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# Locative Inversion and Stage Topics: A Cross-Linguistic Study

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This paper seeks to identify the conditions which a clause-initial X phrase (XP) must satisfy to license locative inversion. Three SVO (subject-verb-object) languages with distinct degrees of word order flexibility are considered: English, French and European Portuguese (EP). We show that these languages only permit locative inversion with preposed XPs which are stage topics (sTOPs), i.e. presupposed XPs that define a (spatio-temporal) location. We further show that being a sTOP is both a necessary and sufficient condition for an XP to license this type of inversion. In addition to the structures typically classified as locative inversion, cases of “absolute inversion” in French, “free” inversion in sentence-focus contexts in EP, and inversion structures with preposed participial and adjectival phrases in English and French are argued to be licensed by (c)overt sTOPs and, thus, constitute forms of (covert) locative inversion. We conclude that there is a strong correlation between sTOPs and subject-verb inversion cross-linguistically.

**Keywords:** locative inversion, stage topic, English, European Portuguese, French

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*Cet article vise à identifier les conditions qu'un syntagme X (SX) en position initiale de phrase doit satisfaire pour être capable de légitimer l'inversion locative. Nous analysons trois langues SVO (sujet-verbe-objet) qui ont différents degrés de flexibilité au niveau de l'ordre des mots: l'anglais, le français et le portugais européen (PE). Nous montrons que ces langues permettent l'inversion locative exclusivement avec des SX antéposés qui sont interprétés comme des topiques scéniques (TOPs), i. e. des SX présupposés qui spécifient une localisation (spatio-temporelle). Nous montrons aussi qu'être un TOPs est une condition non seulement nécessaire, mais aussi suffisante pour qu'un SX puisse légitimer l'inversion. Nous défendons l'idée que, au-delà des structures classées comme inversions locatives, certains cas d'inversion absolue en français, l'inversion « libre » en contexte de focus large en PE et les structures d'inversion avec des syntagmes participiaux ou adjectivaux en anglais et en français, sont légitimés par un TOPs (explicite ou implicite) et constituent, ainsi, des formes d'inversion locative. Nous concluons qu'il y a une forte corrélation entre TOPs et inversion sujet-verbe interlinguistiquement.*

**Mots clés:** inversion locative, topique scénique, anglais, portugais européen, français

## 1. Introduction

- 1 Languages with distinct degrees of word order flexibility, such as European Portuguese (EP), English and French, have one property in common: they admit so-called “locative inversion” (LI), which is a type of subject-verb inversion where the subject occurs postverbally, while a locative X phrase (XP), typically a prepositional phrase (PP), is preposed, as in [1].

- [1a] Na floresta vivia uma família de ursos. (*EP*<sup>1</sup>)  
 [1b] Dans la forêt habitait une famille d'ours. (*French*)  
 [1c] In the forest lived a family of bears. (*English*)

- 2 Over the last decades, research into LI has generally focused on the properties of the verbs and subjects compatible with this word order. A large number of studies have consistently shown that the subject of LIs is required to be (part of) the focus (cf., e.g., Bresnan, 1994, for English and Chichêwa; Culicover & Winkler, 2008, for English; Cornish, 2001 and 2005, for French; Sheehan, 2007, for EP, Spanish and Italian), and that the (sub)classes of verbs permitted in this type of inversion vary across languages. For example, in EP, all classes of intransitive verbs admit LI (examples [1a], [2a] and [3a-b]) (cf. Pereira, 1998). In contrast, in English and French, this word order is only allowed with unaccusative verbs of existence and appearance (examples [1b-c] and [2b-c]) and, in certain cases, with unergative verbs (see [3c-f]) (cf. Levin & Rappaport Hovav, 1995; Cornish, 2001 and 2005). Since researchers have given little attention to the properties of the XPs which occupy the preverbal position of LI structures, the following question remains unanswered: what properties must a clause-initial XP have to license LI? This is the question which the present study aims to answer.

- [2a] Na cozinha partiu-se um copo.  
 [2b] \*Dans la cuisine s'est brisé un verre.  
 [2c] \*In the kitchen broke a glass.
- [3a] No aquário nadavam muitos peixes coloridos.  
 [3b] Junto à nossa mesa vomitou um jovem rapaz.  
 [3c] Dans l'aquarium nageaient des poissons colorés.  
 [3d] \*À côté de notre table a vomi un jeune homme.  
 [3e] In the aquarium swam many colourful fish.  
 [3f] \*Near our table vomited a young man.

- 3 In the literature, it is possible to identify two competing perspectives on this issue. According to a purely syntactic perspective, followed by Bresnan (1994), Coopmans (1989), Sheehan (2007), among many others, the preverbal XPs that license LI are locative arguments of the verb. According to an alternative perspective, the key to understanding the properties of these XPs lies in the discourse domain, rather than in narrow syntax. Some authors, most notably Birner and colleagues (e.g., Birner, 1994 and 1996; Birner & Ward, 1998; Ward *et al.*, 2002), have advocated

1. For reasons of space, in this article, we do not provide glosses for sentences in EP whenever the sentences presented immediately after are appropriate French and English translations. This is why sentence [1a] is not glossed.

that the preverbal XPs which are found in (English) LI correspond to information that is at least as familiar in discourse as that conveyed by the postverbal subject. Other authors, in contrast, have suggested that these XPs are topics (e.g., Stowell, 1981; Rizzi & Shlonsky, 2006). Recently, a new proposal has been put forth by Lahousse (2003 and 2011) to account for the properties of preverbal XPs in French LI. According to her, they are stage topics (sTOPs).

- 4 With a view to contributing to this debate, the present study investigates the properties of the preverbal XPs that allow LI across languages with distinct degrees of word order flexibility. Three languages are considered in the study: (i) EP, a language where subject-verb inversion is very productive and occurs quite freely (cf. Costa, 1998 and 2004); (ii) French, a language which permits subject-verb inversion in a limited number of contexts, such as LI, *wh*-questions and some adverbial clauses (cf. Riegel *et al.*, 1994; Jones, 1996; Lahousse, 2003 and 2011; Fuchs, 2006; Marandin, 2011, for a complete list); and (iii) English, a language which has a more rigid word order than French, and allows subject-verb inversion almost exclusively in LI and *there*-constructions (cf. Culicover & Winkler, 2008; Ward *et al.*, 2002). The relation between these languages with respect to word order flexibility can hence be schematically expressed in the following way:

[4] FLEXIBLE EP > French > English RIGID

- 5 Building on Lahousse's (2003 and 2011) work, in this study, we argue that the XPs which occupy the preverbal position of LI constructions are sTOPs not only in French, but also in English and EP. Moreover, we contend that being a sTOP is both a necessary and sufficient condition for a preposed XP to license LI. However, our study shows that the types of sTOPs found in this structure vary across the three languages under analysis. We claim that this is because of factors pertaining to morphosyntax, rather than discourse.

- 6 The article is organized as follows: section 2 defines the concept of sTOP, which is central to our analysis. In section 3, we present various pieces of empirical evidence in favor of the claim that preverbal XPs are required to be sTOPs to license LI in English, French and EP. Furthermore, we show that none of the other proposals put forth in the literature can account for all the data presented. Section 4 proposes potential morphosyntactic explanations for the cross-linguistic differences found. Finally, the main conclusions of the study are presented in section 5.

