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Abstract: This paper offers a systematic account of various spatial expressions in Shupamem, a Grassfields Bantu language with very few lexical items dedicated exclusively to spatial terms, aiming to contribute to aspects of the structure of spatial P(reposition)s crosslinguistically. We consider locative Ps to be composed of two core parts, a functional head, PLoc, and a complement with nominal properties, building on proposals in Terzi (2008, 2010). It is demonstrated that Shupamem exploits, in a manner previously unattested, the full array of options as to which of the two components is overt or silent. It is further claimed that the language has directional Ps, all of which are silent.

The paper offers an analysis of the lexicalization principles to which the spatial P structure is subject, arguing that both internal and external merge operate and provide phonetic content to it, in a fashion directly reminiscent of EPP effects encountered in the sentential domain (Landau 2007 a.o.). Moreover, it investigates the properties of the items that are able to satisfy the lexicalization requirements of spatial Ps via internal merge. It accomplishes a unified account of spatial Ps across languages as diverse as Greek, Spanish and Bantu.

LEXICALIZING STRUCTURE CROSSCATEGORIALLY: THE CASE OF SHUPAMEM SPATIAL PS

INTRODUCTION

Research on spatial expressions in recent years has revealed that the syntactic structure of spatial P(reposition)s is much richer than what was previously thought (Koopman 2000, den Dikken 2010, Svenonius 2008, 2010, Terzi 2008, 2010a, a.o., and Cinque 2010 for an overview). Within this line of research, a consensus that has emerged with respect to locative Ps in particular is that their structure is made up of two core components. More precisely, Svenonius (2006, 2010) proposes the decomposition of the projection LOC into Place and AxPart, while Terzi (2008, 2010a) argues that the structure of locative Ps consists of a functional head, P_{Loc}, and its (lexical) nominal complement, PLACE, respectively. In this work we take up the latter approach in order to investigate in depth a number of properties associated with each of the two components. We focus on a language which, as we demonstrate, has the option of lexicalizing either component or both, with the result that it offers an empirical domain which is more transparent than what we are used to, thus contributing important insights into the structure of spatial Ps and, in particular, into the principles underlying its lexicalization.

The language we are studying is Shupamem, also known as Bamun, a Grassfields Bantu language spoken by about a million people in western Cameroon. In a manner shared by many African languages, Shupamem utilizes a number of nouns with, or without, a dedicated particle in order to express location. We demonstrate that, in doing so, it provides direct evidence that locative Ps are indeed the combination of a functional element, P_{Loc}, and a nominal lexical part, PLACE, as proposed in Terzi (2008, 2010a) on the basis of Indo-European languages such as Greek and Spanish. We claim that the language instantiates all logical options that fall out of this approach, with the consequence that it is rendered less exotic than one usually tends to think, and that the approach adopted is able to extend to the counterpart expressions of the nearby languages at least (see Aboh 2004, 2010 and Holmberg 2002).

A finding that emerged from our investigation of Shupamem locatives is that they allow only up to a certain degree of their structure to be left without phonetic content. We claim that this is achieved in a principled manner and, moreover, it offers evidence for the presence of EPP phenomena manifested, to our knowledge, for the first time in the Prepositional domain. In order to better understand these phenomena, we extended our inquiry to Shupamem directional/Path Ps. As in several other languages (see Aboh 2009 for West African and Son and Svenonius (2008), and references therein, for Austronesian), Shupamem often utilizes various types of verbal complexes instead of the familiar directional Ps. Here we claim that the language also employs (silent) directional Ps. This is a novel finding which, moreover, offers important information as to how much P structure can be left without phonetic content, which elements can satisfy the requirements for its lexicalization and how. In the end, the structure of spatial Ps is shown to become phonetically overt via both mechanisms identified in other domains of grammar, that is, via internal and external merge (with Shupamem contributing in a novel manner to establishing this finding).

The paper is structured as follows: section 1 presents the basic facts about Shupamem locatives, that is, the various types of locative PPs, some properties of the

nouns that participate in their structure and express location, as well as properties of the elements we label Logophoric Modifiers, which relate the spatial expression to the speaker's point of view. Section 2 provides a structure for Shupamem locative PPs and points out the unusual behavior of Logophoric Modifiers in a number of occasions. In section 3 we discuss a subset of directional expressions, primarily in association with Logophoric Modifiers, claiming that directional PPs are syntactically present, despite being phonetically empty. Section 4 offers an account of the role that Logophoric Modifiers play in terms of lexicalizing parts of the structure of spatial PPs, showing that they are similar in this respect to locative nouns, whose syntactic behavior we attempt to unify with that of other types of non-common nouns, all of which we subsume under the term 'light nouns'. In section 5 we briefly discuss examine how our claims concerning (non)-pronunciation of spatial PPs compare with current views to the EPP and how the Shupamem facts in particular demonstrate that we are indeed dealing with EPP phenomena in the domain of spatial PPs. Section 6 summarizes our findings and claims.

1. THE FACTS

Shupamem utilizes various ways to express location. This section presents the first three frames we identified as locative PPs.

1.1 TYPES OF LOCATIVE EXPRESSIONS

Locative expressions in Shupamem may employ a noun, a particle which resembles the familiar functional PPs of the Indo-European languages, or a combination of the two. The locative expressions that employ a noun can be further divided into two types, depending on whether the noun is preceded by a particle or not. It is rather accurate to say that the nouns which are preceded by a particle or, more precisely, require the presence of a particle, are the ones that refer to body parts. Thus, the above scenario gives rise to three types of overt transitive locative expressions, namely, locative PPs with phonetic content construed with a (DP) *ground argument*.

The first type of locative PPs is exemplified by the paradigm in (1), which employs a common noun alone (i.e., one that is not a body-part noun and is not preceded by a particle) in order to express location. Another noun that participates in the same paradigm is the noun *nkəp* 'coast', which has the meaning of 'near' as a locative.

- (1) a. *lérwà pà ndún tɛ̀bɛ̀*
 book is top/roof table
 'The book is on the table.'
- b. *lérwà pà nʃin tɛ̀bɛ̀*
 book is root table
 'The book is under the table.'

(2) below is meant to show that the nouns employed in locative PPs can also be used with a non-locative meaning. Hence, the noun *nʃin* 'root' of (1b), for instance, is

used as a common referential noun in (2) and, as such, it may be preceded by the indefinite article and be modified by an adjective.¹

- (2) móʔ p̀̀két nʃín mango p̀̀a fíχəʃí
 a nice root mango-tree is cool
 ‘A nice root of the mango tree is cool.’

Examples as in (3) constitute the second type of locative phrases, namely, those that utilize a body-part noun, preceded by the particle *m̀̀*. Other body-part nouns that may participate in this frame are *sí* ‘sex’, *jí* ‘nose’, *nʃút* ‘door/mouth’, *mí* ‘face’, all of which mean ‘in front (of)’, and *nkwen* ‘back’ for ‘behind’.

- (3) a. məsi p̀̀a m̀̀ tú John
 bird is *m̀̀* head John
 ‘The bird is on/above John.’
 b. í p̃i ténè m̀̀ yè leraʔ/ndáp
 he past stand *m̀̀* forehead teacher/house
 ‘He was standing in front of the teacher/the house.’

(4) below shows that the noun *yè* ‘forehead’, (3b), can also be used as a common noun, in which case it may be followed by the possessive pronoun and be modified by an adjective. Similar behavior is manifested by the rest of the body-part nouns.

- (4) í kúm p̀̀két yè ʃi
 he hurt nice forehead his
 ‘He hurt his nice forehead.’

For easiness of reference, throughout this paper we will refer to all nouns above as *locative nouns* when employed to express location.

Finally, as (5) demonstrates, there are locative expressions which employ a particle alone. This is an element that bears no resemblance to nominals, and is reminiscent of the Indo-European type of functional Ps.

