) with *ESTAR* a mouthing /lala/, ‘there-there’, is realized si-

¹⁴ cll = compressing the lower lip with the upper teeth (see Figure 4)

multaneously, with tongue vibration in the open mouth (Figure 3, above); ii) in *FICAR* the NMM consists of a compression of the lower lip by the upper teeth (Figure 4, above).

Four out of five participants realized these NMMs, which are specific of each verb. No signer used the verb *FICAR* when the sentence in Portuguese included *estar*, but one signer produced the verb *ESTAR* when the sentence written in Portuguese included *ficar*: for the stimulus sentence *Eles ficaram em Lisboa* ('They stayed in Lisbon'), signer 5 produced the verb *ESTAR* with the mouthing /lala/, 'there-there' (variant A).

B) Predicative meaning, with stage-level predicates (non-locative): in sentences with a stage-level predicate, there is a null copula: only the subject and the so-called subject predicate are signed, as in (45).

- (45) a) BEBÉ MEDO (signer 2, study I)
baby afraid
'The baby is afraid.'
- b) SENHOR^JOGO CANSADO (signer 5, study I)
player tired
'The player is tired.'
- c) J-O-A-N-A BONITA HOJE (signer 1, study I)
Joana beautiful today
'Today Joana is beautiful.'

We have noticed that in 20 productions, 85% had a null copula; however, three productions involved a verb form, similar to the aforementioned locative meaning of *ESTAR*. We present the results for the four stimulus sentences in Table 3.

Table 3 – Occurrences of *ESTAR* with stage-level predicates

Stimuli	Null copula	Locative <i>ESTAR</i> (variant A)	Locative <i>ESTAR</i> (variant B)
O bebé está com medo. 'The baby is afraid'	4 (80%)	1 (20%)	
O atleta está cansado. 'The player is tired'	4 (80%)	1 (20%)	
Hoje, a Joana está bonita. 'Today Joana is beautiful'	5 (100%)		
Ela ontem estava muito inteligente. 'Today she was very intelligent'.	4 (80%)		1 (20%)

Some sentences had a resultative meaning, with stage-level adjectives or nominals (those that would use *ficar* in EP or *get* in English); moreover, 60% of the productions had null copula, as in (46).

- (46) a) PÂNICO RAPAZ (signer 3, study I)
panic boy
'The boy panicked.'
- b) MULHER^SENHOR SUOR (signer 2, study I)
lady sweat
'The lady turned pale.'

For sentences with *ficar*¹⁵ in the Portuguese stimuli with a stage-level predicate, there was a total of 15 productions, 60% of which involved a null copula. In those sentences in which a verb was expressed, 26.6% included a variant of the locative (variant C, as described in footnote 16), distinct from the other forms expressed with a locative meaning in movement speed and frequency. The remaining 13.4% corresponds to two productions, expressed with the locative FICAR in variant B (Table 4).

Table 4 - Occurrences of FICAR with stage-level predicates

Stimuli	Null copula	Locative FICAR (variant C) ¹⁶	Locative FICAR (variant B)
O atleta ficou cansado. 'The player is tired'	2 (40%)	2 (40%)	1 (20%)
O rapaz ficou em pânico. 'The boy was (l. stayed) in panic'	3 (60%)	1 (20%)	1 (20%)
A senhora ficou pálida. 'The lady stayed / got pale'	4 (80%)	1 (20%)	

In Table 5, we present a summary of properties of the different variants found for ESTAR and FICAR.

Table 5 – Properties of the different variants found for ESTAR and FICAR

Parameters	ESTAR		FICAR		
	Variant A	Variant B	Variant A	Variant B	Variant C
articulators	One hand	both hands	One hand	One hand	both hands
handshape	“Open Hand”	“Open Hand”	“F”	“Open Hand”	“Open Hand”
movement	with repeated movement	short movement, without repetition	oblique movement followed by a suspension	without movement	with a short movement repeated twice, followed by suspension
orientation	tendentiously down	tendentiously down	for signer	tendentiously down	tendentiously down
Locality	non-specific	non-specific	non-specific	non-specific	non-specific
Non-Manual Market (NMM)	mouthings /lala/ 'there-there'	mouthings /lala/ 'there-there'	compressing the lower lip with the upper teeth	without NMM	without NMM

We acknowledge that the methodology used in the study is not ideal, because the stimuli used for LGP data elicitation were presented in written Portuguese, which may induce a negative transfer between the two languages. However, the fact that the stimuli included similar elements, but with signers producing signs associated with verbs in

¹⁵ The semantics of *ficar* is complex in EP; in this study only some of its values interest us (see Rebouças, 2019).