## 2. What is a stage topic?

- 7 The notion of sTOP was proposed by Erteschik-Shir (1997, 1999 and 2007), on the basis of earlier work by Kratzer (1989) on spatio-temporal arguments. According to Erteschik-Shir, a sTOP is a type of topic which defines a spatial and/or temporal location. She argues that sTOPs are not admitted by all types of predicates. Assuming with Kratzer (1989) that predicates fall into two classes – those that express temporary

properties and events (stage-level predicates), and those that express more permanent properties and characteristics (individual-level predicates) –, the author claims that only the former can take sTOPs<sup>2</sup>. Nevertheless, this view is challenged by examples such as [5], which prove that prototypical individual-level predicates, such as “to love” and “to hate”, are also compatible with sTOPs.

[5] Last year, John read a book by Chomsky. Since then, he loves/hates linguistics.  
(Adapted from Lahousse, 2003: 130)

- 8 In order to draw a clear line between what is and is not a sTOP, one must briefly examine a question which has generated a great deal of debate among researchers: what is a topic? In the extensive literature on information structure, there are various definitions for this concept, but no general consensus about which one is the most precise (see, e.g., Gundel & Fretheim, 2004, and Barbosa, 2005, for an overview of the literature). Frequently, topic is taken to be the part of the sentence which conveys discourse-old information (i.e., information explicitly introduced in or inferentially linked to prior discourse<sup>3</sup>), because it is assumed that the notions of “topic” and “focus” are grounded, to some extent, in the discourse notions of “old” and “new” information. However, there is not always a one-to-one correspondence between these notions. Consider the following example:

[6] I can't find broccoli anywhere. [<sub>TOP</sub> Crack] they sell at every corner, but broccoli it's like they don't grow it anymore.  
(Vallduví, 1990: 25)

- 9 Here the topicalized noun phrase (NP) “crack”, though a topic, does not represent old information. Rather, it represents discourse-new information, since it is neither introduced in nor inferentially linked to the prior discourse. This example demonstrates that, as some authors (e.g., Reinhart, 1981; Vallduví, 1990, among others) argue, encoding old information is not a necessary condition for

2. A number of grammatical phenomena have been shown to be sensitive to the stage-level/individual-level distinction (cf. Kratzer, 1989). For instance, it has been shown that only stage-level predicates can appear within small clause complements of perception verbs:

[i1] I saw Peter drunk / I saw Peter kiss Jen.  
[i2] ??I saw Peter intelligent / ??I saw Peter hate Mary.

3. In line with previous work by Birner and Ward (Birner & Ward, 1998; Ward *et al.*, 2002), we assume that the information which is linked to prior discourse through such inferential relations as part/whole, type/subtype and possession, for example, is discourse-old. Consider the following example from Ward *et al.* (2002: 1368):

[ii] I tried to get into the library after hours, but the **door** was locked.

In [ii], there is a part-whole relationship between the door and the library. Consequently, it can be inferred that “the door” refers to the door of the library. Since the latter is mentioned in prior discourse, in [ii], “the door” has the status of discourse-old information. In brief, as argued by Ward *et al.* (2002), the elements that stand in some salient and relevant relationship to elements that have been mentioned in prior discourse should be considered discourse-old, rather than new.



a constituent to be topic<sup>4</sup>. Consequently, it is not adequate to define topic and focus in relation to the notions of old and new information.

10 Following Chomsky (1971 and 1976), Jackendoff (1972) and Zubizarreta (1998), among others, in the present study, we assume that the notions of focus and topic are best defined in relation to the discourse notion of presupposition, which we take to be “the set of propositions lexicogrammatically evoked in a sentence which the speaker assumes the hearer already knows or *is ready to take for granted* at the time the sentence is uttered” (Lambrecht, 1994: 52; emphasis added). In other words, a presupposed constituent conveys information that is taken for granted, but not necessarily discourse-old. On the basis of this notion, the distinction between focus and topic is generally made in the following way: the focus is defined as the non-presupposed part of the sentence, whereas the topic is taken to be a constituent which is part of the presupposition associated with the sentence.

11 In the light of this view of the topic-focus distinction, sTOPs can be defined in more precise terms as constituents that are presupposed (i.e., they convey information that the addressee either knows, by virtue of its discourse-old status, or is ready to take for granted) and define a spatio-temporal location. From this definition it follows that a temporal PP such as “in 1945” has a different discourse status in the question-answer pairs [7a] and [7b].

[7a] A: When did the Second World War end? B: The Second World War ended in 1945.

Presupposition: “The Second World War ended in date x”; Assertion: “that date x = in 1945”

[7b] A: What happened in 1945? B: In 1945 the Second World War ended.

Presupposition: “event x happened in 1945”; Assertion: “that event x = the Second World War ended”

12 In [7a], the temporal PP “in 1945” is the focus, since it corresponds to the non-presupposed part of the sentence, i.e. the assertion<sup>5</sup>. In contrast, in [7b], the same PP is a sTOP, because it is part of the presupposition associated with the sentence and specifies the temporal location of the event.

13 According to Erteschik-Shir (1997, 1999 and 2007), sTOPs can be not only overt, as in [7b], but also covert, as in the example below:

[8] A: What’s going on? B: It’s raining. [sTOP = here and now]

4. It should be noted that topics are typically discourse-old due to independent reasons related to discourse cohesion (see Reinhart, 1981).

5. Underlying this claim is the assumption that, in a question-answer pair, the constituent under assertion in the answer replaces the *wh*-word in the question. Conversely, the constituents that do not replace the *wh*-word are part of the presupposition (see, e.g., Zubizarreta, 1998).

14 Here the assertion “it’s raining” is made in relation to a spatio-temporal location which is taken for granted by the addressee, even though it is not explicitly mentioned in the discourse: the here and now of the speaker. For this reason, Erteschik-Shir postulates that there is a covert sTOP in sentences like [8].

15 That this type of topic is necessarily associated with [8] is suggested by three pieces of evidence. First, when uttered in an out-of-the-blue context like the one in [8], the sentence “it’s raining” is synonymous with [9], but, crucially, not with a sentence whose location is indeterminate, like [10].

[9] It’s raining here now.

[10] It’s raining somewhere now.

16 Second, this sentence can only be understood as not referring to the here-and-now of the speaker when an overt locative is present, as in [11], or when the sentence is embedded in a discourse context which induces a non-deictic interpretation, as in [12]. Note that, in the latter case, there is an implicit location which is recoverable from the previous linguistic context.

[11] (A speaker in Lisbon says:) It’s raining in Edinburgh.

[12] They have just arrived in Edinburgh and it’s raining. [sTOP = in Edinburgh, now]

17 Third, the truth value of [8] can be challenged by a sentence like [13]. Assuming that one can only deny something that is effectively part of the interpretation of a sentence, this fact provides robust evidence in favor of the claim that sentence [8] does have a covert sTOP, which is interpreted as the here-and-now of the speaker.

[13] No, it’s not raining here right now (but it rained this morning/it’s raining in my village).