- (5) a. món swó mbím t̀̀ p̀̀am
 child put money *t̀̀* bag
 ‘The child put the money in the bag.’
 b. í ʃù t̀̀ ndáp
 he stayed *t̀̀* house
 ‘He stayed in the house/at home.’

The only member of this category is *t̀̀* and its meaning is ‘in’, as will be discussed in some more detail in subsequent sections. The particle *m̀̀* that we saw in (3) earlier is similar to it, but is only used with body-part nouns.

¹ Shupamem does not have a definite determiner, and N-to-D movement is assumed for definite nouns (see Carstens (2000) for Bantu and Nchare (2008a) for Shupamem in particular).

The distribution of the locative particles and the nouns associated with them is in fact less strict than what we have presented. Hence, when *mə̀* is followed by the body-part noun ‘head’ for instance, see example (3a) repeated below as (6), the meaning of the expression can also be ‘on John’s head’, which amounts to saying that, unlike in (3a), the complex consisting of the particle *mə̀* and the noun ‘head’ does not convey the meaning of ‘on/above’ anymore. The same holds for the rest of body-part nouns preceded by *mə̀*.

- (6) *məsi pà mə̀ tú John*
 bird is on head John
 ‘The bird is on John’s head.’

Alternatively put, unlike in (3a), the noun ‘head’ is not a locative noun in (6) and it can very well be modified by an adjective, (7). In this case *mə̀* has the meaning of ‘on’.

- (7) *nyenye pet mə̀ paket ji fi*
 mosquito sat on red nose his
 ‘The mosquito sat on his red nose.’

On the other hand, the particle *tə̀* of (5) does not only take common nouns as its complements, but it can also be followed by a body-part noun such as *nti* ‘heart’, in which case the meaning of the complex *tə̀ nti* is ‘inside’:

- (8) *məsi pà tə̀ nti ndáp*
 bird is *tə̀* heart house
 ‘The bird is inside the house.’

In (8) above the noun *nti* is obviously used as a locative noun, which amounts to saying that the particle *tə̀* can also participate in the paradigm in (3), in which we only encountered *mə̀* until now.

We see therefore that locative nouns and associated particles are actually tendencies, an observation that leads us to conclude that there are two frames that employ locative nouns and they are divided along the lines of whether a noun alone is used to express location, (1), or a noun introduced by a particle, (3), (8). At the same time, a particle alone can express location, (5), (6), regardless of whether it may also do so in combination with a locative noun, (3). As a result, examples such as (3a) and (6), which involve the very same lexical items, convey different meanings. This follows from the fact that, when preceded by the particle *mə̀*, body-part nouns, can be used either as locative nouns, or as common nouns, hence, the same linear order ends up having two interpretations. In subsequent sections, we will demonstrate how each such interpretation is mapped into a different syntactic structure.

1.2 THE ‘LOCATIVE NOUNS’

That various languages may utilize nouns as locative expressions is well known about African languages (Aboh 2004, 2010, Svenonius 2007, Holmberg 2002, a.o.). With the exception of the above references however, no detailed description of the properties of such nouns or a precise account of them has been offered. In what follows, we undertake the first task to some extent, by focusing on two aspects of Shupamem locative nouns: modification and extraction of their object (i.e., of the ground argument of the locative).

1.2.1 *Modification*

We mentioned in passing that locative nouns can also be employed as common nouns and that in this case they may be preceded by the determiner, (2), or be modified by an adjective or the possessive pronoun, (2), (4). It was thus left implicit that these possibilities are not available when the same nouns are employed as locative nouns and this is indeed the case, as (9) and (10) below demonstrate for modification by the adjective ‘nice’. Construal of the locative nouns with the indefinite determiner is also impossible.

(9) *lérwà pà p̀̀két n̄́in t̀̀b̀̀è
book is nice root table cf. (1b)

(10) *í p̄́i téǹ̀ m̀̀ ỳ̀è lera?
he was stand-past *m̀̀* nice forehead teacher cf. (4)

Construal of locative nouns with the possessive pronoun is licit however, as (11)-(12) below demonstrate. But notice that that the interpretation of the possessive pronoun is not that of possession anymore. As the glosses indicate, the pronominal possessors are the ground arguments of the locative in such contexts.²

(11) lérwà pà n̄́in i
book is root poss.
‘The book is under him.’

(12) í p̄́i téǹ̀ m̀̀ ỳ̀è ʃi
he was stand-past *m̀̀* forehead poss.
‘He was standing in front of him.’³

² The same properties characterize the locative nouns of the Gbe-type languages that Aboh 2004, 2010 discusses. That is, they cannot be modified by an adjective, but they are compatible with a possessive pronoun (which is their ground argument).

³ The (different) form of the possessive pronoun in the two examples is contingent upon the noun class, and carries over to when these are used as common nouns: *n̄́in i* ‘his/its root’ and *ỳ̀è ʃi* ‘his forehead’.

1.2.2 Extraction of the ground argument

Wh-extraction of the ground argument of each of the three types of locatives in section 1.1 reveals interesting similarities and differences among them, but also with locative Ps crosslinguistically. Let us note first that Shupamem wh-questions are formed either in situ, or via a clefting strategy which involves the expletive pronoun *á*, the relativizer *jwo* and the Q(uestion) particle *nè* in the end of the sentence (Nchare 2008b). We are obviously employing the latter strategy here.

(13) below demonstrates that extraction of the ground argument of an ordinary noun locative, i.e., from one that is not a body-part noun and is not introduced by a particle, is perfectly grammatical.

- (13) *á jija tɛ̀bɛ̀ jwo mbím pà ndún nè*
it (is) which table rel.zer money is on Q
'for which table is it that the money is on?'
i.e., 'which table is the money on?'

On the other hand, extraction of the ground argument of a body-part noun locative requires the presence of a (possessive) resumptive pronoun:

- (14) *á jija ndáp jwo mátwá pà mɛ̀ ye *(j)ì nè*
it (is) which house rel.zer car is mɛ̀ forehead its Q
'for which house is it that the car is in front of it?'
i.e., 'which house is the car in front of?'

Finally, extraction of the ground argument of a particle-type locative is illicit, (15), and no resumptive strategy is available to rescue it.⁴

- (15) **á jija pam jwo mbím pà tɛ̀ nè*
it (is) which bag rel.zer money is in Q
'for which bag is it that the money is in?'
i.e., 'which bag is the money in?'

To summarize the findings of this section, locative nouns, unlike common nouns, cannot be modified by an attributive adjective or be preceded by a determiner. On the other hand, extraction of their ground argument is reminiscent of extraction from common nouns, in that it is licit (with a resumptive pronoun required when extracting from a body-part noun). Thus, noun locatives differ from particle locatives, from which extraction is not an option, (15), just like it is not an option for many languages that lack the English type Preposition stranding. The picture that emerges is not unfamiliar: it is a pattern reminiscent of the stranding possibilities available for locative Ps of languages like Greek and Spanish, for instance, which although do not have the English type P-stranding, allow extraction of the arguments of those locatives which are the modifiers of the silent noun *Place* (Terzi 2008, 2010a). It was

⁴ Pied-piping is not an option either, but this should not come as a surprise given the extraction strategy of the language, i.e., clefting. In order to extract the ground argument of 'in', the form *tɛ̀ ntí* 'inside', cf. (8), may be used instead of *tɛ̀* 'in'.

in fact the stranding possibilities primarily that led Campos (1991) to attribute nominal properties to such locative expressions in Spanish, i.e., the so-called ‘substantive Ps’, (16), (see also Plann (1985)).