¹⁶ FICAR in variant C is realized as in variant B, with the difference that it involves a fast repetition of movement; the signer used both hands with a handshape in “Open Hand”, downward oriented, with a short movement repeated twice, followed by suspension. So, it is different from variant B of ESTAR, due to the absence of an NMM.

some conditions and not in others, already introduces a considerable difference between locative and non-locative productions.

Therefore, based on these first data produced by five signers in 2015, we could establish the following conclusions: i) for locative meaning, signers use an overt sign that can be spatially modified to target a locus in syntactic space; (ii) with non-locatives (even with change of state / resultative predicates), there is a tendency to use a null copula, although it isn't absolutely systematic (85% of the data).

Other studies are therefore justified, to build either from data that are not elicited by written Portuguese or from spontaneous signing.

4.2. Study II

In this section we will present Study II¹⁷, which focuses on copulative sentences with *ESTAR* and *FICAR*, with both locative and non-locative meaning, and with *SER* as well. In 4.2.1 we present the methodology and in section 4.2.2. we describe the results.

4.2.1. Data and methodology

We have conducted an LGP search in the *corpus* of the multilingual dictionary *Spread the Sign* (<https://www.spreadthesign.com/pt/>); in the category “sentences”, we searched for the Portuguese verbs *estar*, *ficar* and *ser* in inflected forms of the Simple Present and in the Simple Past, which gave us direct access to sentences in Portuguese and in LGP (in videos). For our analysis, we have assembled only simple and (mostly) declarative sentences.

In total, 88 LGP productions were collected, including six with locative meaning and 82 with predicative meaning: 25 stage-level predicates and 57 individual-level predicates (Table 5). From the productions with individual-level predicates, 29 occur with nominal predicates and 28 with adjectival predicates.

Table 5– Occurrences of LGP productions in Study II

Different values		Number of sentences	%
Locative meaning		6	6.8%
Stage-level predicates		25	28.4%
Individual-level predicates	nominal predicates	29	33%
	adjective predicates	28	31.8%
Total		88	100%

¹⁷ This study has already been presented at the XXXV National Meeting of the Portuguese Linguistics Association, Braga, October 2019, whose preliminary version was published by Morgado & Brito (2020).

4.2.2. Results

A) With a locative meaning: in the six sentences (6.8% of all analyzed sentences), a verb form corresponding to *ESTAR* was always expressed by way of a handshake “Open Hand” (Figure 3, repeated below as Figure 5), the same as variant A found in study I. It is preceded and / or followed by an *INDEX* with locative interpretation (*INDEX.LOCI*, also in (48)), with simultaneous realization of mouthing /lala/, meaning ‘there-there’, such as in the examples below (Figure 6)¹⁸.

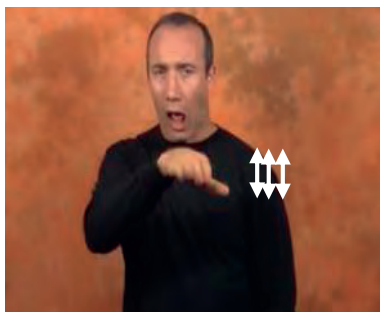


Figure 5: Sign for *ESTAR* (locative meaning)
(Source: Spread the Sign, <https://www.spreadthesign.com/pt/>)



Figure 6: *INDEX* with locative interpretation
(Source: Spread the Sign, <https://www.spreadthesign.com/pt/>)

The examples in (47) and (48) include *ESTAR* with locative meaning and the corresponding photos of the whole sentences illustrate the complexity of the productions:

- (47)
- | | | | | |
|--------------------|-------------------------|-------------------------------|----------|----------------------------|
| <u>/coca.colá/</u> | | | | <u>/lala/</u> |
| C-C | FRIO [^] ABRIR | <u>INDEX_x</u> | ESTAR-EM | <u>INDEX_x++</u> |
| coca-cola | cold.open | <i>INDEX.LOCI(x)</i> | V-LOC | <i>INDEX.LOCI(x)</i> |
| | | ‘Coca-Cola is in the fridge.’ | | |



/coca.colá/
C-C

FRIO[^]ABRIR

INDEX_x ESTAR-EM INDEX_x++

Figure 7: sentence (47) (Source: Spread the Sign, <https://www.spreadthesign.com/pt/>)

¹⁸ All the examples may be observed in the Dictionary *Spread the Sign*, <https://www.spreadthesign.com/pt/>.

- (48)
- | | | | | | | |
|-------------------------------|-----------|-------------------|----------|--------------------|----------|-----------------------|
| MULHER [^] | CASAMENTO | POSS ₁ | HOSPITAL | INDEX _x | ESTAR-EM | INDEX _y ++ |
| woman.wedding | | POSS.1SG | hospital | INDEX.LOCI(X) | V-LOC | INDEX.LOCI(Y) |
| ‘My wife is at the hospital.’ | | | | | | |



Figure 8: sentence (48) (Source: Spread the Sign, <https://www.spreadthesign.com/pt/>)

We see that the locative INDEX that precedes or follows the verb sign seems to act as a deictic sign with a non-referential locative value and may be modified according to the proximity of the Locus that the signer intends to point at in the syntactic space. In sum, the verb signs and this locative INDEX must spatially agree, i.e., they must target the same locus, which suggests a strong relation of selection, to which we will come back later in this study. Below, we summarize the properties that characterize (47) and (48) regarding the locative INDEX and the verb occurrences:

- (ii) During the realization of signs, the signer’s eye gaze points to an equivalent point in space (47) (see the blue arrows in Figure 7);
- (iii) The signer’s facing is directed to the same point as his eyes (47);
- (iv) The signer’s body leans slightly backwards, i.e., to the opposite side of the pointing (48);
- (v) A mouthing /lala/, ‘there+there’, is produced during the realization of signs corresponding to the locative INDEX and the verb occurrences (47 and 48).

FICAR with a locative meaning, whether spatially or temporally delimited, is also expressed as a manual sign, with the same signs that were found in the examples of Study I. This confirms the study’s main conclusions: when there is a locative meaning, the verb is realized in two variants, with handshape in “F” (Figure 9) or in “Open Hand” (Figure 10).

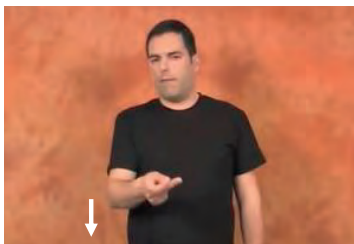


Figure 9: sign for FICAR (handshape in “F” with locative interpretation (Source: Spread the Sign, <https://www.spreadthesign.com/pt/>)

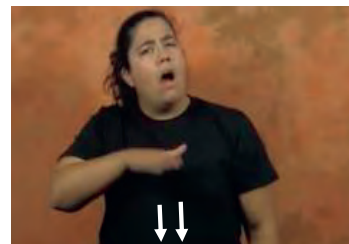


Figure 10: sign for FICAR (handshape in “open hand” with locative interpretation (Source: Spread the Sign, <https://www.spreadthesign.com/pt/>)

In this study there were no declarative sentences with *FICAR* with locative meaning, only interrogative and exclamative ones, and this is why they were not analyzed any further.

B) With stage-level predicative meaning (non-locative): out of 25 sentences, 24 included a null copula, 21 of which corresponded to *estar* (49) and 3 to *ficar* (50) in EP:

- (49) a) DOENTE
ill
'[I] am ill.'
- b) HOJE DIA LINDO
today day beautiful
'Today is a beautiful day.'
- c) ELEVADOR PRESO
lift stuck
'The lift is stuck.'
- d) COMIDA PALADAR PERFEITO
food taste perfect
'The food is delicious.'
- (50) CARRO BATER INDEX₃ FERIR
car strike [accident] 3SG injured
'He got/ was injured in a car accident.'