18 On the basis of these pieces of evidence, it can be concluded that covert sTOPs do exist. In line with previous work by Lahousse (2003, 2007 and 2011), we consider that covert sTOPs can be subdivided into two types, which we label “deictic sTOPs” and “anaphoric sTOPs”. The former are interpreted as referring to the spatio-temporal location of the speaker, as in the case of [8]. The latter, on the other hand, are interpreted in relation to the spatio-temporal parameters of the preceding linguistic context. This is what happens in [14]:

[14] We arrived in Edinburgh this morning. It was raining. [sTOP = in Edinburgh, at the moment of the speaker’s arrival]

19 In brief, for a (c)overl constituent to be a sTOP, it has to meet two requirements: (i) be part of the presupposition associated with the sentence, and (ii) specify a location. As shown above, there are three types of sTOPs: (i) overt, (ii) covert anaphoric, and (iii) covert deictic sTOPs.

### 3. Stage topics and locative inversion in English, French and EP

20 Traditionally, it is assumed that the XPs admitted in the preverbal position of LI are locative arguments of the verb (cf. Bresnan, 1994; Coopmans, 1989; Sheehan, 2007; among others). Nonetheless, this account is disconfirmed by sentences like [15], where the preverbal constituents are adjuncts of the verb and yet allow LI.

[15a] Precisely at nine o'clock came the Princess in the carriage with four horses.  
(A. Lang, *The Blue Mountains*, London, Sovereign Classic, 2014, p. 11)

[15b] Plus tard sont arrivés des gens de divers groupes hema “dans le graben du lac et sur la crête”.  
(E. Thiry, *Une introduction à l'ethnohistoire des Hema du Nord (Congo du Nord-Est)*, Tervuren, Musée royal de l'Afrique centrale, 2004, p. 62)

[15c] Ao fundo do quintal ladravam os cães da Dona Maria.  
Lit.<sup>6</sup> ‘at the back of the backyard barked the dogs of Mrs Maria’

21 In the face of this evidence, we are left with the following question: what precise properties must a clause-initial XP have to be able to license LI? In the present section, we argue that the answer to this question can be found in the discourse domain. More specifically, building on Lahousse's (2003, 2007 and 2011) work on French inversion, we consider that a clause-initial XP must be a sTOP to license LI, and further, that this requirement applies not only to French, but also to other languages, such as English and EP.

22 Our hypothesis makes two testable predictions. On the one hand, it predicts that, in EP, English and French, the XPs in preverbal position must be presupposed, but not necessarily discourse-old, for LI to be felicitous. On the other hand, it predicts that not all the presupposed topic XPs allow LI; only sTOPs do. Both predictions will be examined in detail below.

#### 3.1. Examining prediction 1: preverbal XPs are presupposed

23 In English, French and EP, LI is possible with both discourse-old and discourse-new preverbal XPs. While the former can co-occur with new and old postverbal subjects, the latter are only compatible with subjects which introduce new information in discourse – cf. examples [16] to [19]. Crucially, as we will show in this section, the (un)acceptability of each of these combinations of constituents can be successfully explained by our proposal that a preverbal XP must be presupposed to license LI.

[16] **Discourse-old preverbal constituent + discourse-new postverbal constituent**

[16a] A Sofia tem um piano no centro da sala. *Em cima do piano estão várias fotografias antigas.*  
Lit. ‘the Sofia has a piano in the middle of the living room. On the piano are various photographs old’

6. “Lit.” stands for “literal translation”.

- [16b] Marie a une table en marbre dans la salle de séjour. *Sur la table se trouve un vase de cristal.*
- [16c] They have a great big tank in the kitchen, and *in the tank are sitting a whole bunch of pots.*  
(Ward *et al.*, 2002: 1386)
- [17] **Discourse-old preverbal constituent + discourse-old postverbal constituent**<sup>7</sup>
- [17a] Obama foi cumprimentado pelo diretor do museu, Jean-Luc Martinez, que lhe ofereceu um livro sobre o Louvre. A visita do Presidente dos EUA durou cerca de duas horas. *Ao seu lado esteve sempre o diretor do museu, que lhe mostrou as obras primas em exposição.*  
Lit. 'Obama was greeted by the director of the museum, Jean-Luc Martinez, who gave him a book about the Louvre. The visit of the President of the USA lasted about two hours. By his side was always the director of the museum, who showed him the masterpieces on display.'
- [17b] Et lorsque le journaliste demande à Lewis Hamilton si cette personne est Nicole Scherzinger, le pilote répond d'un simple "oui" [...]. Car il y a quelques années, Lewis Hamilton s'imposait en Hongrie. *À ses côtés se trouvait Nicole Scherzinger.*  
([http://www.purepeople.com/article/lewis-hamilton-une-victoire-en-hongrie-dediee-a-son-ex-nicole-scherzinger\\_1125428/1](http://www.purepeople.com/article/lewis-hamilton-une-victoire-en-hongrie-dediee-a-son-ex-nicole-scherzinger_1125428/1))
- [17c] Tich made tea in a blackened billy and McPherson filled a telescopic cup he took from a pocket. Seated on a form, he helped himself to sugar and then proceeded to cut chips from a tobacco plug, the cold and empty pipe dangling from his lips against the full grey moustache. *Seated opposite him was Tich, waiting for gossip, wandering, hoping.*  
(Birner & Ward, 1998: 169)
- [18] **Discourse-new preverbal constituent + discourse-new postverbal constituent**
- [18a] Almocei na Marshall Field's ontem e nem vais acreditar quem lá estava. *Atrás de um aglomerado de microfones estava a Hillary Clinton.*
- [18b] J'ai pris le déjeuner à Marshall Field's hier, et tu ne peux pas imaginer qui était là. *Derrière une forêt de microphones se trouvait Hillary Clinton.*
- [18c] I had lunch at Marshall Field's yesterday, and you wouldn't believe who was there. *Behind a cluster of microphones was Hillary Clinton (holding yet another press conference).*  
(Ward *et al.*, 2002: 1387)

7. Note that, in English, French and EP, when the information presented by the pre- and postverbal constituents has been previously mentioned in the discourse, it is the constituent that has been evoked most recently (i.e., closer to the LI structure) that typically appears in preverbal position.

- [19] **Discourse-new preverbal constituent + discourse-old postverbal constituent**
- [19a] A Sofia tem muitas fotografias antigas na sala. ??*Em cima do/de um piano estão algumas fotografias.*  
Lit. ‘the Sofia has many photographs old in the living room. On the/a piano are some photographs’
- [19b] Marie a deux vases de cristal dans la salle de séjour. ??*Sur la/une table se trouve un vase de cristal.*
- [19c] They have a whole bunch of pots in the kitchen, and ??*in a great big tank are sitting all of the pots.*  
(Ward *et al.*, 2002: 1386)

24 Let us first consider the LI structures in [16] and [17]. In these sets of examples, the preverbal XPs convey information that is more familiar than that of the postverbal subjects. In the case of [16], the preverbal PPs are the most familiar constituents, since they have a discourse-old status while the subjects do not. In the case of [17], the XPs that appear preverbally are also the most familiar constituents, because the information they convey has been more recently mentioned in discourse than the information presented postverbally<sup>8</sup>. Given the facts just described, it can be concluded that, in the LIs [16] and [17], the information in postverbal position cannot be readily taken for granted, whereas the information conveyed by the preverbal constituents can. Hence, these constituents have a presupposed status. This is why they can license LI. Significantly, this claim is supported by the following question-answer tests<sup>9</sup>, which prove that the acceptability of LIs like [16] and [17] is greatly reduced when they are embedded in discourse contexts where the preposed XPs are not part of the presupposition associated with the sentence.