- (16) a. De qué edificio_i está cerca t_i la facultad?
 what building is near the school
 ‘What building is the school near (to)?’
 b. La pastelería de la cual_i vivo detrás t_i es buenisima.
 the pastry shop of which I live behind is excellent (Campos 1991: 741)

In Shupamem, the locative expressions that allow extraction of their ground arguments are indistinguishable in phonetic shape from common nouns.

1.3 LOGOPHORIC MODIFIERS

There is one more distinctive ingredient in the structure of Shupamem spatial expressions that we need to introduce from the outset, as it will play a central role throughout the paper. This is the existence of a number of elements that denote the (spatial) relationship of the speaker to the scene described by the spatial PP.

The examples in (17) show that all three (types of) locative Ps we have presented so far may be preceded by either one of four elements we identified, and label *Logophoric Modifiers*.⁵ The meaning of the Logophoric Modifiers is given in (18) and their presence is optional, as is standardly expected of modifiers.

- (17) a. lérwà pà (má/mfî/nkú/njí) ndún tètè
 book is top table
 ‘The book is on the table.’
 b. mátwá pà (má/mfî/nkú/njí) mèt jé Adam
 car is mèt forehead Adam
 ‘The car is in front of Adam.’
 c. món swó mbim (má/mfî/nkú/njí) tèt pàm
 child put money tèt bag
 ‘The child put the money in the bag.’

(18)

má: the locative describes a scene far or at a lower level from the speaker

mfî: the locative describes a scene across and at the same level as the speaker

nkú: the locative describes a scene at a higher level from the speaker

njí: the locative describes a scene at an elevated surface across from another elevated surface on which the speaker is located.

⁵ We borrow the term ‘Logophoric’ from Binding theory, where it has been used for anaphoric elements associated with the speaker, see Koopman and Sportiche (1989) and Varlokosta and Hornstein (1993) a.o. Although it is not immediately relevant for the syntactic structure of the spatial Ps that we propose, we would like to confirm that these are indeed elements associated with the point of view of the speaker in Shupamem (rather than the subject of the sentence, for instance). Hence, if the speaker is standing on the third floor of a building, for instance, and is in a position to see what is going on in the second floor, where a boy is trying to place a book on the top of a bookcase that is taller than him, the speaker cannot utter ‘The boy is trying to put the book up on the top of the bookcase’, where *nkú* modifies ‘on the top of’.

While perhaps exotic at first glance, the elements in (17)-(18) have close counterparts in English, as the underlined parts in (19) below demonstrate, (C. Collins, p.c., Svenonius 2010).

- (19) a. The boat drifted from back behind the hill.
 b. The boat drifted from down inside the cave.
 c. The boat drifted from up above the dam.

One of the points that this paper will establish is that the above elements in Shupamem are often called upon to play, in a novel manner for the syntax of PPs, a role that is not shared by their English counterpart elements in (19).

2. THE STRUCTURE OF SHUPAMEM LOCATIVES

In this section we will lay out the syntactic structure we propose for the Shupamem locatives we introduced in the previous section. Before doing that, we will present in some detail the core ingredients of the views we assume for the structure of locative Ps, to which we referred only in passing in the Introduction. It will emerge that although these views were built on the basis of typologically different languages, Shupamem fits well with them, and, moreover, fills in with information that renders the structure of locative Ps crosslinguistically more complete.

2.1 BACKGROUND ASSUMPTIONS

Drawing upon various distributional properties that locative Ps share with adjectives in Greek, Terzi (2008, 2010a) proposed that they are indeed like adjectives – in the sense that they modify a noun, albeit one without phonetic content. On the basis of a similar element that has been associated with the demonstrative locatives ‘here’ and ‘there’ in English (Kayne 2004), she calls this noun *Place*, or PLACE in its silent manifestation, and holds that what we see as the ground argument of locatives is the possessor of *Place*. Subsequently, and given that the locative Ps under consideration manifest properties that differentiate them from nouns at the same time, she proposes that the nominal projection of *Place* is the complement of a functional head, P_{Loc}. Similar ideas are present in Botwinik (2008), Botwinik and Terzi (2008), Noonan (2010), and Pantcheva (2008), who also consider the ground argument of locatives to be the possessor of PLACE.⁶

- (20) [_{PPLoc} [_{PLoc} 0 [_{DP} 0 [_{XP} *locative* [_{NP} PLACE [_{DP} *ground argument*]]]]]]]

Several advantages fall out of this approach to locative Ps. To single out a couple: first, it is in a position to explain the oscillating status of locative Ps across the functional vs. lexical dimension (in a sense pointed out by van Riemsdijk (1990, 1998) when he considers (some) Ps semi-lexical). Then, the nominal component of the proposed structure provides the tools to account for the special Binding properties

⁶ Watanabe (2008) discusses similarities that measure phrases associated with locative PPs share with measure phrases associated with adjectival projections in Japanese (see also Winter 2005 for English and Dutch) and concludes that (a subset of) locative Ps share a certain portion of syntactic structure with adjectives. As a result of his (different) objectives however, he does not offer a detailed structure of the lower part of locative PPs, and does not hold that some nominal element is present in their structure.

of locative PPs, pointed out by Reinhart and Reuland (1993) and further investigated in Botwinik (2004, 2008).

Terzi (2008, 2010a) extends her claims to account for locative PPs in Spanish and (to some extent) in English and further holds that PLACE is always silent, while P_{Loc} has the option of having phonetic content.⁷

2.2 THE STRUCTURE OF SHUPAMEM LOCATIVES

In this work, we propose that the Shupamem locatives we have presented so far essentially fall within the structure in (20) as well, and, moreover, they demonstrate that either part of it, i.e., either P_{Loc} or PLACE, can surface with or without phonetic content (although not both at the same time). Taking into consideration that the language employs elements that are phonetically identical to nouns in order to express location, we hold that PLACE is instantiated, rather than modified by these elements, although nothing crucial hinges upon this departure from earlier claims and from the structure in (20), in which locatives are shown to modify PLACE.⁸ As a result, we propose the structure below for Shupamem locatives, which also provides for a position for the Logophoric Modifiers to the right of P_{Loc} :

(21) [_{LogP} [_{Log} [_{PP_{Loc}} [_{PLoc} 0 [_{DP/NP} locative noun/PLACE [_{DP} *ground argument*]]]]]]⁹

One more difference between (20) and (21), besides modification vs. instantiation of PLACE respectively, is that there is no XP projection in the latter. This should not come as a surprise, since XP essentially served the purpose of a place holder for those locatives that were considered to modify PLACE in Terzi (2008, 2010a). Finally, given the paradigm in (11)-(12), where the pronominal ground argument of the locative is a possessive pronoun, we extend the claims made on the basis of other languages and consider the ground argument of Shupamem locatives to be the possessor of PLACE as well.¹⁰

Having proposed (21) as the structure for Shupamem locative PPs, let us now see where each of the locatives we identified in section 1.1 stands within respect to it.

⁷ This particular aspect of the proposal was based primarily on the empirical domains from which the data were drawn in Terzi (2008, 2010a). On the other hand, the idea that PLACE, along with other silent nouns, cannot have an overt counterpart is defended on conceptual grounds in Kayne (2005a).

⁸ But see Botwinik-Rotem (2008b) for the view according to which the reason why locative adverbials are not construed with a ground argument in Hebrew is precisely because they lexicalize *Place* (rather than modifying a silent counterpart of it).

⁹ Immediately to the left of P_{Log} we assume to be located the phrase that hosts the Degree expressions familiar from the Indo-European languages (Koopman 2000, Svenonius 2007, 2009, den Dikken 2010).

(i) [_{DegP} ndàà [_{Deg} [_{LogP} nkú [_{Log} 0 [_{PP_{Loc}} [_{PLoc} 0 [_{DP/NP} ndún [_{DP} ndáp]]]]]]
 right nkú on house
 ‘Right up on the house.’

