

The Syntax of Silent Locative Prepositions in Greek

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1. Introduction

In Greek the preposition *se* ‘to/ at’ can be optionally omitted when it introduces a PP denoting either directed motion or static location, as can be shown by the following examples:^{1,2}

(1) Pao (sto)³ spiti/ sxolio/ jinnastirio.
go.1SG *se*.the.ACC house.ACC/school.ACC/gym.ACC
‘I go home/to school/to the gym.’

(2) Xthes to proi imun/ emina (sto) spiti/ sxolio.
yesterday the.ACC morning.ACC was.1SG/stayed.1SG *se*.the.ACC house.ACC/school.ACC
‘Yesterday morning I was/stayed at home/the school.’

This phenomenon is also observed in English with the noun *home* (Collins 2007), in Macedonian and Aromanian (Tomic 2006) and in some northern Italian dialects (Cattaneo 2009). Examples (4)-(5) are taken from Tomic (2006: 12) and example (6) is taken from Cattaneo (2009: 289).

(3) I am/went home. (English)

(4) Mi duc Ohārda. (Aromanian)
1SG.ACC.CL. go.1SG Ohrid
‘I am going to Ohrid.’

(5) Odat crkov. (Macedonian)
go.3PL church
‘They are going to church.’

(6) Te scte (a) ca’. (Bellinzonese)
SCL stay at home
‘You stay at home.’

This phenomenon has been discussed in Ioannidou and den Dikken (2009) (henceforth I&D), Terzi (2010b), and Gehrke and Lekakou (2012). However, the following empirical fact has not featured in these previous analyses: null locative prepositions in Greek are only licensed when location is perceived as temporary, and they are ungrammatical when location is perceived as permanent by our encyclopedic knowledge of the world. This contrast is shown in (7)-(8).

¹ In Greek the same preposition (*se*) is used to denote both directed motion and static location.

² In this paper, the following abbreviations are used in the glosses: ACC = ‘accusative’, NOM = ‘nominative’, GEN = ‘genitive’, SG = ‘singular’, PL = ‘plural’, CL = ‘clitic’, SCL = ‘subject clitic’, MS = ‘masculine’, FM = ‘feminine’.

³ In Greek the preposition *se* and the definite article must always amalgamate (Triantafyllidis 1991).

(7) I Maria ine (stin) Agglia.
the.NOM Maria.NOM is.3SG *se*.the.ACC England.ACC
'Maria is in England.'

(8) To Londino ine *(stin) Agglia.
the.NOM London.NOM is.3SG *se*.the.ACC England.ACC
'London is in England.'

The objective of this essay is to extend previous analyses to account for the novel observation of the distinction between permanent and temporary location. I will do so by adopting Gallego and Uriagereka's (2009) analysis of the copulas *ser* and *estar* in Spanish, according to which *estar* is the spell-out of *ser* and an incorporated preposition.⁴ I will argue that Greek sentences like (1) and (2) derive from incorporation of a null preposition; I will claim that when the preposition incorporates into the verb *ime* 'to be', a temporary reading is obtained along the lines proposed by Gallego and Uriagereka (2009) for the "temporary copula" *estar* in Spanish. Since *ime* 'to be' with an incorporated null preposition always results in a temporary reading, sentences where location is perceived as permanent are judged ungrammatical.

The remainder of the essay is structured as follows. In section 2, I provide a description of the properties of null locative prepositions in Greek. In section 3, I present my proposal for the structure of constructions with null prepositions, building on Terzi's (2010a) analysis of locative PPs in Greek. In section 4, I provide more details on the difference between permanent and temporary location in Greek, discuss Gallego and Uriagereka's (2009) analysis of *estar* in Spanish, and show how this analysis explains the ungrammaticality of null prepositions in Greek when location is perceived as permanent. In section 5, I discuss alternative analyses of null locative prepositions in Greek, and explain how they do not extend obviously to account for the contrast in (7) and (8). Finally, in section 6, I discuss some problematic issues for the overall analysis and future research questions that need to be answered.

2. Properties of the phenomenon

In this section I discuss the general properties of the phenomenon of null prepositions in Greek. First, I discuss lexical restrictions in section 2.1; in section 2.2. I discuss the syntactic and semantic characteristics of the phenomenon.

⁴ More details on the nature of the two copulas are provided in section 4 of this paper.

2.1. Lexical restrictions

There are several lexical restrictions to the construction, which are of interest to this paper. Firstly, the only locative preposition that can be null is the preposition *se*. The preposition *apo* ‘from’, for example, can never be null, as illustrated in (9).

- (9) Erxome *(apo to) sxolio.
come.1SG from the.ACC school.ACC
‘I am coming from school.’

Secondly, the verbs that can take PPs with null prepositions as complements are either motion verbs, such as *pao* ‘to go’, *erhome* ‘to come’, or *epistrefo* ‘to return’, or verbs denoting static location, such as *ime* ‘to be’ or *meno* ‘to stay’.

Thirdly, the complement of the null preposition has to be a noun denoting location, such as nouns denoting geographic places.⁵ Terzi (2010b) discusses a possible lexical constraint, according to which the noun cannot be a subpart of a location or means of transportation.

- (10) Ime (sto) spiti.
am.1SG *se*.the.ACC house.ACC
‘I’m (at) home.’
- (11) Ime *(stin) kuzina.
am.1SG *se*.the.ACC kitchen
‘I am at the kitchen.’
- (12) O Janis ine (sto) aerodromio.
the.NOM John.NOM is.3SG *se*.the.ACC airport.ACC
‘John is at the airport.’
- (13) O Janis ine *(sto) aeroplano.
the.NOM John.NOM is.3SG *se*.the.ACC airplane
‘John is on the airplane.’

The noun in (11), *kuzina* ‘kitchen’, is a subpart of the noun *spiti* ‘home’ in (10), and (10) is grammatical while (11) is not. The noun in (13), *aeroplano* ‘airplane’, is a mode of transportation, while the noun in (12), *aerodromio* ‘airport’, denotes the place where airplanes

⁵ In few cases, the noun could denote an event that takes place at a location, such as the example in (i).

- (i) O Janis ine aglika.
the.NOM John.NOM is.3SG English.ACC
‘John is in English class.’

usually are, and we see a grammaticality difference between the two sentences. This constraint is certainly not precisely stated (one could say, for example, that a house is the subpart of a city), but it is an attempt to make some kind of generalization regarding the lexical constraints on what the complement of the null preposition can be. Moreover, these lexical restrictions vary depending on the speaker; for example, even though I agree with the judgment in (13), some of the native speakers that I consulted judged the sentence to be grammatical. The lexical constraints will not play a role in the analysis presented in this essay, though see section 6 for some further discussion.

2.2. Syntactic and semantic characteristics

The complement of the null preposition is obligatorily a bare noun; that is, the noun appears without an overt determiner and it cannot be modified by an adjunct such as an adjective.⁶

(14) Pao (sto) grafio.
go.1SG se.the.ACC office.ACC
'I go to the office.'

(15) *Pao to grafio.
go.1SG the.ACC office.ACC
'I go to the office.'

(16) Piga ekklesia.
went.1SG church.ACC
'I went to church.'

(17) *Piga orea ekklesia.
went.1SG nice.ACC church.ACC
'I went to the nice church.'

Few nouns, such as the noun *spiti* ('home'/ 'house') can appear with a possessive pronoun (although they are still ungrammatical with an overt determiner and/or an adjective).