C) With individual-level predicates: out of 52 productions, 27 involve a null copula, 23 express the copula through a verb form, and 2 use an alternative form (Table 6).

Table 6 – Distribution of sentences according to the expression of the copula with individual-level predicates

Individual-level predicates	null copula	verb form	another	total
nominal predicates	11	17	1	29
adjectival predicates	16	6	1	23
total	27 (51.9%)	23 (44.3%)	2 (3.8%)	52 (100%)

With nominal predicates we have 40.7% of null copula; with adjectives, 59.3%. Examples of both types are presented below in (51) and (52), respectively.

- (51) a) GALLAUDET PRIMEIRO UNIVERSIDADE PESSOAS SURDO PRÓPRIO
Gallaudet first university people deaf own
'The Gallaudet University was the first university for deaf people.'
- b) INDEX₃ PADRE JÁ
3SG priest yet
'He was a priest.'

- (52) a) BEBÉ BONITO^ESTE
 baby nice this one
 ‘The baby is nice.’
- b) TIGRE ANIMAL PERIGO
 tiger animal dangerous
 ‘Tigers are dangerous animals.’

We see that when the predicate is an individual-level predicate, associated with what Brucart calls an abstract relation of central coincidence, there is no verb; so, there is a null copula.

The constructions with a verb form corresponding to SER (44.3%, 23 of 52) contain nominal predicates, with a sign corresponding to SOU (‘I am’) in circa 94% of the productions and NÃO-SOU (‘I am not’) in circa 6%. With adjectival predicates, the productions include the same signs (SOU / NÃO-SOU) in the same percentage (50%). We present the data in Table 7.

Table 7 – Distribution of the forms for individual-level predicates with *sou* and *não-sou*

Individual-level predicates	with sign SOU (‘I am’)	with sign NÃO-SOU (‘I am not’)	total
nominal predicates	16 (94.1%)	1 (5.9%)	17 (100%)
adjectival predicates	3 (50%)	3 (50%)	6 (100%)

Figures 11 and 12 display the signs for SOU and NÃO-SOU, as used in examples (53) and (54):



Figure 11: sign for *sou* (Source: <https://www.spreadthesign.com/pt/>)

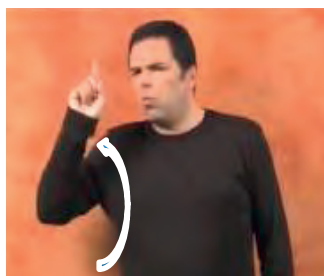


Figure 12: sign for *não-sou* (Source: <https://www.spreadthesign.com/pt/>)

- (53) ¹⁹
_{ht_cpl & ce}
 MÉDICO SOU
 doctor COP.1SG.PRES
 ‘[I] am doctor.’

- (54) _{ht_cpl & ce}
 a) SOLTEIRO SOU
 single COP.1SG.PRES
 ‘[I] am single.’

¹⁹ ht = head tilt; cpl = compressed and projected lips; ce = closed eyes.

- b) SURDO INDEX₁ N^{cop/ce}ÃO-SOU
 deaf 1SG not-COP.1SG.PRES
 ‘I am not deaf.’

In the examples, the realization of *SOU* / *NÃO-SOU* (‘I am / I am not’) is probably related to focus. We should also point out that it is the same signer who produces the copula corresponding to *SOU* in all examples, which might suggest that we are dealing with an individual variant or a sign in a grammaticalization process.

4.3. Discussion of the data

We have seen that, like some other sign languages, in particular ASL, FinSL, LSE and LIBRAS, LGP has a null copula in non-locative predicative sentences both with adjectival and nominal predicates, and either with individual or stage-level predicates.