¹⁰ Notice that the structure we propose for the Shupamem locative Ps in (21) takes the Logophoric Modifiers to precede the higher part of the structure, P_{Loc} , contrary to the detailed cartographic schema suggested in Cinque (2010), where his comparable RelViewP positions follow P_{Loc} instead. This is so primarily because the Logophoric Modifiers precede P_{Loc} when it is overt in Shupamem – provided, of course, that our view of (3)=(22b) is on the right track. Cinque’s (2010) order on the other hand, although grounded primarily on (admittedly, well-founded) conceptual grounds, is based on empirical evidence in which P_{Loc} is silent. There is also the possibility that the Logophoric Modifiers have moved from the position Cinque takes them to be to the one we assume in (21), and see also footnote 21 later in the paper.

PLACE. The result is that the complex consisting of the particle and the locative noun has the meaning of ‘inside’.¹¹

We conclude that the three types of Shupamem locative expressions presented in section 1.1 instantiate three out of the four logical options that are made available by the structure in (21) in terms of which core component of the locative structure has phonetic content. Hence, P_{Loc} is silent and *Place* is overt in (22a), both P_{Loc} and *Place* are overt in (22b), while P_{Loc} is overt and *Place* is silent in (22c). In the following section it will be argued that the fourth possibility, that is, the one in which both P_{Loc} and *Place*, are silent is also available, albeit in disguise.

2.3 A SILENT LOCATIVE: *AT*

When trying to elicit a locative expression that is the counterpart of the English preposition ‘at’, the first response obtained is (23a), in which the ground argument is ‘house/home’. When containment is excluded, however, we see that the same locative is ungrammatical, (23b). We conclude therefore that *tə* is not the Shupamem counterpart of English ‘at’ (which would be rendered homophonous to ‘in’ of (23c)=(22c) otherwise).

- (23) a. í ʃù tə ndáp
 he stayed *tə* house
 ‘He stayed in the house/at home.’
- b. *í ʃù tə Brooklyn
 he stayed *tə* Brooklyn
 ‘He stayed in Brooklyn.’
- c. món swó mbim tə pàm
 child put money *tə* bag
 ‘The child put the money in the bag.’

Searching for a grammatical counterpart of (23b), or else, for the counterpart of the quintessential English locative ‘at’, we discover that several alternatives are possible, as seen in (24). Alternatively put, all variants in (24) can answer the out-of-the-blue question ‘where did he remain’, and choice of response depends on the relationship of the responder to what he describes with the locative.

- (24) a. í ʒítńó *(má) Brooklyn
 he remained *ma* Brooklyn
- b. í ʒítńó *(mfí) Brooklyn
 he remained *mfí* Brooklyn
- c. í ʒítńó má *(nkú) Brooklyn
 he remained *nkú* Brooklyn

¹¹ A generalization that emerges from what we said so far is that body-part locative nouns are always preceded by an overt P_{Loc} while the rest of locative nouns by a silent one. Whether this reflects something deeper property of the language than just a correlation is not obvious to us.

- d. í ʋítɲə *(nʒí) Brooklyn
 he remained nʒí Brooklyn
 ‘He remained at Brooklyn.’

The same alternatives are also available when the locative P is an adjunct, (25). What is interesting is that the elements employed in both paradigms are the *very same* ones we have identified as Logophoric Modifiers.

- (25) a. Adam jànkè lérwà *(má) ndàntèn
 Adam read book mǎ store
 b. Adam jànkè lérwà *(mfi) ndàntèn
 Adam read book mǐ store
 c. Adam jànkè lérwà *(nkú) ndàntèn
 Adam read book nkú store
 d. Adam jànkè lérwà *(nʒí) ndàntèn
 Adam read book nʒí store
 ‘Adam read the book at the store.’

The above sets of facts lead us to conclude that ‘at’ is silent in Shupamem, i.e., AT, and that what we see in (24) and (25) are the modifiers of it. Therefore, in line with our proposals in (21)-(22), we take the structure of Shupamem ‘at’ to be as in (26), which essentially amounts to the fourth option made available by (21), namely, the one in which both, P_{Loc} and *Place*, are silent.

- (26) [_{LogP} *(má/mǐ/nkú/nǐ) [_{Log} [_{PPLoc} [_{PLoc} 0 [_{DP/NP} PLACE [_{DP} ndàntèn]]]]
 AT 0 store
 ‘at the store’

But notice an important difference between the locatives in (22a-c) and the silent locative in (26): while the Logophoric Modifiers are optional in (22), as is standardly expected of modifiers, they are obligatory in (24) and (25). We return to this important issue in section 4. To this effect, we will present in the following section additional environments in which the Logophoric Modifiers are obligatory, a task that leads us to the realm of directional/Path Ps.

3. DIRECTIONAL PS

There are also various manners to express direction in Shupamem but, by contrast to location, this is achieved only via already existing items from the lexicon. In other words, there is no evidence for some directional P in the language, unlike what we demonstrated to be the case for locative Ps, at least with respect to *mə* and *tə*.

Shupamem expresses motion via a motion verb followed by its nominal argument (which is preceded by a Logophoric Modifier), or via some verbal complex that includes a motion verb. Here we will focus on the first type of directional expressions, and refer only in passing to those that employ verbal complexes, as they constitute a whole different research topic on their own.

- (33) 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.

According to (33), the impossibility of an overt ‘to’ in (34a) below is related to the special status of English nouns such as *home*, which Collins calls ‘light nouns’, and which, as a result of this status, raise up to the Specifier position of the PP headed by ‘to’.¹⁵ The only way for (33) to be respected in this case is for ‘to’ to be left unpronounced. When the complement of the spatial P is not such a noun, but an ordinary noun such as *the university* in (34b), for instance, it does not raise to Spec, P and the directional ‘to’ is (and must remain) overt in order for (33a) to be respected.¹⁶

- (34) a. I’m going [PP home [P (*to) [NP ~~home~~]]]
 b. I’m going [PP [P to [NP the university]]]

Assuming that the requirement for an Overt Edge holds for Shupamem spatial Ps, we arrive to the following scenario for each type of the locative expressions we have identified: for those locative PPs that employ a locative noun and no particle, the locative noun, in this case the noun *ndún*, moves to P_{Loc} rendering the Edge of PP_{Loc} overt, (35a). Note that, unlike with English *home* above, we will consider movement of locative nouns an instance of head movement in Shupamem which therefore targets the head P_{Loc}.

- (35) a. ordinary noun locatives, (1)
 [LogP [Log [PPLoc [P_{Loc} **0** [DP/NP *ndún* [DP *tèbè*]]]]]
 ↑
 ‘on the table’

The type of locative PPs that consist of a body-part locative noun preceded by a particle satisfy (33) by virtue of the particle residing in P_{Loc}. If on the right track, we have to assume that movement of the locative noun does not take place in this case, otherwise (33b) would be violated.

- (35) b. body-part noun locatives, (3)
 [LogP [Log [PPLoc [P_{Loc} *mè* [DP/NP *tú* [DP *John*]]]]]
 ‘above John’

¹⁵ More precisely, Collins considers *home* to move to the specifier of P_{Loc} and the resulting PP_{Loc} to the specifier of the directional P (when there is one embedding P_{Loc}, c.f., (34)). The resulting PP subsequently moves to the specifier of PredP (a projection immediately dominating the lowest VP-shell), with this last step being responsible for the different behavior of argument and adjunct PPs with respect to the pronunciation of P, i.e., *I went (*to) home, I stayed (at) home, I did my homework *(at) home*.