(18) Ime spiti tu.
am.1SG house.ACC clitic.3SG.GEN
'I am at his house.'

(19) *Ime to spiti.
am.1SG the.ACC house.ACC

⁶ Kind/type modification though is grammatical, as shown by the grammaticality of example (ii) below. It is worth noting that *vizantino musio* 'Byzantine museum' is not syntactically a compound, and each word appears with its own case marking.

(ii) Pao/ ime vizantino musio.
go.1SG am.1SG byzantine.ACC museum.ACC
'I'm going to/I am at the Byzantine museum.'

‘I am home.’

- (20) *Ime megaló spiti.
am.1SG big.ACC house.ACC
‘I am at the big house.’

However, even though the noun is bare, it is interpreted as a definite DP, contrary to cases like (21), where the bare noun is interpreted as an indefinite:

- (21) Pao se grafío.
go.1SG se office.ACC
‘I go to an office.’

In the sentences with a null preposition, both the determiner and the preposition are missing, while in (21) the preposition is present but the determiner is missing. The interpretation of the noun *grafío* ‘office’ in (21) is that of an indefinite. However, it is an indefinite which cannot refer to a specific office; rather, the sentence has the meaning of ‘what I go to is an office’. This reading is never available in the sentences with a null preposition; the noun in these cases is interpreted as definite.

Moreover, Terzi (2010b) and Gehrke and Lekakou (2012) argue that the preposition can only be omitted when the PP is an argument of the verb; omission of the preposition is ungrammatical when the PP is in adjunct position, as can be seen by the contrast in (22)-(23).

- (22) Piga (sto) sxolio xthes.
went.1SG se.the.ACC school.ACC yesterday
‘I went to school yesterday.’
- (23) Egrapsa to gramma *(sto) sxolio.
wrote.1SG the.ACC letter.ACC se.the.ACC school.ACC
‘I wrote the letter at the school.’

However, there are some cases where it is not clear whether the PP containing the null preposition is in argument or adjunct position. Such an example is (24) below.

- (24) Spudase (stin) Agglia.
studied.3SG se.the.ACC England.ACC
‘He studied in England’

Anagnostopoulou (2005) gives an adjuncthood test for Greek, which is similar to *do so* ellipsis tests in English. More specifically, in Greek the antecedent of the expression *kano to idio* ‘do the same’ must include internal arguments but may exclude VP adjuncts. The following examples (taken from Anagnostopoulou 2005: 84) illustrate this test:

- (25) O Kostas efaje to milo stin kuzina ke o
the.NOM Kostas.NOM ate.3SG the.ACC apple.ACC se.the.ACC kitchen.ACC and the.NOM

Petros ekane to idio ston kipo.
 Peter.NOM did.3SG the.ACC same.ACC *se*.the.ACC garden.ACC
 ‘Kostas ate the apple in the kitchen and Peter did so in the garden.’

- (26) *O Kostas pije stin Olandia ke o Petros
 the.NOM Kostas.NOM went.3SG *se*.the.ACC Netherlands.ACC and the.NOM Peter.NOM
 ekane to idio sti Galia.
 did.3SG the.ACC same.ACC *se*.the.ACC France.ACC
 ‘*Kostas went to the Netherlands and Peter did so to France’

In (25), the PP *stin kuzina* is an adjunct and, thus, *kano to idio* can be anaphoric to the V + DP constituent excluding the PP adjunct. In (26), however, the PP *stin Olandia* is an argument of the verb and it is excluded from the antecedent of *kano to idio*, which results in the ungrammaticality of the sentence. Thus, we can use this test to determine whether the PP in problematic sentences like (24) above is in argument or adjunct position.

- (27) I Maria spudase (stin) Agglia ke o Janis ekane
 the.NOM Maria.NOM studied.3SG *se*.the.ACC England.ACC and the.NOM John.NOM did.3SG
 to idio (stin) Galia.
 the.ACC same.ACC *se*.the.ACC France.ACC
 ‘Maria studied in England and John did so in France.’

The grammaticality of (27) shows that the PP *stin Agglia* (with which a null preposition is grammatical) is in adjunct position, because it can be excluded by the antecedent of the expression *kano to idio*. This seems to indicate that null locative prepositions are licensed not only when the PP is an argument of the verb, but also when it is in adjunct position. This distinction between argument and adjunct position is crucial for the analysis and it should be, thus, further investigated; it is possible that a specific class of nouns can appear in adjunct position. A first observation about (24) is that the noun-complement of the null preposition is a proper name denoting geographic location (I will call those geographic names). If we replace *Agglia* ‘England’ with a noun that is not a geographic name, the sentence is ungrammatical as shown by (28).

- (28) Spudase *(sto) panepistimio.
 studied.3SG *se*.the.ACC university.ACC
 ‘He studied at the university.’⁷

⁷ One could wonder whether the null preposition here is ungrammatical because of a lexical restriction on the noun *panepistimio* ‘university’. However, *panepistimio* is otherwise grammatical with a null preposition as shown in (iii) below.

However, (29) below shows that null prepositions are sometimes grammatical in adjunct position (as shown by the grammaticality of the sentence with *kano to idio*) even if the noun involved is not a geographic name.

(29) I Maria diavase ena vivlio *(sto) grafio ke o
 the.NOM Maria.NOM read.3SG a.ACC book.ACC *se*.the.ACC office.ACC and the.NOM
 Janis ekane to idio (sti) vivliothiki.
 John.NOM did.3SG the.ACC same.ACC *se*.the.ACC library.ACC
 ‘Maria read a book at the office and John did the same in the library.’

What is interesting about (29), though, is that the null preposition is ungrammatical in the clause with *diavase* ‘read’ as the main verb, but grammatical in the clause with *ekane* ‘did’ as the main verb. This indicates that there could be something special about the verb *kano* ‘to do’, which is a light verb in Greek.

The above discussion of the relevance of the distinction between argument and adjunct shows that it is not clear whether null prepositions are always ungrammatical when the PP containing them is in adjunct position. We can make a preliminary generalization according to which geographic names or nouns in clauses with the light verb *kano* ‘to do’ can sometimes appear with a null preposition in adjunct position. However, these cases are rare and not fully understood; in this paper, I will follow Terzi (2010b) and Gehrke and Lekakou (2012) and assume that null prepositions are grammatical only when the PP is in argument position. Further research is needed, though, for the problematic cases discussed above.

In sum, in this section I have outlined the main properties of the phenomenon: the noun-complement of the null preposition has to be obligatorily bare, without an overt determiner or modifier, and null prepositions are ungrammatical when the PP is in an adjunct position. Finally, I have talked about some lexical restrictions on the nominals that appear in these structures. In the following section, I will discuss Terzi’s (2010a) analysis of locative PPs in Greek and will extend this analysis to account for the phenomenon of null locative prepositions in the language.

3. Analysis of locative PPs in Greek

3.1. Background on locative PPs in Greek

According to Terzi (2010a), in Greek there are three possible “frames” for locative PPs. In the first frame, a locative preposition is followed by one of the two “light” prepositions, *se*

(iii) Pao (sto) panepistimio.
 go.1SG *se*.the.ACC university.ACC
 ‘I’m going to the university.’

‘to/at’ or *apo* ‘from’, and the DP ground argument.⁸ In (30) below *pano* ‘on’ is the locative preposition, followed by the light preposition *se* ‘to/at’ and the DP *tin efimerida* ‘the newspaper’.⁹

- (30) O Janis kathete pano stin efimerida.
 the.NOM John.NOM sits.3SG on se.the.ACC newspaper.ACC
 ‘John is sitting on the newspaper.’