- [20a] A: What is sitting in the tank? B: In the tank are sitting [<sub>FOC</sub> a whole bunch of pots].
- [20b] A: Where is a whole bunch of pots? B: ??[<sub>FOC</sub> In the tank] are sitting a whole bunch of pots.
- [20c] A: Why are you upset? B: (because) ??[<sub>FOC</sub> in the tank are sitting a whole bunch of pots].
- [20d] A: Who was seated opposite him? B: Seated opposite him was [<sub>FOC</sub> Tich].
- [20e] A: Where was Tich? B: ??[<sub>FOC</sub> Seated opposite him] was Tich.
- [20f] A: Why was he upset? B: (because) ??[<sub>FOC</sub> Seated opposite him was Tich].

25 Contrary to what we observe in [16] and [17], in the LI structures in [18], there are no differences between pre- and postverbal constituents in terms of discourse

8. Discourse-oldness is a gradient notion. As noted by Birner (1998: 309), “more recently evoked information is treated as more familiar in the discourse than less recently evoked information”.

9. For reasons of space, these tests are just presented in English. However, the same results are obtained for EP and French.

familiarity: they both convey discourse-new information. However, the preceding context, namely the sequence “you won’t believe *who* was there”, makes it clear that what is being asserted is the presence of Hillary Clinton, and not where she was. Therefore, in this context, the information presented by the preposed constituent is not under assertion. On the contrary, it appears to be taken for granted. Put differently, it seems to be presupposed.

- 26 Two pieces of evidence lend support to this claim. First, the LI in [18] can be replaced by [21] without losing its core meaning. Second, and more importantly, this structure is infelicitous in reply to an out-of-the-blue question, which forces the entire sentence to be interpreted as focus, i.e. as non-presupposed (example [22])<sup>10</sup>.

[21] [...] you wouldn’t believe who was there: Hillary Clinton.

[22a] A: Why did everybody look so surprised? B: ??(Because) [<sub>FOC</sub> behind a cluster of microphones was Hillary Clinton].

[22b] A: Why did everybody look so surprised? B: (Because) [<sub>FOC</sub> Hillary Clinton was behind a cluster of microphones].

- 27 Crucially, the felicity contrast between [18], where the preverbal PP is simultaneously [+ presupposed] and [+ discourse-new] (cf. above), and [22a], where the PP is [- presupposed] and [+ discourse-new], indicates that, as predicted, the factor which determines whether a clause-initial XP can license LI is its [ $\pm$  presupposed] status, rather than its [ $\pm$  discourse-new] status.

- 28 The proposal that a fronted constituent must be presupposed to allow LI accounts not only for the felicity of the structures in [16], [17] and [18], but also for the infelicity of sequences like [19], where a discourse-new preverbal constituent is followed by a discourse-old postverbal constituent. In this case, LI is infelicitous because the preverbal PPs are not presupposed while the postverbal subjects are.

- 29 Even though the evidence presented so far strongly suggests that only preverbal XPs with a presupposed status can license LI, there are (apparent) exceptions to this rule in literary texts. As the following examples taken from the Portuguese, French and English versions of *Ali Baba and the forty thieves* illustrate, literary texts often begin with a LI structure. In this context, none of the sentence constituents seems to be presupposed.

[23a] Há muito tempo, numa pequena cidade da Pérsia viviam dois irmãos: Ali Babá e Cassim.  
(<http://cegolendolivro.blogspot.pt/2011/09/ali-baba-e-os-40-ladros.html>)

10. For reasons of space, these tests are just presented in English. However, the same results are found in EP and French.

[23b] Il y a très longtemps, dans un très lointain pays, l'Arabie, vivaient deux frères, Ali Baba et Kassim.

([http://www.antoineonline.com/Livre\\_Ali\\_Baba\\_Et\\_Les\\_Quarante\\_Voleurs\\_de\\_Marcelino\\_Troung\\_9782840062271.aspx?productCode=0009782840062271](http://www.antoineonline.com/Livre_Ali_Baba_Et_Les_Quarante_Voleurs_de_Marcelino_Troung_9782840062271.aspx?productCode=0009782840062271))

[23c] Once upon a time... in a distant Persian city lived two brothers called Ali Baba and Kasim.

(<http://home.in.tum.de/~kirsch/maerchen/englisch/alibaba>)

30 Interestingly, this type of (apparently) non-presupposed LI has a strongly literary flavor. As shown in [24], outside of a literary context it is much less acceptable to use an inversion structure whose pre- and postverbal constituents have a non-presupposed status.

[24a] A: João, ouviste a reportagem insólita que deu nas notícias? B: ??Num bairro de lata vive um ex-presidente brasileiro. / Um ex-presidente brasileiro vive num bairro de lata.

[24b] A: Jean, est-ce que tu as écouté le reportage insolite dans le journal? B: ??Dans un bidonville vit un ex-président brésilien. / Un ex-président brésilien vit dans un bidonville.

[24c] A: John, did you hear the weird report on the evening news? B: ??In a slum lives a former Brazilian president. / A former Brazilian president lives in a slum.

31 These facts raise the following question: why are non-presupposed fronted XPs accepted in LI structures (almost) exclusively in literary texts? Following Birner and Ward (1998), we argue that this occurs because the hearer/reader expects stories to have spatio-temporal settings. As proposed by Birner and Ward (1998: 176), “in the context of the beginning of a story, the notion of a setting may be assumed to be situationally evoked (Prince, 1981)”, i.e. salient in the situational context of the discourse. Significantly, in non-literary contexts, the preposed constituents which convey situationally evoked information also admit LI. For example, one can point to a table in a room and utter sentences like [25] out of the blue.

[25a] João, em cima daquela mesa está uma caneta azul; podias trazer-ma, por favor?

[25b] Jean, sur cette table se trouve un stylo bleu; est-ce que tu pourrais me l'apporter, s'il te plaît?

[25c] John, on that table is a blue pen; could you bring it to me, please?

32 In line with Prince (1981), we assume that situationally evoked information constitutes given, rather than new information. We further assume that situationally evoked XPs, such as those in [23] and [25], have a presupposed status, corresponding to propositions which “the speaker assumes the hearer already knows or is ready to take for granted at the time the sentence is uttered” (Lambrecht, 1994: 52). Based on these assumptions, we propose that, contrary to what might appear at first sight, the structures in [23] and [25] conform to the generalisation that preverbal XPs must have a presupposed status to be accepted in LI.

- 33 Taken together, the empirical data examined in this section provide robust evidence in favor of the prediction that a clause-initial XP must be presupposed to license LI. Simultaneously, these data bring into question the hypotheses that appeal to the notion of discourse familiarity to account for the properties of preposed XPs in LI. In particular, the felicity contrast between [18] and [22a], repeated under [26] for ease of exposition, constitutes a key piece of evidence against a widely adopted generalisation, proposed by Birner and colleagues (e.g., Birner, 1994 and 1996; Birner & Ward, 1998; Ward *et al.*, 2002), according to which LI requires the preverbal constituent to represent information that is at least as familiar within the discourse as that represented by the postverbal constituent. This is because the contrast in [26] demonstrates that, unlike what Birner and colleagues' predict, the combination of a discourse-new preverbal constituent with a discourse-new postverbal constituent is not always felicitous. The facts illustrated by [26] are only explainable if one assumes – as we do – that the (in)felicity of a preverbal XP in LI is determined by its [ $\pm$  presupposed] status, rather than by its discourse familiarity.