¹⁶ See also Cattaneo (2009) for similar facts in a number of Northern Italian dialects, and a similar analysis. Very similar facts are manifested in Greek, but Ioannidou and den Dikken (2006) account for them in a different manner, to which we return briefly in section 4.3. Terzi (2010b) extends the study of Greek to cover a number of (null) spatial Ps and the bare nouns that appear as their complements, offering an analysis according to which the latter, which are by no means restricted to *home* in Greek, are special types of elements, able to lexicalize the Edge of Ps just like English *home*.

When location is expressed by a particle alone, (33) is satisfied without movement of the locative noun again, since the particle occupies P_{Loc} , hence renders its Edge overt. Movement of the locative noun could not save the structure in this case anyway, since this noun is now PLACE and does not have phonetic content.

- (35) c. particle-type locatives, (5)
 $[_{LogP} [_{Log} [_{PPLoc} [_{PLoc} \text{tə} [_{DP/NP} \text{PLACE} [_{DP} \text{pàm}]]]]]]$
 ‘in the bag’

Finally, when neither P_{Loc} nor the locative noun have phonetic content, i.e., when the locative expression in question is ‘at’, i.e., (26), the Edge of P is not overt and the outcome is ungrammatical, (35d). As before, movement of PLACE cannot save (35d), since PLACE has no phonetic content. Moreover, the ungrammaticality of (35d) leads us to conclude that an ordinary noun such as the ground argument of the locative, i.e., ‘store’, is not able to render the Edge of PP_{Loc} overt (presumably because it does not move to P_{Loc} (or to its specifier as an XP alternatively) just as ‘the university’ does not move in (34b)).

- (35) d. *at*, (24)-(25)
 $*[_{LogP} [_{Log} [_{PPLoc} [_{PLoc} \mathbf{0} [_{DP/NP} \text{PLACE} [_{DP} \text{ndàntèn}]]]]]]$
 ‘at the store’

Notice that the presence of some Logophoric Modifier becomes obligatory precisely in (35d), that is, when (33) cannot be satisfied via some other means. This leads us to believe that when neither P_{Loc} nor *Place* have (or, have obtained) phonetic content, what renders the Edge of P_{Loc} overt are the Logophoric Modifiers.

Therefore, assuming that the Edge of spatial PPs must (minimally) have phonetic content in Shupamem, a scenario that is entirely reasonable judging from English, we can understand the properties of the first three types of Shupamem locative PPs identified in the beginning of the paper, namely, the ones with which the presence of Logophoric Modifiers is optional. Most importantly, however, it turns out that we are also able to explain why the Logophoric Modifiers are obligatory with the fourth type of locatives, namely, those that are radically devoid of phonetic content. We are led to conclude that, in this case, which is exemplified by the locative AT, the Logophoric Modifiers, in addition to contributing the speaker’s point of view to the spatial P, supply the Edge of PP_{Loc} with phonetic content. As a consequence of this latter role they are called upon to play, which does not seem to be matched by their counterparts in languages such as English, (23), they cannot be omitted.

Notice that the overall pattern laid out in this section with respect to the locative nouns moving to P_{Loc} and providing it with phonetic content appears to be supported by the extraction facts of the ground arguments of locatives in section 1.2.1, i.e., (13)-(15). There we noted that wh-extraction of the ground argument is possible from the first type of locatives, (35a)=(13), but not from the third, (35c)=(15). Given our claims in this section, what the extraction possibilities in (13)-(15) bring to mind is *Holmberg’s generalization*, see Holmberg (1999) for a recent discussion, according to which (short) movement of the object in Scandinavian is contingent upon verb movement. In the present context, wh-extraction of the ground argument of locatives appears to be possible precisely in those cases that the locative noun moves in

satisfaction of (32), a state of affairs closer to Fox and Grodzinsky’s (2005) discussion of Scandinavian Quantifier Movement in fact. The validity of the parallelism has to be investigated, of course, along with the extraction of the ground argument in (14), where the locative noun arguably does not move, (35b), but extraction is possible (although only with a resumptive pronoun). As for the reasons that trigger movement of the locative nouns to P_{Loc} , see section 4.3.

Turning to directional Ps, similar considerations are able to explain the obligatory presence of Logophoric Modifiers with TO and FROM in (27)-(29). In other words, the obligatory presence of the Logophoric Modifiers with the directionals in (27)-(29), should also be attributed to the fact that they constitute the means via which Spec, P_{Dir} becomes phonetically overt. We should note again here that an ordinary DP that is the goal or source argument of the directionals TO and FROM is not able to render the Edge of P_{Dir} phonetically overt, just like the ground arguments of locative Ps in (35) cannot either. This is another important difference between ordinary nouns and the elements we have called locative nouns, to which we return in section 4.3.

4.2 SHUPAMEM *HERE* AND *THERE*

The idea that when the Logophoric Modifiers are obligatory they lexicalize parts of the PP structure gains support from their interaction with the locative demonstratives *ɲí/ɲá* ‘there/here’. We will assume that, just as English *here/there* in Collins (2007) account, Shupamem *ɲí/ɲá* are ‘light nouns’, and, as a consequence of this status, to which we return in the following section, they raise higher than ordinary DPs/NPs, in particular, to Spec, P in an instance of XP movement in this case.

If we are right, the ungrammaticality of (37) below is due to the fact that the Edge of the spatial PP is not minimally overt. If *tə̀* ‘in’ occupies P_{Loc} , cf. (22c)=(35c), movement of *ɲí/ɲá* to Spec, P_{Loc} , illustrated in (38), should not be possible, and the outcome should be ungrammatical, as it indeed is.

(37) *món swó mbím (*tə̀) ɲí/ɲá.*
 child put money in there/here
 ‘The child put the money in there/here’.¹⁷

(38) [_{LogP} 0 [_{Log} [_{PPLoc} [_{PLoc} **mə̀** [_{DP/NP} **ɲí/ɲá**]]]]]
 ↑
 *

¹⁷ Two complications arise with respect to our account of the ungrammaticality of (37). First, why is (37) ungrammatical while (34b) is not? In the latter case, one would expect that movement of the locative noun to P_{Loc} would give rise to ungrammaticality as well, but this is not the case. There are two differences between (37) and (35b), which can potentially explain their different grammaticality status: movement of *tú* in (35b) is an instance of head movement, while movement of ‘here’ and ‘there’ in (37) is phrasal movement. Second, it is conceivable that the licensing/checking needs of locative nouns are different from those of ‘here’/‘there’, in that the former allow checking of the relevant feature(s) with P_{Loc} via agree as well. In section 4.3 we provide an explanation for this grammaticality contrast that opts for the latter alternative.

The other complication has to do with the fact that the counterpart of (37) is grammatical in English. This grammaticality difference may have to do with the fact that the locative particle/P ‘in’ resides in different positions in the two languages, i.e., in P_{Loc} in Shupamem, but lower in English, as is indeed assumed in Cinque (2010) for English.

What this reasoning predicts is that *ɣí/ɣá* should be possible when P_{Loc} (or P_{Dir}) have no phonetic content, a prediction that is borne out, as the following examples demonstrate. Recall that we consider (39) below to involve the silent locative AT and (40) the silent directionals TO and FROM and we see that in both cases the presence of *ɣí/ɣá* is grammatical. What is even more supportive of our claims is that not only are *ɣí/ɣa* licit when the spatial Ps are null, but that the Logophoric Modifiers are optional again. Their optionality follows from our analysis since some element other than a Logophoric Modifier lexicalizes the Edge of the spatial Ps, in this case, *ɣí/ɣá* in the manner just explained.

(39) *í ʒítɲə (má/mfɪ/nkú/njí) ɣí/ɣá*
 he remained there/here
 ‘He remained there.’

(40) a. *í wón (má/mfɪ/nkú/njí) ɣí/ɣá*
 he went there/here
 ‘He went there.’
 b. *í lɔʒ (má/mfɪ/nkú/njí) ɣí/ɣá*
 he started/left there/here
 ‘He left from there.’