In the second frame, the locative preposition is followed by a genitive clitic, as shown in (31).^{10,11}

- (31) O Janis kathete pano tis.
 the.NOM John.NOM sits.3SG on 3SG.GEN.CL
 ‘John is sitting on it (the newspaper).’

In the third frame, the only preposition present is the preposition *se* ‘to/at’, in which case there is a more general locative meaning. For example, in a scenario where an earthquake occurred, if (32) is uttered, then John could have been at the balcony when the earthquake happened. This is impossible, though, if (33) is uttered, in which case it must have been the case that John was inside the house (Terzi 2010a).

- (32) O Janis itan sto spiti.
 the.NOM John.NOM was.3SG se.the.ACC house.ACC
 ‘John was at home.’
- (33) O Janis itan mesa sto spiti.
 the.NOM John.NOM was.3SG in se.the.ACC spiti.ACC
 ‘John was inside the house.’

It is within this frame that we find the null prepositions under discussion in this paper.

Finally, there is a possible fourth frame: one in which the locative preposition is not followed by a complement (i.e. no light preposition and DP) as shown in (32).

⁸ I will follow Terzi (2010a) in using the term “locative prepositions” to describe words like *pano* ‘on’, *kato* ‘under’, *konta* ‘near’ etc. in Greek. However, there is no consensus about what the lexical category of these words is and they are often described as adverbs (Alexiadou 1997 among others).

⁹ The specific light preposition, *se* ‘to/at’ or *apo* ‘from’, to be used depends on the preceding locative preposition. In these cases *se* and *apo* have no semantic contribution and are present for case purposes. See Terzi (2010a) for further details on why they have no semantic contribution.

¹⁰ Terzi (2005) provides arguments on why the case of this clitic is genitive and not its homophonous dative in Greek.

¹¹ Locatives can be followed by a genitive clitic but not by a full DP in genitive, as shown by (iv) below:

- (iv) O Janis ine piso tis/ *tis Marias.
 the.NOM John.NOM is.3SG behind 3SG.GEN.CL the.GEN Maria.GEN
 ‘John is behind her/Mary.’

- (34) O Janis ine mesa.
 the.NOM John.NOM is.3SG inside
 ‘John is inside.’

3.2. Terzi’s (2010a) proposal for Greek locative PPs

Terzi (2010a) shows that the distribution of locatives in Greek parallels that of adjectives and proposes a nominal structure that contains them, which includes Kayne’s (2005) silent noun PLACE, and which is the complement of a P functional head. In this section I will summarize the similarities between locatives and adjectives pointed out by Terzi (2010a) and will present the exact structure that she proposes for them.

As described in the previous section, locative prepositions in Greek can have a genitive clitic – but not a full DP in genitive – as their complement. The genitive case of this clitic complement is the main indicator for a similar structure between nominals and locatives, since genitive is the case associated with the complements of nouns in Greek. However, nouns, unlike locatives, can take a full DP in genitive as their complement as well. This asymmetry between clitics and DPs in genitive is found with adjectives in the nominal domain. More specifically, in Greek possessives are expressed as DPs or clitics in genitive and they follow the noun, as shown in (35).¹²

- (35) to spiti tu Jani/ tu.
 the.NOM house.NOM the.GEN John.GEN 3SG.GEN.CL
 ‘John’s/his house’

However, in the presence of an adjective, genitive clitics, but not DPs, can precede the noun, as shown in (36)-(37) below.

- (36) to megalo spiti tu Jani/ tu
 the.NOM big.NOM house.NOM the.GEN John.GEN 3SG.GEN.CL
 ‘John’s/his big house’

¹² DPs (but not clitics) can precede the noun, but only if they appear before the determiner; possessives before the noun but after the determiner are ungrammatical.

- (v) tu Jani to spiti
 the.GEN John.GEN the.NOM house.NOM
 ‘John’s house’

- (vi) *to tu Jani spiti
 the.NOM the.GEN John.GEN house.NOM
 ‘John’s house’

- (37) to megalo tu/ *tu Jani spiti
 the.NOM big.NOM 3SG.GEN.CL the.GEN John.GEN house.NOM
 ‘John’s/his big house’

Moreover, Terzi (2010a) states that, historically, genitive DPs stopped appearing as complements of locatives at the same time that they ceased to appear as pre-nominal complements in the presence of an adjective in Greek, from the 12th to the 16th century.

According to Terzi (2010a), these data indicate that locatives in Greek behave like adjectives; she argues that they modify the silent noun PLACE, proposed by Kayne (2005) for adverbs like *here* or *there* in English. Terzi (2010a) also claims that, since PLACE is a silent noun, it is licensed through incorporation into a c-commanding head; the locative prepositions are this head. As for the complements of locatives – genitive clitics or PPs headed by the light prepositions *se* or *apo* –, she takes them to be the possessors of the noun PLACE and she adopts a small clause structure for possession, shown in (38) below.

- (38) [SC [DP \emptyset [XP *locative preposition* [X [NP PLACE]]][PP [P *se/apo*] [DP *ground argument*]]]

However, Terzi (2010) does not take (36) to be the structure of locatives; rather, she claims that the small clause in (38) is the complement of a silent locative preposition. Hence, the complete structure for locatives is the one in (39).

- (39) [PP_{loc} [P_{loc}] [SC [DP \emptyset [XP *locative preposition* [X [NP PLACE]]][PP [P *se/apo*] [DP *ground argument*]]]]]

One might wonder what the motivation is to propose a silent P_{LOC} functional head instead of adopting the small clause structure in (38). Terzi (2010a) gives two main arguments. Firstly, locatives, but not adjectives, can be modified by adverbs and degree phrases such as *akrivos* ‘right, precisely.’ Secondly, she claims that the functional P_{LOC} head can be sometimes phonetically realized: this is what happens in the third frame discussed in the previous section.¹³ In this case, the locative meaning of the PP results from the overt realization of the P_{LOC} functional head.

Terzi (2010a) leaves the semantics of the noun PLACE as an open question for further research. However, she does give some ideas on what the semantics of this silent noun are, which are useful in understanding the third frame and in positing an analysis for the null prepositions in question in this essay. She claims that PLACE, when modified by a locative, is

¹³ See Terzi (2010a) for a more detailed discussion of why *se* is the overt realization of the P_{LOC} head in the third frame of locatives.

“restricted”; for example, *mesa* ‘inside’ restricts space in the space that is both “PLACE” and “inside”. The reason why location is more “general” in the third frame is that PLACE is not modified and, hence, there is no restriction to the space indicated in the phrase.

3.3. Proposal for null locative prepositions

Having Terzi’s (2010a) proposal in mind, we can now understand how the locative meaning is obtained in the three frames (and the possible fourth one) presented in 3.1. For the first frame, we can say that in a PP like *pano sto trapezi* ‘on the table’, the noun *trapezi* gets its locative meaning because it is the possessor of PLACE, which is inherently locative. PLACE in the PP *pano sto trapezi* is licensed because it incorporates into the locative preposition *pano*. For the third frame, a PP like *sto trapezi* ‘at the table’, the noun *trapezi* ‘table’ gets its locative meaning by the preposition *se*, which is the overt realization of a functional P_{LOC} head, not by its relationship to PLACE. As for the fourth frame, we can say that it is the same as the first frame but the complement of the locative preposition has been elided.

So what happens in sentences like (40) below, where the locative preposition is null and the noun is bare?