[26a] **Discourse-new preverbal constituent + discourse-new postverbal constituent:**  
 I had lunch at Marshall Field's yesterday, and you wouldn't believe who was there.  
*Behind a cluster of microphones was Hillary Clinton (holding yet another press conference).*  
 (= [18c])

[26b] **Discourse-new preverbal constituent + discourse-new postverbal constituent:**  
 A: Why did everybody look so surprised? B: ??(Because) *behind a cluster of microphones was Hillary Clinton (holding yet another press conference).* (= [22a])

### 3.2. Examining prediction 2: preverbal XPs must define a location

- 34 The hypothesis that the XPs in the preverbal position of LIs are required to be sTOPs predicts that having a presupposed topic status is a necessary, but insufficient condition for a preverbal XP to license subject-verb inversion. An additional condition must be satisfied: the XP must define a location. This prediction is confirmed by various pieces of empirical evidence, which will be presented and discussed in the remainder of this section.

- 35 The first piece of evidence comes from the well-attested fact that, in English, French and EP, LI typically occurs with preverbal XPs which define a spatio-temporal location. These include locative PPs and adverbial phrases (AdvPs) (examples [27] and [28]), temporal PPs, AdvPs and NPs (examples [29] and [31]), and participial phrases with a locative PP<sup>11</sup> (example [32]) (cf. Birner, 1994 and 1996; Birner

11. Note that, in participial phrases with a locative PP, omitting the PP reduces the acceptability of inversion, while omitting the participle preserves it. This fact indicates that what licenses inversion in these cases is not the participial phrase itself, but rather the embedded locative. Compare the examples in [32] with the following:

[iii] ??Coiled lay a one-hundred-and-fifty-foot length of braided nylon climbing rope [...]. / On the floor lay a one-hundred-and-fifty-foot length of braided nylon climbing rope [...].

[iii2] ??Assis se trouvait un mineur [...]. / Sur la banquette arri re se trouvait un mineur [...].



& Ward, 1998; Cornish, 2001 and 2005; Lahousse, 2003 and 2011; Pereira, 1998, among others). In addition to overt spatio-temporal XPs, preverbal covert locatives are also compatible with LI, but only in EP and French (cf. Lahousse, 2003, 2007 and 2011; Sheehan, 2007 and 2010)<sup>12</sup>.

- [27a] *Em frente deles* estavam mais de cem jornalistas dos quatro cantos do mundo.  
 [27b] *Devant eux* se trouvaient plus de cent journalistes venus des quatre coins du monde.  
 [27c] *In front of them* were over a hundred journalists from the four corners of the world.
- [28a] *Aqui* vivia Ghandi.  
 [28b] *Ici* a vécu Ghandi.  
 [28c] *Here* lived Ghandi.
- [29a] *Às 10:02 horas* partiu do pódio o concorrente número 1, Miguel Nunes/Victor Calado, em Mitsubishi Lancer X.  
 Lit. 'at 10:02 o'clock departed from the podium the contestant number 1, Miguel Nunes/Victor Calado, in Mitsubishi Lancer X'  
 (Internet: the page is no longer online)
- [29b] *À 17 heures* est arrivée la vedette de cette année: Jean-Luc Lahaye.  
 (<http://www.lavoixdunord.fr/region/ecaillon-soleil-chaleur-et-foule-a-la-18e-fete-de-la-fraise-ia16b12101n2149597>)
- [29c] *Precisely at nine o'clock* came the Princess in the carriage with four horses.  
 (A. Lang, *The Blue Mountains*, London, Sovereign Classic, 2014, p. 11)
- [30a] *Depois* chegou o Tiago, que escondeu metade dos rebuçados que a Sara tinha deixado na caixa.  
 Lit. 'afterwards arrived the Tiago [...]'  
 (<http://www.mat.uc.pt/canguru/Arqprovas/2014/provaEscolar14.pdf>)

[iii3] ??Eram o5hoo de quinta-feira e sentados estavam três irmãos [...]. / Eram o5hoo de quinta-feira e no chão estavam três irmãos [...].

Lit. 'Were o5hoo of Thursday and sitting were three brothers / Were o5hoo of Thursday and on the floor were three brothers'

12. English admits bare inversion in the context of stage directions, as illustrated in [iv]. Even though it could be hypothesized that this verb-subject order is licensed by a covert stage topic interpreted as "on the stage", we do not consider this structure an instance of covert LI for two main reasons. First, there is no agreement between the subject and the verb in this inversion structure, which indicates that it is derived in a substantially different way from LI. Second, this type of inversion occurs almost exclusively with the unaccusative verb *enter* in the present simple, and thus appears to function more as a ready-made formula for introducing characters on the scene than as a true inversion structure with finite rules that speakers can creatively apply to generate an infinite range of sentences.

[iv] Enter Helena.

(J. Osborne, *Look Back in Anger*, London, Faber and Faber, 1960, p. 71)

- [30b] *Après* est arrivé ce qu'il appelait le moment maniériste [...].  
(<http://sedition-revue.fr/la-place-de-la-critique-entretien-avec-jean-baptiste-thoret/>)
- [30c] *Afterwards* arrived the mother of all meals: the roast.  
(<http://www.theresident.co.uk/food-drink-london/restaurant-reviews-london/food-review-red-lemon/>)
- [31a] *Anos mais tarde* apareceram muitos outros, mas esses eram considerados bandidos!  
Lit. 'years later appeared many others, but those were considered bandits'  
(<http://www.junior.te.pt/servlets/Rua?P=Portugal&ID=1101>)
- [31b] *Un peu plus tard* sont arrivés des immigrants d'Europe centrale (Allemands, Suisses) et méridionale (Italiens, Portugais).  
(<http://www.larousse.fr/archives/grande-encyclopedie/page/8191>)
- [31c] *Four years later* occurred another attempted invasion that, like its predecessors, was a fiasco.  
(W.M. Armstrong, *E.L. Godkin: A Biography*, Albany, State University of New York Press, 1978, p. 109)
- [32a] Eram 05h00 de quinta-feira e *sentados no chão*, estavam três irmãos, com idades entre os seis e os nove anos.  
Lit. 'it was 05h00, Thursday and sitting on the floor were three brothers, with ages ranging from six to nine'  
(<http://www.cmjornal.xl.pt/nacional/portugal/detalhe/tres-irmaos-maltratados.html>)
- [32b] *Assis sur la banquette arrière* se trouvait un mineur, détenant un passeport qui appartenait au fils aîné du couple.  
(<http://www.lavoixdunord.fr/region/coquelles-des-migrants-arretes-deux-fois-en-quelques-ia33b48583n2576842>)
- [32c] *Coiled on the floor* lay a one-hundred-and-fifty-foot length of braided nylon climbing rope three-eighths of an inch thick.  
(Birner & Ward, 1998: 121)

36 In EP, inversion structures without any overt preverbal XP (henceforth, bare inversion) only occur in two contexts (cf. Costa, 1998 and 2004; Sheehan, 2007 and 2010): (i) when the subject receives narrow focus, independently of the type of verb (example [33]), and (ii) in sentence-focus contexts, with a group of intransitive verbs which cut across the traditional unergative/unaccusative distinction (e.g., the unaccusative verb *chegar* ['to arrive'] and the unergative verb *telefonar* ['to telephone']) (see [34]). According to Sheehan (2007 and 2010), who follows earlier work by Pinto (1997) on Italian bare inversion, these verbs, labeled "inversion verbs", optionally select an extra null loco-temporal argument (LOC), which typically

has a deictic interpretation, and is a possible candidate for satisfying the extended projection principle (EPP)<sup>13</sup>. For this reason, unlike all other verbs, the so-called “inversion verbs” can exploit two alternative strategies for satisfying the EPP: (i) the subject can be moved to Spec, IP or (ii) LOC can be raised to Spec, IP. The latter strategy allows the subject to remain low, in a postverbal position. Thus, as proposed by Pinto (1997) and Sheehan (2007 and 2010), the availability of “bare” inversion in sentence-focus contexts is dependent on the availability of LOC as a possible EPP-satisfier.