In the same vein, notice the grammaticality contrast between the above sentences and the ones below (which are (24) and (27a)-(28) slightly altered for easiness of comparison). (41)-(42) below differ from (39)-(40) in that the ground argument, (41), or the goal and source arguments, (42), are ordinary DPs. Unlike in (39)-(40), the Logophoric Modifiers are obligatory in this case. This contrast also follows from the line we are pursuing because common nouns, such as ‘Brooklyn’ or ‘house’, cannot lexicalize the Edge of the spatial P in (41)-(42), and this role is played by the Logophoric Modifiers, hence their obligatory presence. Once more, while Shupamem ‘here’ and ‘there’ are able to lexicalize the Edge of locative and directional PPs in (39)-(40), by virtue of ending up in Spec, P, ground or goal common noun arguments of spatial Ps are not, (41)-(42).¹⁸ As a result, the Logophoric Modifiers are optional in the former pair of sentences, but obligatory in the latter. We are led to conclude that they occupy their dedicated position in Spec, LogP in the former pair, but they are merged in Spec, P in the latter (and see footnote 21).

(41) *í ʒítɲə *(má/mfɪ/nkú/njí) Brooklyn/ndáp*
 he remained Brooklyn/house
 ‘He remained at Brooklyn/home’

¹⁸ Cinque (2009) reports facts from Grebo (a Kru language, de Melo 2005), where *ke* ‘there’ also seems to be employed when no overt spatial P is available. This is presumably why *ke* is obligatory in (i), but optional in (ii):

(i) Ne yi-da nə ne ke London (ii) Ne yi-da nə ne (ke) kae ye
 I see-past him affirm. there London I see-past him affirm. there house in-front-of
 ‘I saw him in London.’ ‘I saw him in front of the house.’

- (42) a. í wón *(má/mfh/nkú/njí) Brooklyn/ndáp
 he went Brooklyn/house
 ‘He went to Brooklyn/home.’
- b. í pí lo? *(má/mfh/nkú/njí) Grèce/ndáp
 he past leave/start Greece/house
 ‘He left Greece/home.’

Before ending this section, let us examine two more sets of facts in further support of our claims, in particular, in support of a silent ‘from’ and a silent ‘to’ respectively. Starting with the former, we repeat example (29) as (43) below in which, according to what we have proposed, the obligatory presence of a Logophoric Modifier is contingent upon a silent P_{Dir}, ‘from’. Surprisingly, (43) appears to be grammatical even without a Logophoric Modifier, (44). Notice, however, that the interpretation of the spatial P in (44) is not ‘from’ anymore. Instead, (44) has the meaning of ‘took/placed the book under the table’. If no silent P is present in (44), no element is required to lexicalize the Edge of such a P, and we understand why the sentence is grammatical without a Logophoric Modifier (and why it has a different interpretation). What is also predicted is that when a Logophoric Modifier is present in (44), the interpretation of the spatial expression is ambiguous between (43) and (44) – a prediction which is indeed confirmed.

- (43) m̀è piye lérwà *(má/mfi/nku/njí) n̄jĩn t̀èb̀è
 I took book under table
 ‘I took the book from under the table.’

- (44) m̀è piye lérwà n̄jĩn t̀èb̀è
 I took book under table
 ‘I took the book under the table.’

The following minimal pair offers further support for the presence of a silent P_{Dir} ‘to’, licensed by a Logophoric Modifier. In (45), which is (23a), slightly altered to include the Logophoric Modifier *má*, the presence of the latter is optional, a behavior which is expected since it modifies an overt P, i.e., *t̀è* ‘in’. But notice that *má* is not optional when the very same PP, i.e., *t̀è ndáp* ‘in the house’ is the complement of the verb ‘went’, (46). The ungrammaticality of (46) in the absence of *má* follows if the Logophoric Modifier is required in order to render some silent P overt – presumably the directional ‘to’.

- (45) í jũ (m̀à) t̀è ndáp.
 he stayed m̀à t̀è house
 ‘He stayed in the house/at home.’

- (46) í wón *(m̀à) t̀è ndáp.
 he went m̀à t̀è home
 ‘He went to the house.’

To conclude, after undertaking a closer look at the distribution of Logophoric Modifiers in Shupamem, we argued in the last two sections that, while they retain their interpretive properties, they are obligatory with spatial PPs that are not mapped onto items with phonetic content. We took this phenomenon to follow from the idea that spatial Ps although apparently silent, are subject to certain restrictions as to how much of their structure can be left without phonetic content. Such a view, expressed in Collins (2007), was based primarily on evidence from English, for which it was argued that the Edge of PP must be minimally overt and that this requirement is satisfied via movement of a set of elements identified as light nouns. In this work it was demonstrated that Shupamem spatial PPs are subject to similar principles with respect to the pronunciation of (parts of) their structure, satisfied in a similar manner in the case of locative PPs which have some phonetic content. In particular, we considered those PPs which do not contain a particle, (35a), to involve movement of the locative noun to P_{Loc} which thus becomes overt, while ‘here’ and ‘there’ to raise to the specifier position of spatial PPs with similar results.

Most importantly however, it was demonstrated that the obligatory presence of Logophoric Modifiers with those spatial PPs that are entirely devoid of phonetic content constitutes an additional manner of lexicalizing parts of the P structure. We understand this manner to essentially amount to the other subcase of the operation merge that is available in grammar, namely, to external merge, which obtains in the paradigm at hand when no element in the structure of spatial PPs is available to lexicalize the Edge of PP via internal merge. This combination of strategies Shupamem utilizes in order to lexicalize the structure of spatial PPs, that is, internal and external merge, is directly reminiscent of EPP effects. While both internal and external merge are well known to satisfy the EPP in other syntactic domains (see Holmberg 2000, Landau 2007 a.o.), they have not been investigated or detected in the context of the PP structure so far. In section 5 we comment in some more detail on the contribution that the current study makes to this effect. Before doing that however, we turn in the following section to the elements that we have considered to supply the PP structure with phonetic content via internal merge, that is, to ‘light nouns’.

4.3 LOCATIVE NOUNS AND LIGHT NOUNS

In the analysis developed in the previous section we considered locative nouns, (35a), and ‘here/there’, (39)-(40), as those elements that satisfy the requirement that the Edge of PP be overt via internal merge. In doing so, repeatedly, although without much justification, we employed one of the core notions that Collins (2007) utilizes in proposing (33), namely, the notion of ‘light nouns’, as a set of elements that are able to lexicalize the structure of locative PPs by moving to their specifier position. But what are light nouns to start with, and how legitimate is it to consider the nominals that are employed to express location in Shupamem (as well as in other typologically similar languages presumably) to be such elements?

A thorough understanding of the nature and properties of light nouns is certainly welcome, since the literature on them is rather scarce and unclear – nevertheless, it cannot be fully undertaken in this paper. What we will do in this section instead is to pinpoint aspects of the behavior of such elements that are relevant for our purposes, relegating a detailed investigation of the topic to future research. Collins (2007) coins the term ‘light nouns’ from work on elements that are similar to

the ones he discusses, although not identical.¹⁹ What he considers light nouns in his analysis of spatial Ps are essentially the noun *home* in (47) and the locative adverbials *here* and *there* (the latter essentially by virtue of modifying the silent noun PLACE). He considers light nouns to have a reduced syntactic structure, a conclusion to which he arrives based on the observation that they cannot be modified, (47b).

- (47) a. I'm going home.
 b. *I'm going my home/new home.