In these circumstances, we could argue that LGP uses nominal sentences, with: i) juxtaposition of two terms without a verb (as in some OL, like Russian and Hungarian), as in (49a), *BEBÉ MEDO* (*baby afraid*, ‘The baby is afraid’), and ii) an inversion of the word order (as in Irish), as in (50a), *PÂNICO RAPAZ* (*panic boy*, ‘The boy panicked’).

However, other phenomena suggest that sentences in sign languages do have a VP in predicative and non-predicative contexts. How does one analyze them?

At first sight, Zagona’s and Brucart’s analysis are not adequate for sign languages, because their model starts from OL with prepositions and with the distinction of *ser* / *estar*. As a matter of fact, sign languages do not commonly employ (spatial) prepositions and in many contexts they have null copula, as we have seen before.

However, we have seen that Brucart develops a proposal according to which *estar* is, in general, related to a feature that codifies terminal coincidence and that does not need to be related to a preposition; and *ser*, considered the unmarked copula, is in fact related to an abstract preposition of central coincidence.

What we have seen is that in LGP the copulative verb is not expressed when it selects a non-locative predicate, not only when this predicate codifies a terminal coincidence feature, as in (55), but also when it codifies a central coincidence feature, as in (56). That is, in LGP in both contexts there is a null copula:

- (55) ... [_{VP} 0 [_{RP} ... R_T ...]] (FOR MARIA CANSADA)
 (56) ... [_{VP} 0 [_{RP} ... R_C ...]] (FOR MARIA INTELIGENTE)

In contrast, predicative sentences with a locative meaning contain verb forms *ESTAR* or *FICAR*, which correspond to the EP verbs “*estar*” and “*ficar*” and the syntax of these sentences seems much more complex. We will now summarize the main results for locatives.

ESTAR is expressed in our studies with two variants: i) variant A, which is the most frequent variant – one hand with handshape “Open Hand”, palm oriented downwards for a non-specific Locus, in suspension, but with a repeated wiggling of fingers, and accompanied by a NMM (found in both studies, Figures 3 and 5); and ii) variant B

– both hands with the same handshape, “Open Hand”, both oriented downwards for a non-specific Locus, in suspension, but with a short movement, without repetition, with NMM (first study).

The sign for FICAR is expressed in our studies with three variants: i) with handshape “F”, with an oblique movement followed by a suspension in a non-specific Locus in the syntactic space (found in both studies, Figure 4); ii) variant B – both hands with the same handshape, “Open Hand”, both oriented downwards towards a non-specific Locus (LOCI) in suspension, but with a short movement, without repetition and without NMM (first study); iii) variant C – similar to variant B, but with a short movement repeated twice with wrist flexion, without NMM (first study). Variants B and C of FICAR are similar to variant B of ESTAR but without an NMM.

A similar situation was found in LIBRAS. Remember that this language does not use copula in general; nevertheless, in two different studies, two signs for ESTAR were found, one of which was reinterpreted as FICAR (Veloso, 2008, p. 125, see Figure 2 in section 3.2. of this chapter).

Let us now analyze in more detail the nature of the sign that we have considered an INDEX ($INDEX_y$ or x / INDEX.LOCI). This sign does not co-occur with FICAR. Therefore (57b–d), which are three alternatives to (57a), are ungrammatical, according to the judgements of a Deaf signer that we have consulted in order to confirm the compatibility of these constituents:

- (57) a) ONTEM CASA INDEX₁ FICAR-EM CASA (signer 3, study I)
 yesterday home 1SG V-LOC home
 ‘Yesterday I stayed at home.’
- b) *ONTEM CASA INDEX₁ INDEX_x FICAR-EM CASA
 yesterday home 1SG INDEX.LOCI(x) V-LOC home
- c) *ONTEM CASA INDEX₁ FICAR-EM INDEX_x CASA
 yesterday home 1SG V-LOC INDEX.LOCI(x) home
- d) *ONTEM CASA INDEX₁ INDEX_{y,x} FICAR-EM INDEX_x CASA
 yesterday home 1SG INDEX.LOCI(x,y) V-LOC INDEX.LOCI(x) home

We conclude then that this locative INDEX in LGP behaves like the deictic sign with a non-referential locative value used in LSE, as identified by Herrero-Blanco & Salazar-García (2005), and which they call an indirect deictic ‘THERE(i)’: i) it is realized with the index finger of the dominant hand, in a diagonal movement from the ipsilateral to the contralateral side, ending at a point away from the body; ii) it does not encode any identified referential function; iii) it does not co-occur with FICAR-EM (‘stay’).