- (40) O Janis ine grafio.
 the.NOM John.NOM is.3SG office.ACC
 ‘John is at the office.’

I will claim that in these cases the noun behaves in the same way as the locative prepositions discussed by Terzi (2010a). Apart from the intuition that these nouns behave like adverbs, they share an important characteristic with locative prepositions: some of them can be followed by a genitive clitic, but not by a full DP in genitive, as shown by (41) below.

- (41) O Janis pige spiti tis/ *tis Marias.
 the.NOM John.NOM went.3SG house.ACC 3SG.GEN.CL the.GEN Maria.GEN
 ‘John went to her/Maria’s house.’

Thus, the structure I propose for them is the one in (42), in which these nouns are the modifiers of the silent noun PLACE. Following Terzi (2010a), there is a null locative preposition in the structure.

- (42) [P_{Loc} [P_{loc}] [SC [DP ∅ [XP noun [X [NP PLACE]]]]]]

I will claim that in such cases the locative meaning of the PP is obtained through incorporation of the null locative preposition into the verb.¹⁴ I will extend Terzi's (2010a) licensing condition for PLACE by saying that for it to be licensed it has to incorporate into a c-commanding head that has a locative feature. Since the nouns involved in these structures are not inherently locative and do not have a locative feature, PLACE cannot incorporate into them. P incorporation accounts for the ungrammaticality of null prepositions in adjunct position, since according to Baker (1988) incorporation cannot take place from this position.

What I have not discussed is how the noun in a structure like the one in (42) gets its accusative case marker. This is a problem that all previous analyses run into. Ioannidou and den Dikken (2009) propose a complicated mechanism to explain the case marking on the noun. I will give the details of this mechanism in section 5, but the mechanism does not explain why the case of the noun has to be accusative, as opposed to, say nominative, or genitive. Terzi (2010b) and Gehrke and Lekakou (2012), which will also be discussed in section 5, give no explanation at all for the existence of a case marker on the noun. I will leave this as a topic for further research; however, an intuition is that case is assigned to the noun post-syntactically, as a result of the exact position that it occupies in the structure.¹⁵

To sum up, in this section I have claimed that in the constructions with null prepositions in question in this essay, the bare nouns are modifiers of the silent noun PLACE. When the noun appears in this position, the locative meaning of the PP is obtained through incorporation of the null preposition into the verb. Finally, how accusative morphology is assigned is still an open question, but it could be the case that case marking takes place post-syntactically.

4. Difference between temporary and permanent location

As mentioned before, there is a characteristic of the phenomenon, which, to my knowledge, has not figured in its analysis so far: null locative prepositions are only possible when they express the temporary location of a moveable object, not the permanent location of a fixed object.

- (43) I Maria ine (stin) Agglia.
 the.NOM Maria.NOM is.3SG se.the.ACC England.ACC
 'Maria is in England.'

¹⁴ In section 5, I will discuss an alternative analysis of the phenomenon (Ioannidou and den Dikken 2009), which also involves incorporation of the preposition into the verb.

¹⁵ We could say, for example, that the noun gets dependent accusative case, following McFadden (2004), but this has to be further investigated for the Greek nouns.

- (44) To Londino ine *(stin) Agglia.
 the.NOM London.NOM is.3SG se.the.ACC England.ACC
 ‘London is in England.’
- (45) O Janis ine (stin) ekklesia.
 the.NOM John.NOM is.3SG se.the.ACC church.ACC
 ‘John is at the church.’
- (46) I diasimi tixografia ine *(stin) ekklesia.
 the.NOM famous.NOM fresco.NOM is-3SG se.the.ACC church.ACC
 ‘The famous fresco is at the church.’

In (43) and (44) (and similarly in (45) and (46)), the verb and its PP complement are identical but the null preposition is grammatical in the former but ungrammatical in the latter. There are two differences between (43) and (44) that could account for this difference in grammaticality: the subject in (43) is animate, while the subject in (44) is inanimate, and the location of the subject in (43) is perceived as temporary, while the location of the subject in (44) is perceived as permanent in our world. As example (47) shows, inanimate subjects are grammatical in the context of null prepositions; this indicates that it is the permanent location interpretation that results in the ungrammaticality of (43) and (44). One could imagine, then, that the sentences in (43) and (44) would be grammatical in a world where cities or frescos could move from place to place.¹⁶

- (47) To aftokinito ine sinerjio.
 the.NOM car.NOM is.3SG shop.ACC
 ‘The car is at the shop.’

This semantic distinction between the temporary position of a moveable object and the permanent position of a fixed object is manifested in other languages as well. For example, in Hebrew, when the position is temporary the use of the pronominal copula *Pron* (Doron 1983) is optional, while when the position is permanent *Pron* is obligatory, as shown by the contrast in (48)-(49). The examples are from Greenberg (1998: 136).

- (48) pariz ??(hi) be-carfat
 Paris 3FM.SG. in France
 ‘Paris is in France.’
- (49) ha-nacig Seli (hu) be-carfat
 the representative mine 3MS.SG. in France
 ‘My representative is in France.’

¹⁶ A note that has to be made here is that this distinction is relevant as long as verbs denoting static location are concerned; directed motion predicates involve movement of an object from place to place, so they are inherently transitory.

In Spanish and Portuguese there are two different copulas (both translated as ‘to be’ in English), *ser* and *estar*. Butt & Benjamin (2004) state in their reference grammar of Modern Spanish that “it is usually true that *ser* indicates permanent features and *estar* temporary conditions.” The distribution of the two copulas is very similar in the two languages but there is an important difference between the two with respect to locatives: in Spanish locatives always select for *estar*, while in Portuguese *estar* is used when the location of an object is temporary, as in (50), but *ser* is used when the location is perceived as permanent, as in (51).^{17,18} In Spanish the equivalent of (51) is given in (52), which shows that even though the location is permanent, the copula used is still *estar*.

(50) A Maria está na Inglaterra. (Portuguese)
 the Maria temp.is.3SG in.the England
 ‘Maria is in England’

(51) Londres é na Inglaterra. (Portuguese)
 London perm.is.3SG in.the England
 ‘London is in England.’

(52) Londres está en Inglaterra. (Spanish)
 London temp.is.3SG in England
 ‘London is in England.’¹⁹

The distribution of *ser* and *estar* is certainly more complicated than a simple distinction between a “permanent” and a “temporary” copula and many studies have tried to provide an analysis to account for their distribution, especially in Spanish. Some (Kratzer 1995) see the two copulas as lexical exponents of the individual-level (IL)/stage-level (SL) predicate distinction, some (Luján 1981, Schmitt 1996) claim that the difference between the two copulas is due to aspectual differences, while others (Maienborn 2005) claim that the difference between *ser* and *estar* is due to pragmatic reasons.

Gallego and Uriagereka (2009) provide an analysis according to which *estar* is derived by incorporating a preposition into *ser*, following proposals that analyze *have* as derived by

¹⁷ *Ser* is used with locatives in Spanish in some very specific cases, such as when the copula means ‘to take place/to occur’:

(vii) La fiesta es en el apartamento de Juan.
 the party is-3SG in the apartment of John
 ‘The party is in John’s apartment.’

¹⁸ Examples (50)-(51) were provided by native speaker of Brazilian Portuguese, Paulo R. de Souza Costa.