It is not obvious that what Collins labels light nouns are structurally impoverished however. Moreover, even if they were, this does not necessarily follow from the fact that they resist modification. For one thing, although *home* cannot be modified, as illustrated above, other elements, which pattern the behavior of *home* in the sense of being able to move higher than common nouns and satisfy (33), can and, in fact, are modified. Such an example is the silent noun PLACE which is also considered a light noun in Collins' account. Moreover, 'here' and 'there', which, after Kayne (2004), are widely considered to be the modifiers of the silent noun PLACE in English, are shown to behave similarly to *home* in the relevant contexts. There is, therefore, some discrepancy in Collins' claims in this respect, also noted by him: although we are dealing with what is considered a light noun in (48) below, as confirmed by the fact that it raises just like *home* in (47a), it is a noun that is modified (by *there*).

- (48) I am going [DP [there [NP/N PLACE]

Therefore, unlike *home*, which indeed does not seem to be modified, other light nouns, such as PLACE, may be modified – suggesting that it is inaccurate to hold that light nouns cannot be modified, and, moreover, conclude on the basis of this assumption that they have a reduced syntactic structure.²⁰ Why, then, *home* cannot be modified? The very same question pertains to the Shupamem locative nouns, for which we have specifically suggested that they fall into the category of light nouns as well: recall that, by contrast to common nouns that are phonetically identical to them, (49), locative nouns cannot be modified by an adjective, (50).

¹⁹ See Kishimoto (2000) and Larson and Marušič (2004) for *something*, *somebody*, *someplace*, etc. in English. What Collins (2007) considers light nouns are similar in syntactic behavior to the italicized parts of the above, in the sense that they are also taken to raise higher than common nouns. On the other hand, in his follow up on Kishimoto (2000) and Larson and Marušič (2004), Leu (2004) considers such elements in English, French and Swiss German to be generated higher than common nouns, potentially a consequence of the fact that they are functional. It turns out that our view to light nouns is much in the spirit of Leu (2004), since we consider them to be more like functional elements, despite the fact that they often look identical in shape to common nouns (and in a higher position than common nouns, which however is attained via movement).

²⁰ Ioannidou and den Dikken (2006), in their analysis of Greek *spiti* 'home' – which behaves much like its counterpart in English and in Northern Italian Dialects when it is the complement of a silent locative or directional P – consider *spiti* to be part of a DP with full blown structure. They claim that it raises to Spec, D in order to check its case feature (since P is null, hence, unable to provide case and Greek is a language with rich case morphology), as a result of which the EPP feature they consider the Greek D to have is also checked. Lack of an overt determiner or impossibility of modification follows from the specifics of their account, rather than from a reduced syntactic structure. Our understanding is that their analysis does not prohibit further movement of *spiti* (and, presumably, of other similar nouns) to some position higher than Spec, D.

(49) móʔ pòkét nʃín mango pà fíχáʃí
 a nice root mango-tree is cool
 ‘A nice root of the mango tree is cool.’

(50) *lérwà pà (*pòkét) nʃín tètè
 book is nice root table
 ‘The book is under the table.’

We believe it is unmotivated to conclude that only silent light nouns, such as PLACE, (48), can be modified, while their overt counterparts cannot. As a result, we have to look elsewhere for the reasons that make light nouns resist modification, and we suggest that they are to be found within the content of the noun that is (not) modified, in association with the properties of the modifier. Informally speaking, while in the case of a common noun, such as ‘root’ in (49), the attributive adjective ‘nice’ restricts the reference of ‘root’, when the same lexical entry is employed as a locative noun that expresses a spatial relation, (50), the adjective cannot possibly have the same function. To this effect, note that the (silent) light noun PLACE that is considered to be modified in (48) is not modified by such an adjective. That light nouns can be modified, but by different elements than common nouns, is consistent with the view that they are different from common nouns, despite the fact that they often are identical to them phonetically. Moreover, it is reasonable to consider this difference, which we have not delimited yet, as a relevant one for the fact that the former move higher within the PP structure than the latter, with the consequence that they lexicalize crucial parts of the PP structure.

Interestingly, in their study of the silent noun PERSON and its overt counterpart in Dutch, Corver and Kranendonk (2009) focus on elements that are similar to the light nouns discussed in this work, and make similar observations. They notice that the common noun ‘person’ in (51), for instance, may be modified by the adjective ‘friendly’, but modification by the same adjective is impossible when ‘person’ appears in (52). Corver and Kranendonk consider elements such as *persoon* in (52) *grammatical nouns*, licensed by the interpretable feature [+human], residing in D.

(51) In de taalkunde werken alleen vriendelijke personen.
 in the linguistics work only friendly persons
 ‘In linguistics, only friendly people are employed.’

(52) Op het internet staat veel over zijn (*vriendelijke) persoon.
 at the internet stands a-lot about his friendly person
 ‘The internet contains a lot of information about him.’

Very much in the same spirit, we will hold that PLACE and its overt manifestations (c.f., the locative nouns of Shupamem) are ‘light’, or grammatical, nouns licensed by some feature in P_{Loc}. Recall that it has been argued independently for the locative nouns of Shupamem that they are the instantiation of the (otherwise silent) noun PLACE, whose existence is contingent upon the functional head P_{Loc}. By considering PLACE, or the nouns that otherwise instantiate it, as light nouns, that is, as essentially less ‘lexical’ than common nouns, we can understand why they cannot be modified by the adjectives that may modify their homophonous ordinary nouns. Furthermore, by

associating PLACE, along with the elements that modify or instantiate it, with a higher functional head P_{Loc} , we can understand why they move higher than common nouns, in particular, to the Edge of P_{Loc} : they do so because they share some feature(s) with the functional head P_{Loc} which needs to be checked.

Before ending this section, let us come back to the first issue raised in footnote 17, namely, to the fact that while locative nouns do not have to raise to P_{Loc} , presumably because they are able to check the feature they share with P_{Loc} via agreement with the consequence that (35b) is grammatical, PLACE (which we take to move to Spec, P_{Loc} along with the modifiers ‘here’/‘there’ in an instance of XP movement), *does* have to move, hence the ungrammaticality of (37). One wonders whether this contrast is related to the types of elements that may lexicalize the Edge of spatial P, namely, locative nouns vs. PLACE (modified by ‘here’/‘there’). We believe this is not the case. Instead, the above contrast stems from the fact that the latter type of light noun, i.e., PLACE, is a silent light noun and as such it has to surface in Spec, P, since, according to Kayne (2006), the only chance for an element to surface without phonetic content is to be in the Specifier of a phase. Since PLACE is silent therefore, it has to have moved to Spec, P_{Loc} , while the locative nouns do not, as they have phonetic content. Alternatively put, while both types of light nouns are contingent upon the presence of P_{Loc} , with which they share a feature that needs to be checked, PLACE has to be in Spec, P_{Loc} by virtue of being silent. Moving to Spec, P_{Loc} along with ‘here’/‘there’, it results in that the Edge of P_{Loc} is not minimally overt, therefore, (37) is ungrammatical (by contrast to (35b)).²¹

To conclude, we believe we have demonstrated that extending the status of light nouns, properties of which we attempted to understand and articulate in this section, to the locative nouns of Shupamem is a move to the right direction. Light nouns appear to comprise various elements in the literature – such as Collins’ light

²¹ A number of issues arise with respect to the precise mechanism that lexicalizes the Edge of spatial Ps, starting with what exactly counts as such. Let us start with locative Ps, for which things are slightly simpler. Recall that we have assumed the structure in (21) for locatives, repeated below as (i):

- (i) [_{LogP} [_{Log} [_{PP_{Loc}} [_{PLoc} 0 [_{DP/NP} locative noun/PLACE [_{DP} *ground argument*]]]]]]

We have considered lexicalization of the Edge of P to take place in two ways: via movement of ‘here’/‘there’ or a locative noun to Spec, P/P respectively or via merge of some Logophoric Modifier. In both cases the target is the Edge of the spatial P, but in the latter we probably have to assume that the Logophoric Modifier further moves to Spec, LogP associated with speaker’s point of view (either on its own or as part of the PP_{Loc} moving to Spec, LogP).