However, this locative INDEX ($INDEX_{y,x}$) presents us with some differences when compared with the sign ‘THERE(i)’ of LSE, in particular: i) it co-occurs with the verb; ii) it may be produced before the verb, after the verb and in both pre- and post-verbal positions; iii) the post-verbal INDEX is always repeated; iv) it is always produced with the mouthing /lala/, ‘there+there’.

These different options are summarized in (58):

- (58) a) $\frac{\text{ /lala/ }}{\text{NP V.LOC}}$
- b) $\frac{\text{ /lala/ }}{\text{NP INDEX}_x \text{ V}}$
- c) $\frac{\text{ /lala/ }}{\text{NP V.LOC INDEX}_x \text{ + +}}$
- d) $\frac{\text{ /lala/ }}{\text{NP INDEX}_x \text{ V.LOC INDEX}_x \text{ + +}}$
- e) $\frac{\text{ /lala/ }}{\text{NP INDEX}_x \text{ V.LOC INDEX}_y \text{ + +}}$

All alternatives express a VP containing a locative predicate in LGP. But the multiplicity of the above forms suggests that the Vs considered until now as copulatives with locatives in LGP are in fact closer to full verbs than to true copulas. Specifically, they seem close to spatial verbs according to Padden’s classification (1988, 1990). It should be noted that spatial verbs not only use the visual modality but also contain locative affixes that may interpreted as the Locus in the syntactic space.

In predicative constructions with locatives, the correspondent to affixes of spatial verbs is incorporated in the verb and also in the locative INDEX. If this assumption goes in the right direction, then in LGP the relation between the verb and the locative predicate is not simply the agreement / selection between a copula and its RP (Relator Phrase) but seems closer to the agreement / selection between a full verb and its argument.

Also, we suggest that the low structure of the VP is hierarchical, complex and subject to movements²⁰: if only the V moves and the locative INDEX is covert, we obtain (58a); if the locative INDEX is projected, it may remain *in situ* with or without verb movement, as in (58b) and (58c), respectively; finally, the V may also move by copy, yielding the structures in (58d) and (58e). The possibility of an NMM (/lala/, ‘there+there’) must be considered herein. As for (58d) and (58e), it seems possible to defend the existence of a movement by copy as a way to explain the position of the V and the doubling / non doubling of the INDEX. We leave this for future research.

As for FICAR: in LGP some productions with locatives and with this verb were produced in two variants (B and C). These realizations, with the meaning of FICAR (‘stay’) but very similar to the ones with ESTAR (the only difference is the non-realization of the mouthing /lala/), seem to be justified by the influence of written Portuguese within the stimulus sentences, because these variants were not found in non-locative constructions.

5. Conclusions

In this chapter we have studied predicative sentences in some OL and in some SL. In OL, there is great variation in the expression of predicative sentences: copulative verbs; null copula; nominal constructions with null copula and inversion; use of particles, including modal particles. The variety of these productions justified distinct

²⁰ As word order is not the main focus of this text, we will not discuss the position of the NP_{LOC} to the left of the V.

theoretical treatments, including the idea of nominal constructions. However, according to Generative Syntax, there is always a verbal syntax, with an agreement between features of the verb and those of the RP (Relator Phrase, the so called “small clause”).

In EP, as well as in Spanish, there are distinct predicative verbs (*ser*, *estar*, *ficar* and others): *ser* is the unmarked copula, used with individual-level predicates, *estar* is used with stage-level predicates, both adjectival and locative PPs. While most of this alternation is described in semantic terms, we have considered two syntactic treatments of *ser* and *estar*. Zagona (2012) argues that an uninterpretable feature, related to some kind of location, is responsible for the complements of *estar* and for the contexts in which the predicate is temporally delimited.