¹⁹ Example (52) was provided by native speaker of Peninsular Spanish, Melina Sánchez.

incorporating a preposition into *be* (Freeze 1992; Kayne 1993 among others).²⁰ The motivation for such an analysis for *estar* is the claim that it is syntactically more complex than *ser*, which is based on two empirical facts. Firstly, the distribution of the two copulas is predictable when the adjectives that they combine with have specific morphology. As can be seen in (53), when the present morpheme *-nte* is present, then only *ser* is grammatical, while *estar* is the only copula that can be combined with adjectives with the participial morpheme *-do*, as seen in (54) (examples taken from Gallego & Uriagereka 2009:1).

(53) Es/*Está amenazante, ilusionante, aluzinante... (Spanish)
perm.is.3SG/temp.is.3SG threatening encouraging amazing
'(S)he/it is threatening, encouraging, amazing...'

(54) *Es/Está amenazado, ilusionado, aluzinado... (Spanish)
perm.is.3SG/temp.is.3SG threatened encouraged amazed
'(S)he/it is threatened, encouraged, amazed...'

Secondly, predicates usually selecting for *ser* can be used with *estar* if the appropriate environment is provided, but not vice versa, as can be seen by examples (55)-(56) (taken from Gallego & Uriagereka 2009: 2).

(55) Ronaldinho es genial, pero el año pasado no estuvo genial. (Spanish)
Ronaldinho perm.is.3SG brilliant but the year passed not temp.was.3SG brilliant
'Ronaldinho is brilliant, but he was not brilliant last year.'

(56) *Ronaldinho está agotado, pero normalmente no lo es. (Spanish)
Ronaldinho temp.is.3SG exhausted but normally not CL perm.is.3SG
'Ronaldinho is exhausted but normally he is not.'

They argue that all adjectives can be decomposed into a noun and an adposition and that the adposition which can incorporate into *ser* and, thus, license *estar* has an extra aspectual layer, one denoting telicity or perfectivity. The structure they propose for a *ser* phrase is that in (57a), and the structure they propose for an *estar* phrase is that in (57b) (Gallego & Uriagereka 2009:5) (the subscript 'T' indicates this aspectual characteristic of the adposition, SC stands for Small Clause).

(57) a. [_{serP} ser [_{SC} DP [P+N]]]
b. [_{estarP} P_T+ser [_{SC} DP [_{tp} [P+N]]]]

However, the authors do not specify whether it is the kind of preposition that is incorporated or the incorporation mechanism itself what gives the SL reading to *estar* 'to be

²⁰ Gallego & Uriagereka's (2009) analysis bears some similarities to Zagana's (2009) use of prepositional features to distinguish between *ser* and *estar*. 3

(temporary)’. This is definitely a topic for further research, which is crucial for the understanding of both the copulas in Romance languages and null locative prepositions in Greek.

In the same study, the authors indicate that locatives in Spanish pose problems for this analysis because they always select for *estar*, even if the location of the object is perceived as permanent. However, as we mentioned above, in Portuguese both copulas are used with locatives, depending on whether location is perceived as temporary or permanent. Therefore, Gallego and Uriagereka’s (2009) analysis can explain locatives in Portuguese; namely, when the preposition of the locative PP has the necessary aspectual characteristics, it incorporates into *ser* and *ser* + P is spelled out as *estar*. Of course, something needs to be said about what makes Spanish different from Portuguese, that is, what is the reason for which Spanish is not “well-behaved” when it comes to location. I will discuss this further in section 6.

In Greek, in the case of null locative prepositions, the distinction between temporary and permanent location is relevant for verbs denoting static location. These verbs are few and some of them, such as *meno* ‘to stay’ imply a transitory state (i.e. if someone stays somewhere, he probably somehow moved there first). Thus, the main verb with which we actually see this distinction is the copula *ime* ‘to be’. If we adopt Gallego and Uriagereka’s (2009) analysis of *estar*, we can say that when the null preposition incorporates into the Greek copula *ime*, then a temporary reading is obtained, which is what happens when a preposition is incorporated into the copula *ser* in Spanish. The difference between Greek and Spanish/Portuguese is that Greek does not express this incorporation morphologically. Therefore, in sentences like (44) (repeated below), there is nothing in the grammar blocking the licensing of the null preposition; rather, P incorporation leads to a temporary interpretation, which is not compatible with our encyclopedic knowledge of the world. In a world where London can move to another country, (44) would be grammatical with the null preposition.

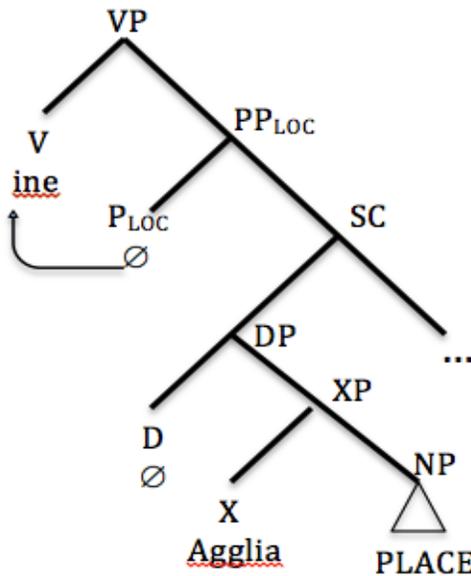
(44) To Londino ine *(stin) Agglia.
the.NOM London.NOM is.3SG *se*.the.ACC England.ACC
‘London is in England.’

There is a difference, though, between the Greek examples and the Spanish cases: in Spanish there is an overt copy of the preposition, while in Greek the preposition is silent. One should account for this difference, which will be further discussed in section 6.

To show how the analysis works, in (58) I provide the derivation for the VP of sentence (43), repeated below:

- (43) I Maria ine (stin) Agglia.
 the.NOM Maria.NOM is.3SG se.the.ACC England.ACC
 ‘Maria is in England.’

(58) Derivation:



We see that the null preposition incorporates into *ine*, which results in a temporary reading. Even though *ime* is the verb with which the contrast between permanent and temporary location is mainly observed, this difference could potentially be seen with other verbs denoting static location, such as *vriskome* ‘to find oneself/to be located’.²¹ However, we can extend our analysis to such verbs as well, if we assume a verb decomposition along the lines of Cuervo (2003), and say that these verbs are always composed of their lexical root and a light verb v_{BE} (see also Marantz 1997 and den Dikken 2010). The structure would be the one in (59).

- (59) [VP [[v_{BE} [$\sqrt{vriskome}$]][v_{BE}]][PP]]

In this case, the null preposition would incorporate into the light verb v_{BE} and this incorporation would lead to the temporary reading.

In this section, I have shown how Gallego and Uriagereka’s (2009) analysis of the verb *estar* in Spanish can be combined with the proposal that a null preposition incorporates into the verb when *se* is silent to account for the empirical facts so far, including the novel observation

²¹ I am saying “potentially” because so far I cannot find any example of a null preposition with the verb *vriskome*, ‘to find oneself/to be located’ maybe because it tends to be a bit more formal and less commonly used.

regarding the difference between temporary and permanent location. In the following section, I will discuss three alternative analyses of the phenomenon and explain why they cannot be naturally extended to account for this observation, which thus provides support for the P incorporation analysis of (1)-(2) in Greek.

5. Alternative analyses

5.1. Ioannidou and den Dikken (2009)

I&D claim that there is a null locative preposition present in the structure of sentences like (1)-(2), which is licensed via incorporation. They then focus on accounting for the ungrammaticality of overt determiners and modifiers with null prepositions. They adopt the view according to which the structure of the DP is parallel to the structure of the CP and they propose that definite articles originate in a Deixis head and not in D; D is spelled out overtly only when the Deixis head moves to D. The specific structure of the DP that they propose is given in (60) (Ioannidou & den Dikken 2009: 396).