- [33a] A: Quem chegou? B: Chegou o João / ??O João chegou.  
Lit. ‘A: who arrived? B: arrived the John / the John arrived’
- [33b] A: Quem falou? B: Falou o João / ??O João falou.  
Lit. ‘A: who spoke? B: spoke the John / the John spoke’
- [33c] A: Quem comeu o bolo? B: Comeu(-o) o João / ??O João comeu(-o).  
Lit. ‘A: who ate the cake? B: ate (it) the John / the John ate it’
- [34] A: O que aconteceu?  
Lit. ‘what happened?’
- [34a] B: Chegou o João. / O João chegou.  
Lit. ‘arrived the John / the John arrived’
- [34b] B: ??Descongelou o frigorífico / O frigorífico descongelou.  
Lit. ‘defrosted the fridge / the fridge defrosted’
- [34c] B: ??Falou o João / O João falou.  
Lit. ‘spoke the John / the John spoke’
- [34d] B: Telefonou o João / O João telefonou.  
Lit. ‘telephoned the John / the John telephoned’

37

One of the key pieces of evidence that supports this proposal is the fact that inversion triggers a subtle change in meaning in sentence-focus contexts. In fact, in verb-subject orders like [34a] and [34d], the location of the event/action is associated with that of the speaker (i.e., a sentence like *chegou o João* is interpreted as “John arrived here”). In contrast, in subject-verb orders, such a deictic interpretation is not available. Here, a location neutral interpretation is strongly preferred (i.e., *o João chegou* is interpreted as “John arrived somewhere”) (see in particular Sheehan, 2007 and 2010). In the light of this evidence<sup>14</sup>, we assume with Pinto (1997) and Sheehan (2007 and 2010) that, in sentence-focus contexts, bare inversion is licensed by a preverbal null locative, thus constituting an instance of covert LI.

13. According to this principle, the canonical subject position (i.e., the specifier of the inflectional phrase – Spec, IP) must be filled in every sentence.

14. For further evidence, see Pinto (1997) and Sheehan (2007, 2010).

- 38 We propose that LOC acts as a covert sTOP at the level of discourse, since it defines a location and its content is readily taken for granted by the addressee. In other words, it is presupposed. We further propose that, even though LOC has a deictic interpretation by default, it can also receive an anaphoric reading, as in [35]. In short, depending on the context where it is embedded, LOC can function either as a covert deictic sTOP or as a covert anaphoric sTOP.

[35] A: Eles andavam a brincar no parque e resolveram entrar na casa abandonada.  
Lit. 'they were playing in the park and decided to enter the abandoned house'  
B: E o que aconteceu?  
Lit. 'and what happened?'  
A: Apareceu um fantasma. [sTOP = 'afterwards, in the abandoned house']  
Lit. 'appeared a ghost'

- 39 Like EP, French has a type of bare inversion, traditionally called “absolute inversion” (e.g., Le Bidois, 1952; Gournay, 2006), where the location of the event/action described in the sentence is implicit (Lahousse, 2003, 2007 and 2011). Interestingly, this type of bare inversion is only admitted with a group of verbs which cuts across the unaccusative/unergative distinction and roughly corresponds to the group of “inversion verbs” which allow covert LI in EP. Thus, this appears to be another manifestation of covert LI.

[36] *Unaccusative verb*

[36a] Tout le monde s'assoit... Arrive le chef d'orchestre, Eliahu Inbal, un Israélien...  
(Lahousse, 2007: 14)

[36b] Tout le monde s'assoit... ??Se brisent les chaises.

[37] *Unergative verb*

[37a] Tout le monde s'assoit... Sonnent les cloches.

[37b] Tout le monde s'assoit... ??crient les enfants.

- 40 Crucially, the type of covert LI admitted in French differs from that of EP in two ways. First, unlike EP, French appears to admit this inversion only in (oral or written) narrative sequences<sup>15</sup>, which suggests that it is not part of its core grammar<sup>16</sup>. Second, French allows covert LI exclusively in discourse contexts where the spatio-temporal location of the postverbal subject is recoverable from the preceding context. Put differently, this type of inversion is just admitted with covert

15. Possibly, this type of LI only occurs in narrative sequences because the hearer/reader expects them to present a succession of events in a linear chronological order. Consequently, the notion of chronological order may be assumed to be situationally evoked (Prince, 1981) here, which makes the insertion of an adverb like *ensuite* (“afterwards”) redundant.

16. As Haegeman and Guéron (1999: 63) point out, “the ‘core grammar’ of a language [...] governs the unmarked registers or styles, and ‘peripheral grammars’ [...] govern special registers or styles”.

anaphoric sTOPs (example [38]). As Lahousse (2003, 2007 and 2011) points out, these topics always get a temporal reading, and tend to be interpreted as meaning “then, afterwards (in the same place)”.

[38a] Elle sonne. Arrive une infirmière: “Ah! Mais madame, ce n’est pas l’heure”.

(Lahousse, 2007: 13)

[38b] (*Context: opening sentence of a text*) \*Arrive une infirmière: [...].

[38c] A: Qu’est-ce qui s’est passé? B: \*Est arrivée une infirmière.

41 Taken together, the cross-linguistic data presented above concerning the type of preverbal XPs found in LI suggest that this type of word order is licensed by (c)overt constituents which are presupposed and define a spatio-temporal location, just as sTOPs characteristically do.

42 Significantly, the spatio-temporal XPs which do not specify a location are unable to trigger inversion in these languages. This is the case of the non-specific indefinite adverb “somewhere” (example [39]) and of adverbs of duration, like “temporarily” (example [40]). Only in EP do we find (apparent) exceptions to this rule. As shown in [40a], EP permits inversion with fronted adverbs like “temporarily”. Contrary to what might appear at first sight, this verb-subject order is not licensed by the fronted adverb. Rather, it is an instance of bare inversion and licensed by other mechanisms, which are unavailable in English and French. This is why the structure in [40] is admitted in EP – but crucially not in the other languages – without any overt preverbal XP (example [41]). In the light of these facts, it can be concluded that the word order illustrated by examples [39] and [40] constitutes a second piece of empirical evidence in favor of the proposal that a preverbal XP must define a location to license LI.

[39a] ??Algures apareceu o João.

[39b] ??Quelque part est apparu Jean.

[39c] ??Somewhere appeared John.

[40a] Temporariamente ocorreram algumas halucinações.

[40b] \*Temporairement se sont produites quelques hallucinations.

[40c] \*Temporarily occurred hallucinations.