Brucart (2012) builds a unitary analysis of *ser* and *estar*, starting from the idea that *estar* is the result of an interpretable feature of terminal coincidence (R_T) and that *ser* is the default, “elsewhere” or unmarked copula, characterized by a feature of central coincidence (R_C).

Having described the general uses of *ser* and *estar* in Portuguese and Spanish, we have compared these two OL with sign languages, in particular ASL, FinSL, LSE and LIBRAS.

In sign languages, we could also think about the existence of nominal sentences. However, across sign languages, there is also variation in the expression of locative and non-locative predicative sentences. In non-locative constructions, we find: (i) null copula with juxtaposition of terms in a canonic order; (ii) null copula with inversion of the two terms; (iii) use of specific particles (P_I for non-locative sentences in FinSL); (iv) use of NMM (head nod in ASL). In locative constructions, the following options are observed: (i) null copula with juxtaposition of terms in LIBRAS) (note, however, two signs for *ESTAR*, one with a more permanent meaning, another one more transitional and close to the meaning of *FICAR*); (ii) in LSE there is an indirect deictic sign ‘THERE(i)’, with a non-referential locative value, that is associated to a copula.

As for LGP, we can now summarize the main conclusions of the analysis of predicative constructions:

- (i) with stage-level predicates, non-locative, we have confirmed the null copula (corresponding to the EP copulas *estar* and *ficar*);
- (ii) with individual-level predicates (corresponding to *ser* in EP), with nominal predicates or adjectival predicates, there is also a null copula, except for two cases: *SOU* (‘I am’) and *NÃO-SOU* (‘I am not’);
- (iii) with locative meaning, there is the expression of a verb form corresponding to *ESTAR-EM*, with handshape “Open Hand” with the simultaneous realization of mouthing /lala/ (‘there+there’). The same form was found in two studies, sometimes preceded and followed by a locative *INDEX*, besides the *NMM*;
- (iv) there is also the expression of a verb form correspondent to *FICAR-EM*, with a locative meaning, with handshape “F”; the same form was found in both studies.

In order to analyze the variety of locative predicative constructions in LGP, we presented the hypothesis that copulative verbs may be close to full verbs, specifically to spatial verbs, in the classification by Padden (1988, 1990), and that the variety of productions may be due to a complex VP structure.

6. References

- Amaral, M. A., Coutinho, A., & Delgado-Martins, M. R. (1994). *Para uma Gramática da Língua Gestual Portuguesa*, Lisboa: Caminho.
- Benveniste, É. (1966). La phrase nominale. In Benveniste, Émile (ed.). *Problèmes de Linguistique Générale*, pp. 151-167, Paris: Gallimard.
- Brucart, J. M. (2010). La alternancia *ser/estar* y las construcciones atributivas de localización. In A. Avellana (Ed.). *Actas del V Encuentro de Gramática Generativa*, pp. 115-152, Neuquén: Editorial Universitaria del Comahue.
- Brucart, J. M. (2012). Copular alternation in Spanish and Catalan attributive sentences. *Linguística: Revista da Universidade do Porto*. Vol. 7, pp. 9 – 43.
- Carlson, G. (1977). *Reference to Kinds*, PhD. Mass. Amherst.
- Camacho, J. (2012). *Ser and estar*: the individual / stage-level distinction and aspectual predication. In Hualde, J. I. et al (eds.) *The Handbook of Hispanic Linguistics*, pp. 453-476, Oxford: Wiley-Blackwell.
- Choupina, C. et al. (2015). ESTAR e FICAR na Língua Gestual Portuguesa: entre verbos copulativos e verbos principais. In *Las Jornadas de Morfosintaxe da LGP e de outras Línguas de Sinais. Livro de resumos*, pp. 26-27 November 2015, Porto: FLUP and ESE. Poster.
- Costa, J. (1998). L'opposition *ser / estar* en Portugais. In Rouveret, A. (ed.). *Être et avoir. Syntaxe, Sémantique, Typologie*, pp. 139-153, Paris: P.U.V.
- Cunha, L. F (2013). Aspeto. In Raposo, E., Bacelar do Nascimento, M., Coelho da Mota, M. A., Segura, L., & Mendes, A. (eds.). *Gramática do Português*, Vol. 1, Cap. 17, pp. 585-619, Lisboa: Fundação Calouste Gulbenkian.
- den Dikken, M. (2007). Specificational Copular Sentences and Pseudoclefts. In M. Everaert & H. C. Van Riemsdijk (eds.). *The Blackwell Companion to Syntax, 2nd edition*, pp. 292 – 409.
- Duarte, I. (2003). Frases copulativas. In Mateus, M. H. et al. (2003). *Gramática da Língua Portuguesa*. Cap. 13.4, pp. 538-548, Lisboa: Caminho.
- Fernández Leboráns, M. (1995). Las construcciones com el verbo *estar*: aspetos sintácticos y semánticos. *Verba* 22, pp. 253-284.
- Gallego, A., & Uriagereka, J. (2009) *Estar=ser+P*. Paper presented at the 9th Colloquium of Generative Grammar. Victoria (available at <http://webs2002.uab.es/ggt/membres/professors/gallego/pdf>).
- Herrero-Blanco, Á., & Salazar-García, V. (2005). Non-verbal predicability and copula support rule in Spanish Sign Language. In C. de Groot & K. Hengeveld (eds.), *Morphosyntactic Expression in Functional Grammar*, pp. 281-315. Berlin & New York: Mouton de Gruyter.