(60) $[_{DP} D [_{DxP} Dx^{[PERSON]} [...N...]]]$

In (60), D is taken to be the equivalent of C in the CP and $Dx^{[PERSON]}$ the equivalent of T(ense). The intuition is that Tense is a deictic temporal category just as Person is a deictic referential category.

Following Alexiadou and Anagnostopoulou (1998), I&D suggest that the Greek DP has an EPP property, which can be satisfied in two ways: head movement (Dx-to-D movement) or phrasal movement (usually NP to SpecDP). They suggest that the former strategy is generally used in Greek but the latter strategy is still available as a last resort solution if head movement is not available. They further suggest that in Greek N and D need matching Case features; in general D checks its Case against material in the outside syntactic environment and N gets its Case checked via an Agree relation with D. However, when P is null, P incorporates into the verb, and I&D assume that P cannot assign Case from an incorporated position. Thus, D cannot get its Case features checked against any material outside of the DP: the verbs involved in these structures are unaccusative and P is no longer able to assign Case because it is incorporated. For D and N to get their Case features checked, NP moves to SpecDP (so that N and D are in a Spec-head configuration.) This movement also satisfies the EPP property and head movement of Dx-to-D is no longer necessary; thus, D remains silent.

This analysis has some problematic aspects. Firstly, the Case checking mechanism they use is not very easily reconciled with modern Case theory. They claim that N's Case feature can be checked either under Agree or by a Spec-Head configuration with D; for the specific method of Case checking to be determined, the DP has to first become a part of a larger structure within which D's Case feature can be valued and checked under Agree. This countercyclicality of the Case mechanism does not fit well in current research in minimalism.

Secondly, their explanation for the unavailability of adjectives is also problematic. In order to explain the ungrammaticality of modifiers, the authors test three different possible structures for adjectives. These structures are shown in (61) through (63) below (in brackets I give the name they give to these structures). (Ioannidou and den Dikken (2009): 404-405)

(61) *P Ø [DP D [D_{xP} [NP N] [D_x^[PERSON] [AP A]]]] (straight predication structure)

(62) *P Ø [DP D [FocP [AP A] [Foc [D_{xP} [NP N] [D_x^[PERSON] t_{AP}]]]]] (focus structure)

(63) *P Ø [DP D [D_{xP} [AP A] [D_x^[PERSON] [NP N]]]] (predicate-specifier structure)

For N and D to check their Case features, the NP has to move to SpecDP in all the above cases. Thus, the authors explain how in each one of the above structures this derivation crashes, making the presence of adjectives ungrammatical.

For (61) they invoke den Dikken's (2006b) Vacuous Movement Hypothesis, according to which movement that skips material which is both phonologically null and without semantic content is prohibited. If NP were to move to SpecDP in (61) it would skip D, which is phonologically null and has no semantic content; thus movement is prohibited and the derivation crashes.²²

In (62) AP moves to SpecFocP. Then, movement of the NP to SpecDP is illegitimate because the previous AP movement to SpecFocP sets up a relativized minimality effect. Thus, the derivation crashes again.

As for (63), they claim that according to Den Dikken (2006a: 50), in predicate-specifier structures of this type, the post-relator subject is generally 'frozen'.

Even though their analysis accounts for the unavailability of modifiers, it is based on very specific assumptions about the position of adjectives in the DP. According to other theories of adjective placement, their explanation would no longer be valid. Such a theory would be, for

²² In the cases where the noun is not modified by an adjective (structure outlined in (60) of this paper), it skips D_x in order to move to SpecDP; even though D_x is phonologically null, it is semantically contentful (it expresses person features for example) so movement is legitimate.

example, one in which adjectives are base generated higher than N, in the Specifier of some functional head (Julien 2005 among others). In this case, the NP would be able to move.

To sum up, I&D explain why the noun is obligatorily bare and why null prepositions are only licensed when the PP is in argument position, by invoking P incorporation. However, the Case checking mechanism, as well as the explanation for the unavailability of modifiers, are problematic.

5.2. Gehrke and Lekakou 2012

Gehrke and Lekakou (2012) argue that what in this essay I call null locative preposition cases are really cases of pseudo-incorporation of an NP, with both P and D being completely absent from the structure. They use the following properties of the phenomenon as support for their analysis:

- The noun has to be obligatorily bare.
- The bare noun in these constructions differs from indefinite bare nouns (as discussed above for example 21).
- An empirical fact they introduce, according to which the noun obligatorily takes narrow scope with respect to quantificational elements in the clause.
- Their claim that the nouns involved in this kind of structure denotes stereotypical location and/or an institutionalized activity.

Since the verb and the incorporating noun have a quite loose syntactic relationship (they do not form a complex head), the authors argue that these clauses are cases of pseudo-incorporation along the lines of Massam (2001). This means that the verb and the noun do not form a complex head; rather the two are interpreted as one semantic unit post-syntactically.

There are many parts of this proposal that pose theoretical problems. Firstly, it is very difficult to formally define what is meant by “stereotypical location” or “institutionalized activity”, which are two quite vague terms. Secondly, they have no explanation for how the locative meaning is achieved if the locative P is completely absent from the structure, apart from saying that this meaning simply comes from the lexical meaning of the noun. Thirdly, their analysis is based – among other things – on the claim they make that the noun involved in such structures cannot serve as an antecedent for anaphoric pronouns in subsequent discourse. They use (64) below as evidence, which is the same example that I&D use to make the opposite claim. Native speakers that I consulted gave mixed responses to (64) but all of them agreed that (65) is

grammatical. The grammaticality of (65) shows that these nouns can indeed serve as an antecedent for anaphoric pronouns, just as I&D claimed, and is an argument against the pseudo-incorporation analysis.²³

- (64) Pao paralia. Tin episkeptome kathimerina.
 go.1SG beach.ACC clitic.3SG.ACC visit.1SG daily
 ‘I go to the beach. I visit it daily’
- (65) Piga paralia simera. Tin ida apo to parathiro to
 went.1SG beach.ACC today clitic.3SG.ACC saw.1SG from the.ACC window.ACC the.ACC
 proi ke den boresa na antistatho.
 morning.ACC and not could.1SG subjunctive resist.1SG
 ‘I went to the beach today. I saw it from the window and I could not resist.’

Finally, one of the arguments that they give to support the lack of D in the structure is the fact that the nouns involved in these structures do not refer to a specific place but are rather number neutral. They give the following example:

- (66) To proi pigame paralia: i misi sto Marvovuni ki i ali misi
 the morning went.1PL beach the half.NOM *se*.the Mavrovuni and the other half.NOM
 sta Trinisa.
se.the Trinisa
 ‘In the morning we went to the beach: half of us to Mavrovuni and the other half to Trinisa.’

However, (67), the counterpart of (66) in which the phrase *pigame paralia* ‘we went to the beach’ appears with the preposition and the definite article, is still grammatical, i.e. the phrase is number neutral even when the definite article is present.

- (67) To proi pigame stin paralia: i misi sto Marvovuni ki i ali
 the morning went.1PL *se*.the beach the half.NOM *se*.the Mavrovuni and the other
 misi sta Trinisa.
 half.NOM *se*.the Trinisa
 ‘In the morning we went to the beach: half of us to Mavrovuni and the other half to Trinisa.’