[41a] Ocorreram algumas halucinações.

[41b] \*Se sont produites quelques hallucinations.

[41c] \*Occurred some hallucinations.

43 The last piece of evidence which supports this proposal comes from the behavior of English and French with non spatio-temporal XPs. In these languages, subject-verb

inversion without a contrastive meaning<sup>17</sup> is only allowed in declarative matrix clauses in two constructions: (i) LI and (ii) expletive-associate inversion (e.g., “there occurred something strange”; “*il s’est passé quelque chose de bizarre*”). Just as our hypothesis predicts, in these languages, the XPs which do not denote a spatio-temporal location are generally incompatible with inversion, even when their content is presupposed. This is exemplified in [42], with an instrumental PP, and in [43], with a manner AdvP<sup>18</sup>.

[42a] A: Qui est arrivé par le train? B: \*Par le train est arrivé Jean.

[42b] A: Who arrived by train? B: \*By train arrived John.

[43a] A: Qui est venu volontairement? B: \*Volontairement est venu Jean.

[43b] A: Who came voluntarily? B: \*Voluntarily came John.

44 There are, nevertheless, some exceptions to this rule. In fact, various corpus-based studies have observed that English and French permit verb-subject orders with preverbal XPs which are not semantically spatio-temporal, namely adjective phrases (AdjPs) (example [44]), NPs with a predicative function (example [45]) and participial phrases (example [46]) (Birner, 1994 and 1996; Birner & Ward, 1998, for English; Lahousse, 2003 and 2011, for French).

[44a] Republican senators on the conference committee expressed outrage when these gimmicks were proposed. *Angriest of all was Judd Gregg.*

(R.G. Kaiser, *Act of Congress: How America’s Essential Institution Works, and How It Doesn’t*, New York, Alfred A. Knopf, 2013, p. 361)

[44b] [...] ils étaient tous très fiers de moi. *Le plus content était mon papa.*

([http://dylaneiq43q44.blogspot.pt/2013\\_05\\_01\\_archive.html](http://dylaneiq43q44.blogspot.pt/2013_05_01_archive.html))

17. Note that the term “inversion” is used throughout this article to refer to inversion without a contrastive/exhaustive meaning associated. The inversion structures where the postverbal subject is interpreted as contrastive/identificational focus are not relevant to the present study.

18. As an anonymous reviewer rightly pointed out, French admits inversion with the manner adverb *ainsi* (“thus”) and with manner AdvPs such as *sans se presser* (“without hurry”), as in the examples below:

[v1] Ainsi doivent espérer les condamnés à mort.

(Lahousse, 2011: 106)

[v2] Sans se presser déambulaient trois touristes.

In [v1], *ainsi* is exhaustively interpreted as meaning “this way rather than any other way”, thus acting as an identificational focus operator. In other words, this is a case of inversion associated with a restrictive meaning (cf. Lahousse, 2011, for further details). In [v2], inversion appears to be licensed by a covert anaphoric sTOP, as it is only acceptable when embedded in a narrative context where the location of the action is recoverable from the preceding context. Compare [v1] to [v2]:

[v1] A: Qu’est-ce qui s’est passé? B: ??Sans se presser déambulaient trois touristes.

[v2] Il est assis sur un banc en bois pour observer le parc. Sans se presser déambulaient trois touristes.

[sTOP = in the park, at that moment]

Thus, it can be concluded that the examples in [v] do not challenge our hypothesis that, in matrix clauses without a contrastive/restrictive meaning or an expletive in preverbal position, subject-verb inversion is only admitted with a (c)over t sTOP.

- [45] She is a nice woman, isn't she? *Also a nice woman is our next guest...*  
(Ward *et al.*, 2002: 1385)
- [46a] Twiggs County Sheriff Darren Mitchum said they have recovered the stolen merchandise and made arrests. "Four people arrested and we've recovered approximately about \$20,000 worth of merchandise," said Mitchum. *Arrested were: Condly Warren Ashe Jr., 53, Cory D. Brown, 24, Jeffery Blake Hasty, 30, and Joshua David Mixter, 33.*  
(<http://www.13wmaz.com/story/news/local/twiggs/2015/01/07/theft-ring-twiggs-county-four-arrested/21386795/>)
- [46b] *Mes grands-parents repartis, restaient seulement avec nous Millie et mon père [...].*  
(<http://bibliotheq.net/alain-fournier/le-grand-mealnes/page-42.html>)

45 The inversion structures presented above have one characteristic in common: their sentence-initial XPs generally repeat an adjective (e.g., "angry"), noun (e.g., "woman") or participle (e.g., "arrested") mentioned in or inferable from the preceding linguistic context, thus situating the postverbal subject in relation to or within a group of entities in the prior discourse. For example, in [44a], the AdJP "angriest of all" situates "Judd Gregg" in the group of Republican senators who were outraged. Similarly, in [45], the NP "also a nice woman" locates the postverbal subject "our next guest" in the class to which the woman mentioned in the prior sentence belongs – the class of "nice women". Finally, in [46a], the preverbal verb phrase (VP) "arrested" situates "Condly Warren Ashe Jr.", "Cory D. Brown", "Jeffery Blake Hasty" and "Joshua David Mixter" in the group of four people arrested in Twiggs County. These examples, therefore, suggest that the non spatio-temporal XPs compatible with inversion are presupposed and define a notional, abstract location in context. As a result, they function as sTOPs<sup>19</sup>. The difference between them and the typical sTOPs lies in the fact that they provide a notional, rather than a spatio-temporal, location.

46 Crucially, as this analysis predicts, when a non spatio-temporal XP is unable to fulfil a notional "locative" function, subject-verb inversion is blocked. Consider the examples below:

- [47a] I went to the police station yesterday, and you wouldn't believe who was there.  
*??Arrested were Condly Ashe Jr. and Cory Brown.*
- [47b] I went to the police station yesterday, and you wouldn't believe who was there.  
*Behind a cluster of microphones were Condly Ashe Jr. and Cory Brown.*

19. Underlying this proposal is the assumption that the location of an entity E can be defined not only with respect to a loco-temporal stage, but also in relation to comparable or similar entities mentioned or implied in prior discourse.

47 In [47a], the preverbal VP “arrested” is not linked to any entities mentioned in or inferable from the preceding discourse and, as a result, it cannot locate the postverbal subject in relation to any entity. Due to this fact, the VP cannot function as a sTOP, which, in turn, leads to the infelicity of inversion. Significantly, when the sentence-initial position is filled by a sTOP like the locative PP “behind a cluster of microphones”, inversion becomes felicitous, as shown in [47b]. Note that, in both [47a] and [47b], the preverbal XPs represent discourse-new information and are not under assertion. What differentiates them is that the PP in [47b] has a locative function, while the VP in [47a] does not. Therefore, the comparison between [47a] and [47b], on the one hand, and between these and [46a], on the other hand, makes it clear that the infelicity of inversion in [47a] is caused neither by the fact that the VP is not intrinsically locative nor by its discourse-new status. Rather, the infelicity of this inversion structure stems from the fact that the VP does not have a locative function in the discourse context in which it is embedded and is consequently unable to act as a sTOP. These data thus support the proposal that English and French only allow verb-subject orders with (referential) preverbal XPs which define a location and are interpreted as sTOPs.