- Irslinger, B. (2015). The Copulas *Is* and *Tú* in Modern Irish, available at: <http://www.rosenlake.net/er/irish/Irslinger-copula.html>
- Jantunen, T. (2007). The equative sentence in FinSL. *Sign Language & Linguistics* 10:2, pp. 113–143 (available at <https://www.quora.com/Is-there-any-natural-language-that-lacks-a-copula>).
- Kratzer, A. (1989). Stage-level and individual-level predicates. *Papers on quantification*, Un. Of Mass. Amherst.
- Luján, M. (1981). The Spanish copulas as aspectual indicators. *Lingua*, 54, 165-210.
- Milsark, G. (1977). Towards an explanation of certain peculiarities of the existential construction in English. *Linguistic Analysis* 3, pp. 1–29.
- Padden, C. A. (1988). *Interaction of Morphology and Syntax in American Sign Language*. New York: Garland Publishing.
- Padden, C. (1990). The relation between space and grammar in ASL verb morphology. In Lucas, C. (ed.), *Sign Language Research – Theoretical Issues*, pp. 118-132, Washington, DC: Gallaudet University Press.
- Quadros, R., & Quer, J. (2006). Revertendo os verbos reversos e seguindo em frente: sobre concordância, auxiliares e classes verbais em línguas de sinais. In R. M. Quadros & M. L. B Vasconcellos (Orgs.). *Questões Teóricas das Pesquisas em Línguas de Sinais*, pp. 65- 81, Florianópolis/Brasil: Arara Azul.
- Raposo, E. P. (2013). Orações copulativas e predicções secundárias. In E. P. Raposo et al. (Orgs.), *Gramática do Português*, pp.1285-1356, Lisboa: FCG.
- Rouveret, A. (1998). Points de vue sur le verbe “être”. In Rouveret, A. (ed.) “Être” et “avoir”. *Syntaxe, Sémantique, Typologie*, pp. 11-65, Paris: PUV.
- Stassen, L. (2013). Zero Copula for Predicate Nominals. In Dryer, Matthew S. & Haspelmath, Martin (eds.) *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology (available online at <http://wals.info/chapter/120>).
- Stowell, T. (1981). *Origins of Phrase Structure*, PhD Diss., MIT.
- Veloso, B. S. (2008). *Construções localizadoras e verbos de deslocamento, existência e localização na Língua de Sinais Brasileira*, Tese de Doutorado em Linguística apresentada à Universidade Estadual de Campinas.
- Zagona, K. (2012). *Ser* and *estar*: phrase structure and aspect. In Chiyo Nishida & Cinzia Russi (eds.). *Cahiers Chronos*, pp. 303-327, Amsterdam: Rodopi.