Even the English translation ‘we went to the beach’, where it is very clear that there is both a preposition and a determiner in the structure, is number neutral.²⁴ Thus, this kind of behavior of the bare nouns in these examples cannot be used as evidence for the complete absence of D in the syntactic structure.

²³ I suspect that the mixed views regarding (23) are due to the fact that, in general, the expression “I visit place x” in Greek is not very common and thus sounds funny with an anaphoric pronoun, even if the antecedent is a DP with an overt determiner.

²⁴ This is a case of “weak definites”, discussed by Schwarz (2012) among others.

As for the distinction between temporary and permanent location, it is not clear how this would be explained within the framework of pseudo-incorporation because it is very easy to just say that incorporation is blocked because the permanent location cases are not cases of “stereotypical location”. However, as I said before, stereotypical location is hard to formally define – one could argue, for example, that the permanent location cases are actually the best example of a stereotypical location because the object never leaves that location – it is fixed there. An analysis which is not based on these loose semantic terms would be preferred and it is not clear what such an analysis would be if we were to accept that P is absent and that we are dealing with a case of pseudo-incorporation.

5.3. Terzi 2010b

Terzi (2010b) provides an overview of the properties of the phenomenon and relates it to similar phenomena in other languages, namely null locative prepositions in northern Italian dialects and sentences like *I'm home* in English. She then proposes an analysis of null prepositions that assumes the structure of locative PPs in Terzi (2010a) and builds on Collins’ (2007) analysis of *home* in English.

The structure that she proposes for the locative PP is the following (Terzi 2010b: 180):

(68) [P_{PLoc} [P_{Loc} 0 [DP 0 [XP locative [NP PLACE [DP *ground argument*]]]]]]

As discussed in section 3, the XP ‘locative’ is the modifier of PLACE and in languages like Greek it corresponds to locative prepositions – excluding the prepositions *se* and *apo*, which are considered to be functional and to occupy the P_{Loc} head position in the structure in (68). The DP designated as *ground argument* in (68) is the possessor of PLACE and, in the examples of null prepositions present in this paper, this DP is the noun-complement of the null preposition.

The author then assumes Collins’ (2007) Edge(X) condition, which is presented below (Terzi 2010: 180):

- (69) a. Edge(X) must be phonetically overt.
 b. the condition in (a) applies in a minimal way, so that either the head or the Specifier, but not both, are spelled out overtly.

This means that, for (68) to satisfy the Edge(X) condition, either P_{Loc} (the head of PP_{Loc}) or the Specifier position of PP_{Loc} has to be overt, and the two cannot be overt at the same time. Therefore, in the presence of a null preposition under P_{Loc}, the Specifier position of PP_{Loc} has to be spelled out overtly. This is achieved by movement of the ground argument DP to the Specifier

position of PP_{LOC}.

She then claims that there is subsequent movement of the ground argument DP to the Specifier position of PredP. PredP is the phrase that contains the verb and its arguments; thus, if the PP is an adjunct, it is external to the PredP and movement of the PP to SpecPredP is impossible. This explains the ungrammaticality of null prepositions when they are the head of a PP in adjunct position.

Even though Terzi's (2010b) analysis successfully accounts for the facts, there are two parts of the analysis which are problematic. Firstly, even though the movement of the ground argument DP to the Specifier position of PredP accounts for the ungrammaticality of null prepositions when the PP is in adjunct position, this movement is not justified by the author. Secondly, Terzi's (2010b) proposal as is cannot account for the ungrammaticality of sentences in which location is perceived as permanent; there is nothing in the theory explaining how the same PP, when it is in argument position, can sometimes be grammatical and sometimes not. Since incorporation is not involved in her analysis, it is difficult to combine it with my proposal involving the verb *ime* or the light verb v_{BE} and an incorporated preposition.

To sum up, Terzi's proposal does not provide a satisfactory explanation for the ungrammaticality of overt determiners and modifiers and does not include P incorporation, which is required (in my proposal) to account for the difference in grammaticality between expressions where location is perceived as temporary and expressions where location is perceived as permanent. It is not clear what aspects of Terzi's proposal could be modified to account for the distinction between (7) and (8) or connect this distinction to the related phenomenon of *ser* versus *estar* in Spanish or Portuguese.

To sum up, in this section I gave a brief overview of three alternative analyses of the phenomenon, discussed some of the problematic parts of these analyses, and explained why they cannot automatically be extended to account for the permanent versus temporary location distinction. In the following section, I will discuss some possible shortcomings of the analysis adopted in this essay and issues for further research.

6. Further issues

In this section, I will discuss some problematic aspects of the proposal presented in this essay and I will suggest some topics for further research.

My proposal for the structure of the locative constructions with null prepositions in question in this essay has some problematic aspects, which have to be further investigated. Firstly, more research into the semantics of PLACE is needed, since it is crucial for the analysis. The details of the semantics of this silent noun are important for the understanding of locative constructions not only in Greek, but also other languages. Secondly, the licensing conditions of PLACE should be made more specific. Terzi (2010a) states that it is licensed through incorporation into a c-commanding head, while I have claimed that this head must have a locative feature. Research on locative PPs in languages for which PLACE has been proposed could shed light on the licensing conditions of the noun. Thirdly, the current proposal does not specify the category of the projection of the locative prepositions like *pano* ‘on’, which is the same projection where we find the bare nouns when there is no overt locative preposition (this projection is simply named XP in Terzi (2010a) and in the current essay). Fourthly, my basic claim in the current proposal is that when the nouns occupy this XP projection, the locative meaning is obtained through incorporation of the null locative preposition of the PP into the verb. However, we should find evidence from other languages to support such a claim. Finally, in the current proposal, PLACE is part of a DP with a silent D. The exact syntactic structure of this DP is crucial for the analysis, especially because it affects the morphology of the nominals in question. The following extract from Terzi (2010b) is representative of our lack of understanding of this syntactic structure.

One of the points to be kept in mind [...] is that the D position of PLACE is also silent. The reasons for this are not clear in Kayne (2004, 2005), while for Collins (2007) they follow from the fact that it is a ‘light’ noun, and, as such, it has a reduced syntactic structure. We will not elaborate further on this (very important) issue here, but take for granted that PLACE or its overt counterpart, are associated with a null D, remaining agnostic as to whether this D is syntactically present but silent or is entirely absent – and what the effect of this difference is on the special behavior of the ‘nominals’ under investigation. (Terzi 2010b: 181)

Moving to the explanation given for the distinction between permanent and temporary distinction, there is an important issue for which the proposal presented in this essay currently

does not account for: why in Spanish and Portuguese – even though there is incorporation of a preposition into the copula– there is an overt preposition present in the structure, while in Greek this preposition is null. To make this difference more clear, consider the two “temporary” examples in (70) and (71).

(70) O Janis ine Agglia. (Greek)
 the.NOM John.NOM is.3SG England-ACC
 ‘John is in England.’

(71) Juan está en Inglaterra. (Spanish)
 John temp.is.3SG in England
 ‘John is in England’²⁵

In (70) there is incorporation of a null preposition into the copula *ine* and a) there is no overt preposition at all in the structure and b) the copula is spelled out with the same phonological form that it would have in the absence of incorporation. In (71), on the other hand, a) there is an overt preposition (*en* ‘in’/ ‘at’) and b) the copula *ser* is spelled out as *estar*.