48 To sum up, from the empirical evidence presented throughout section 3, three conclusions can be drawn. First, preverbal XPs must be presupposed to license LI (prediction 1 confirmed). Second, not all the preverbal XPs with a presupposed topic status allow this inversion – only the ones that define a location, i.e. sTOPs, do (prediction 2 confirmed). Finally, it appears that being a sTOP is not only necessary, but also a sufficient condition for a preverbal XP to license LI. At least, in English, French and EP, any sTOP can trigger this type of subject-verb inversion, regardless of two factors typically deemed decisive in the literature: (i) the adjunct or argument status of the preposed constituent, and (ii) the discourse-oldness or -newness of the information it conveys.

#### 4. Explanations for the differences across English, French and EP

49 Even though all the languages under analysis require the preverbal position of LI to be filled by a sTOP, the subtypes of sTOPs allowed in this position vary cross-linguistically. As shown in Table 1, English is the strictest of the three languages considered in this study, as it only permits LI with overt sTOPs. EP, on the contrary, admits this inversion with all types of sTOPs. French is situated between these opposite poles. As illustrated below, this language allows LI not only with overt sTOPs, but also with covert anaphoric sTOPs. In the present section, we will argue that these cross-linguistic differences stem from morphosyntactic factors.

50 The differences between EP, on the one hand, and French and English, on the other, with respect to covert LI are related to a macro-parametric difference: EP fixes the null subject parameter at a positive value, while English and French have a negative setting for this parameter – cf. [48] and [49].



LI structure	English	French	EP
overt sTOP verb subject	✓ Mary owns a marble coffee table. [On the table is a crystal vase.]	✓ Marie possède une table basse en marbre. [Sur la table se trouve un vase de cristal.]	✓ A Maria tem uma mesa de café em mármore. [Em cima da mesa está uma jarra de cristal.]
covert sTOP <sub>[+ anaphoric]</sub> verb subject	✗ *The door slowly opens and [appears a man in his sixties].	✓ Une porte s'ouvre doucement et [apparaît un homme d'une soixantaine d'années].	✓ A porta abre-se lentamente e [aparece um homem com uns sessenta anos].
covert sTOP <sub>[+ deictic]</sub> verb subject	✗ A: What happened? B: *[Died Prince].	✗ A: Qu'est-ce qui s'est passé? B: *[Est mort Prince].	✓ A: O que aconteceu? B: [Morreu o Prince].

Table 1. Configurations of LI permitted in English, French and EP

[48] **Referential null and overt subjects**

[48a] Cozinho muito bem. / Eu cozinho muito bem.

[48b] \*Cuisine très bien. / Je cuisine très bien.

[48c] \*Cook very well / I cook very well.

[49] **Expletive null and overt subjects**

[49a] Está a chover. / \*Ele está a chover.

[49b] \*Pleut. / Il pleut.

[49c] \*Is raining. / It is raining.

51 In fact, the behavior of consistent null subject languages (NSLs)<sup>20</sup> (e.g., EP, Spanish and Italian), partial NSLs<sup>21</sup> (e.g., Brazilian Portuguese and Cape Verdean Creole) and non-NSLs (e.g., English and French) with respect to inversion suggests that the order *covert sTOP verb subject* is only admitted in the grammar of languages which license expletive null subjects (see, e.g., Costa & Figueiredo Silva, 2006; Costa & Pratas, 2004; Nicolis, 2008; Pratas, 2002; Sheehan, 2007 and 2010). In these languages, the EPP does not require phonetic material in the canonical subject

20. Languages which allow referential and expletive null subjects.

21. Languages which allow expletive, but not referential null subjects.

position, Spec, IP. As a result, the (deictic/anaphoric) null argument LOC<sup>22</sup> can move to this position to satisfy the EPP, which frees the subject from the need to move from its base-generated low position. In contrast, in the languages which do not admit expletive null subjects, like English and French, the EPP must be satisfied by phonetically realized material. For this reason, the movement of LOC to the canonical subject position is not a possibility in these languages. Consequently, the order *covert sTOP verb subject* is generally unacceptable in English and French. Only in the latter language do we find an exception to this general rule. As described in section 3.2, French admits the order *covert sTOP<sub>[+anaphoric]</sub> verb subject* in a special context: narratives. We argue that this order is acceptable in a narrative style because the requirements made by the EPP in the core grammar of French (i.e., the grammar that governs unmarked registers and styles) are relaxed in the peripheral grammar which governs this special, marked style<sup>23</sup>. Put simply, in a narrative style, aesthetic concerns seem to overrule the core grammar of French.

- 52 We are now left with one last question: why is it that French allows inversion with covert anaphoric sTOPs in special styles, but English does not? We tentatively propose that this difference is caused by a morphologic factor: the fact that French has a richer tense morphology than English (example [50]).

[50a] *Past tense of “to sing”*: I/you/he/she/it/we/you/they sang

[50b] *Past tense of “chanter”*: J’ai chanté/tu as chanté/il a chanté/nous avons chanté/vous avez chanté/ils ont chanté

- 53 Underlying this proposal are two assumptions: (i) that French covert LI is triggered by the fronting of a weak form of LOC, whose interpretation has to be anaphorically established; and (ii) that, as suggested by Lahousse (2003, 2007 and 2011), it is the tense morphology of the verb that indicates the temporal link between the clause and the preceding context, thus allowing the (loco-temporal) interpretation of LOC to be established in relation to prior discourse. In the light of these assumptions, it can be hypothesized that French admits the structure *covert sTOP<sub>[+anaphoric]</sub> verb subject* because its tense morphology enables the sTOP to establish the necessary temporal link with the prior discourse. The poor tense morphology of English, on the contrary, does not allow such a link to be established. As a result, covert LI is completely absent from this language.

- 54 In brief, the cross-linguistic differences found in LI seem to stem from purely morphosyntactic factors. At the level of discourse/pragmatics, there are no asymmetries across English, French and EP. In all of these languages, LI is subject to exactly the same discourse constraints: (i) the preverbal XP must be a sTOP and (ii) the postverbal subject must be (part of) the focus.

22. Recall that LOC functions as a (deictic or anaphoric) sTOP in EP covert LI.

23. Note that it is well attested in the literature that certain constraints of non-null subject grammars can be relaxed in special registers (cf. Haegeman, 1990 and 2013; Haegeman & Guéron, 1999).

## 5. Conclusion

- 55 In conclusion, the notions of argumenthood, topicality and discourse familiarity, which have been systematically used in the literature to describe the properties of fronted XPs in LIs, cannot account for the behavior of English, French and EP with respect to these constituents; only the generalization according to which preverbal XPs must be sTOPs can. The empirical data presented and discussed in this study indicate that being a sTOP is both a necessary and sufficient condition for a preverbal XP to license LI. In addition, these data show that this type of subject-verb inversion is a more widespread phenomenon than generally assumed. In addition to the structures typically classified as LI, the following verb-subject constructions have been argued to be licensed by a (covert) sTOP and hence constitute instances of LI: (i) English and French inversion structures with non-spatio-temporal XPs, such as participial and adjectival phrases, which provide an abstract, notional location in context; (ii) cases of subject-verb inversion traditionally labeled “absolute inversion” in French; and (iii) the bare inversion structures which occur in sentence-focus contexts in EP. Thus, the data from English, French and EP suggest that there is a strong correlation between sTOPs and subject-verb inversion cross-linguistically.

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