The case of directional/Path Ps is more complex. We have argued that lexicalization of Edge of (both) Ps via internal merge always involves the locative nouns or ‘here’/‘there’. Since the latter are contingent upon P_{Loc} , a first welcome outcome is that we obtain further evidence that Path Ps embed a (silent) locative P in their structure, as in (32) repeated below as (ii), in agreement with what the current views are with respect to Path Ps hold:

- (ii) [_{PP_{Dir}} [_{PD_{Dir}} 0 [_{LogP} [_{Log} [_{PP_{Loc}} [_{PLoc} 0 [_{DP/NP} PLACE [_{DP} *ground argument*]]]]]]]]

As to the specifics of further movement which eventually provides Path Ps with phonetic content, we will follow Collins (2007) in that PP_{Loc} (which is already minimally overt via internal merge of locative nouns or ‘here’/‘there’) moves to Spec, P_{Dir} with the consequence that the latter is lexicalized. When lexicalization of Path Ps takes place via external merge of Logophoric Modifiers, we will assume that they merge in Spec, P_{Loc} with subsequent movement of PP_{Loc} to Spec, P_{Dir}, leaving aside further details for the moment.

nouns, the silent noun PLACE, the locative nouns of Shupamem that constitute a central topic of this work, but also the silent noun PERSON and its overt instantiation in Dutch²². We hold that they all have little lexical content and depend on some higher functional head with which they share some feature(s). Most pertinently, we further argued that locative nouns and the silent noun PLACE are elements that, in the process of checking a feature with P_{Loc} via internal merge, supply the spatial P structure with phonetic content

5. OVERT EDGE AND EPP

In our account of Shupamem spatial Ps we argued explicitly that parts of their structure are often silent, but are subject to certain requirements as to how much structure may remain without phonetic content. It was proposed that these requirements are satisfied via the two (sub)cases of the operation merge that are available in grammar, that is, via internal and external merge. Internal merge employs locative/light nouns, while the elements that are called upon to play the same role via external merge are the ones we have identified as Logophoric Modifiers. We concluded that the combination of these two strategies in the manner described argues for the presence of EPP effects, detected for the first time in the (spatial) P domain. Let us elaborate some more on why we believe this is indeed so and why, provided our analysis is on the right track, the Shupamem facts are essential for these claims to be valid.

As Landau (2007) notes, see also Holmberg (2000), one of the most puzzling aspects about the EPP is that it does not seem to trigger movement. In other words, although it is a principle that may be satisfied via movement, it is parasitic on some feature of the elements that undergo movement for independent reasons, with the consequence that these elements end up satisfying the EPP at the same time. This appears to be true for the cases discussed by Collins (2007) for English, since satisfaction of the Overt Edge requirement that he takes to hold for spatial Ps is always associated with nominal elements whose properties are special (his ‘light nouns’).

We assumed that similar considerations hold for the Shupamem spatial Ps, where common DP/NP ground arguments are not able to survive as the arguments of silent Ps, (54)-(55). This did not come as a surprise since, unlike light nouns, common nouns do not share some feature residing in P_{Loc}, hence do not move to the Edge of spatial Ps in order to match it, with the consequence that they cannot supply silent Ps with phonetic content.

(54) [_{PP_{Loc}} *(má/mfî/nkú/njí) [_{PLoc} **0** [_{DP/NP} **PLACE** [_{DP} ndàntèn]]]]
 ‘at the store’

(55) [_{PP_{Dir}} *(má/mfî/nkú/njí) [_{P_{Dir}} **0** [_{DP} Brooklyn]]]]
 ‘to/from Brooklyn’

Nevertheless, at least one question arises, also pertinent to Collins’ (2007) claims when addressing English *home* and the lexicalization of the P structure it is able to provide: if we indeed entertain the idea that light nouns raise to P/Spec, P, how do we

²² And conceivably several of the silent elements discussed extensively in Kayne (2005b) and Kayne (2006).

know that they also satisfy some lexicalization requirement(s) of the spatial P, rather than simply check off a feature shared with it? Unless we offer a satisfactory answer to this question, the whole idea that the Edge of P imposes the lexicalization requirements argued for in this paper is rendered less solid. As things stand, English, or any language that satisfies EPP via internal merge alone cannot offer a conclusive answer to this effect it seems to us.

This is exactly why the contribution of Shupemem is unique in this respect: the fact that some element(s), namely, the Logophoric Modifiers, are externally merged in Spec, P, when spatial Ps have no phonetic content and no light nouns are available to supply it, is precisely the evidence confirming the claim that the Overt Edge requirement does not only reflect some properties of light nouns causing their movement to the Edge of locative Ps. Rather, the requirement for an Overt Edge of spatial Ps is real and is satisfied by external merge as well (furthermore, even within the same language), arguing that what we are observing are indeed EPP effects. Thus, apart from the sentential domain, where internal and external merge are widely assumed to operate hand in hand in satisfaction of the EPP, we have demonstrated in this work that the two mechanisms are also fully operative in the domain of (spatial) Prepositions. This constitutes a novel and valuable finding as far as we can see.

6. SUMMARY AND CONCLUSIONS

This work investigated the properties of spatial expressions in Shupamem, with the objective to find out where they fit within current views to spatial Ps and what they are able to contribute to them. The study was instigated by three robust phenomena that the language manifests: first, the existence of very few elements that one can clearly identify as spatial prepositions. Then, the existence of a number of elements that look a lot like nouns but are used as locative expressions. Finally, the existence of elements in the extended projection of spatial Ps, which refer to the speaker's point of view, but give the impression of locative or directional Ps in certain occasions. We believe we have addressed the above phenomena, enriching in novel ways a number of issues concerning the structure of spatial Ps and, in particular, the manner in which it obtains phonetic content.

It was demonstrated in the first part of the paper that if one adopts views to locative Ps according to which their structure is decomposed into two core parts, a functional one and a lexical with nominal properties, cf. Terzi (2008, 2010a), Shupamem appears to exhibit the full array of options that fall out of it, in terms of which of the two parts is overt or silent. At the same time, the above views are able to offer an account of the noun looking elements that are employed as locative expressions which renders them less exotic than they are usually considered, potentially able to extend to other African languages whose spatial Ps have a similar make up (see Aboh 2004, 2010 and Holmberg 2002), and beyond.

It was further demonstrated that, although spatial Ps are not phonetically expressed in a number of environments in Shupamem, they are, nevertheless, syntactically present. Most crucially, the (non)-pronunciation of (parts of) their structure is governed by certain principles which until now had not been given adequate attention. The facts from Shupamem support Collins' (2007) proposals with respect to the requirement that the Edge of spatial Ps must be (minimally) overt phonetically. Most importantly however, the current study provides evidence that this requirement is satisfied not only via internal merge (of locative nouns, or 'here' and 'there'), but also via external merge (of the elements we have identified as

Logophoric Modifiers and are commonly used to express speaker's point of view). This state of affairs make the lexicalization requirements of spatial Ps to boil down to familiar EPP effects – research on which had not addressed the prepositional domain until now (see Holmberg 2000, Landau 2007).

Finally, we were bound to take an, inevitably, quick look at the elements to which we referred as light nouns, and which we considered to lexicalize the structure of PPs via internal merge. It was concluded that they comprise a set of elements that differ from common referential nouns – with which they are often phonetically identical – not necessarily in terms of a reduced syntactic structure, but in terms of how lexical they are and, more precisely, in terms of being contingent upon the presence of a higher functional head. Their ability to move higher than common nouns follows from the need to match a feature they share with the associated functional head, and, in the present context, the side effect of this movement is that it supplies silent Ps with phonetic content.

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