The question is what preposition incorporates into the verb and why there is an overt preposition in Spanish. Gallego and Uriagereka (2009) provide two possible solutions to the puzzle of what preposition incorporates into the copula and what is spelled out as a preposition in the PP (or in the morphology of the adjective): they say that either the preposition which appears overtly in the PP is the one incorporating but its downstairs copy is also spelled out overtly or that there is a double, i.e. what incorporates into the verb is some preposition in the structure, which is distinct from the overt preposition of the PP. If the first option is the mechanism in place, then one could argue that the same operations apply in both languages, i.e. the preposition of the PP incorporates into the verb and its downstairs copy is still pronounced, but in Greek this preposition happens to be null and the copy is, thus, silent. If the second option is what happens, then one could say that it is a null preposition that incorporates into the verb in both languages.²⁶ This, however, does not answer the question of why this null preposition happens to be the same as the locative preposition in Greek (hence, no overt preposition at all), while in

²⁵ Example provided by native speaker of Peninsular Spanish Melina Sánchez.

²⁶ This view is supported by examples like (viii) in Spanish, where *estar* has the meaning of ‘is here/there’:
 (viii) Juan está.
 John temp.is-3SG
 ‘John is here/there’

If we adopt Kayne’s (2005) analysis of *here* and *there* in English, where there is a silent noun PLACE in the structure, then one could analyze examples like (viii) as involving a null preposition modifying PLACE. According to my Portuguese informants, sentences like (viii) are grammatical in Portuguese as well.

Spanish it seems to be distinct from the locative preposition (since there is still an overt preposition in the locative PP).

Even though I currently have no answer to this question, there is an issue brought up by Terzi (2010b) that could be relevant to the discussion: she makes the observation that in all the languages that exhibit the phenomenon of null locative prepositions the preposition for directed motion and for static location is the same (in Greek, for example, this preposition is the preposition *se*).²⁷ Spanish and Portuguese, on the other hand, both have two different prepositions for directed motion and static location (Spanish: *a* ‘to’, *en* ‘at’/ ‘in’; Portuguese: *a* ‘to’, *em* ‘at’/ ‘in’). This difference between Greek and Spanish and Portuguese could be relevant to the difference they have with respect to the presence of an overt locative preposition but whether this is true or not is a topic for further research.^{28,29}

²⁷ More research has to be done on this generalization to determine a) whether it is actually true and b) what this generalization can tell us about the syntactic representation of the null prepositions.

Firstly, in order to state such a generalization regarding the “phenomenon” we have to be careful with defining what the phenomenon is. The northern Italian dialects and Greek have the same properties: no preposition, no determiner, no modifiers. There is no research on Aromanian and Macedonian, as far as I know, so we cannot be certain about their properties, but the examples given in Tomic (2006) are very similar to the Greek examples. Myler (2013) and Biggs (2013) give data from two dialects of British English that have null locative prepositions – only for directed motion in Myler’s dialect and for both directed motion and static location in Biggs’ dialect. However, in both these dialects the nouns are not bare; rather, they are preceded by an overt determiner and modifiers are grammatical. So are these cases of the same phenomenon or not? If they are, then Terzi’s generalization wouldn’t hold anymore because English does have two different prepositions for directed motion and static location. (And yet, they seem to be different enough that we might not worry too much)

Secondly, more research should be done on Macedonian and Aromanian to see if the generalization holds in these two languages. According to Tomic’s (2006) description of the two languages, Macedonian has only one preposition for both directed motion and static location (and thus falls into the generalization) but Aromanian has two different prepositions, which would make the language an exception to the generalization. However, Aromanian seems to have a complicated system of locative prepositions (which includes more than one preposition for ‘to’ and one for ‘at’), with static location prepositions sometimes used to denote directed motion and vice versa, so more research is needed for us to draw a clear conclusion.

²⁸ Many studies (Koopman 2010 among others) suggest that PP_{loc} is further analyzed into PlaceP and PathP. In languages like English, Spanish and Portuguese, which have two separate prepositions for static location and directed motion, one could say that the preposition for static location is base generated in PlaceP, while the preposition for directed motion is base generated in PathP. However, in languages like Greek, which have only have one preposition, it is not very clear where the preposition is base generated in each case and whether there is movement of the preposition involved. Thus, what exactly incorporates (PlaceP or PathP) and which head is occupied by a preposition is relevant to what is spelled out.

²⁹ What I have not mentioned so far is that another language which has the two copulas *ser/estar* is Catalan, which is discussed in Gallego and Uriagereka (2009). The authors point out a difference between Catalan and Spanish: examples like (iii) in footnote 13 are ungrammatical in Catalan and such sentences are realized with *ser* and a locative clitic in the language. Catalan, contrary to Spanish and Portuguese, has one preposition for both static location and directed motion and one wonders whether this difference is relevant to the ungrammaticality of sentences like (iii) in Catalan. Of course, this depends on what the role of Terzi’s (2010) generalization is in the incorporation pattern.

Another issue for further research is the difference between Spanish and Portuguese with respect to locatives. Gallego and Uriagereka's (2009) analysis automatically explains the Portuguese facts (even though they do not discuss any data from Portuguese) but not the Spanish ones; the authors consider locatives in Spanish as problematic cases for their analysis and mention that the only explanation they can come up with is to say that location is inherently transitory despite our encyclopedic knowledge of the world. However, given that our encyclopedic knowledge of the world is relevant to the grammar in Portuguese and Greek, there must be a better explanation for the difference between Spanish and Portuguese, which could potentially shed more light on the nature of the two copulas.

Finally, I would like to present some additional topics for future research. Firstly, we have to look more carefully into the behavior of the noun *spiti* 'home/house', which displays properties that differ from those of the other nouns involved in the phenomenon. Secondly, we have to examine more carefully the various lexical constraints to see if these constraints have any implication for the syntactic structure of the constructions in question. Thirdly, I have not discussed at all in this essay the data from Hebrew introduced in section 4, which show a different kind of manifestation of the permanent versus temporary location distinction. It would be interesting to do further research on the Hebrew cases and try to understand their relation – if any – to the phenomenon in question and/or the *ser/estar* distinction in Spanish and Portuguese.

7. Conclusion

To conclude, in this essay I have given an overview of the properties of the phenomenon of null locative prepositions in Greek and I have presented a novel empirical observation, according to which null prepositions are ungrammatical when location is perceived as permanent with our encyclopedic knowledge of the world. I discussed the relevance of the *ser/estar* distinction in Spanish and Portuguese and I extended Gallego and Uriagereka's (2009) analysis of the temporary copula *estar* in Spanish as *ser* + P to the Greek phenomenon, arguing that the null preposition in Greek is incorporated into the verb and the incorporation of the preposition into the copula *ime* results in a temporary interpretation of the predicate, making sentences where the location is perceived as permanent ungrammatical. Moreover, I have proposed the presence of a light verb v_{BE} for other verbs denoting static location. I have also discussed problematic aspects of previous accounts of the phenomenon and have suggested a proposal, which builds on Terzi's (2010a) analysis of locative PPs in Greek. This proposal relies on the presence of the

silent noun PLACE; the details of its syntax and semantics are important for our understanding of locative constructions in general. Furthermore, I have discussed some problematic aspects of my proposal and the analyses it builds on and I have briefly discussed some topics for further research. Among the topics for further research, it is very important, in my opinion, to study more carefully similar phenomena in other languages, especially in Macedonian and Aromanian, data from which have not figured in any previous discussion of null prepositions. Finally, it would be useful to also look at the manifestation of the permanent versus temporary location distinction in other languages, such as Hebrew, to see whether a unified theory of this distinction is possible.

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