

Locative Inversion in Otjiherero: More on morpho-syntactic variation in Bantu*

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This paper discusses locative inversion constructions in Otjiherero against the background of previous work by Bresnan and Kanerva (1989) on the construction in Chichewa, and Demuth and Mmusi (1997) on Setswana and related languages. Locative inversion in Otjiherero is structurally similar to locative inversion in Chichewa and Setswana, but differs from these languages in that there are fewer thematic restrictions on predicates undergoing locative inversion. As Otjiherero has a three-way morphological distinction of locative subject markers, this shows that there is no relation between agreement morphology and thematic restrictions in locative inversion, confirming the result of Demuth and Mmusi. The availability of transitive predicates to participate in locative inversion in Otjiherero furthermore raises questions about the relation between locative inversion, valency, and applicative marking, and these are addressed in the paper, although further research is needed for a full analysis. In terms of function of the locative subject markers, Otjiherero presents, like Chishona, a split system where all markers support locative readings, but where one of them is also used in expletive contexts. In contrast to Chishona, though, this is the class 16, rather than the class 17 marker.

1 Introduction

Locative inversion in many Bantu languages is characterised by a locative NP functioning as grammatical subject, while the logical or thematic subject appears in the position immediately after the verb and is presentationally focused, as the

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contrast between the transitive clause in (1a) and the example of locative inversion in (1b) from Otjiherero shows:¹

- (1) a. òv-à-ndù v-á-hìtí m-ó-ᵀ-ngándá [Otjiherero]
 2-people SC2-PAST-enter 18-9.house
 ‘The guests entered the house/home’
- b. m-ò-ngándá mw-á-hìtí òv-á-ndù
 18-9.house SC18-PAST-enter 2-people
 ‘Into the house/home entered (the) guests’

In (1a), the verb agrees with the class 2 subject *òv-à-ndù* which precedes the verb, and the locative NP *m-ó-ᵀ-ngándá* follows the verb. In contrast, in (1b), the locative precedes the verb, and *òv-á-ndù* follows it, and the verb shows subject agreement with the locative NP.² Both sentences express the same semantic relation, i.e. that guests are entering the house, but differ in their grammatical characteristics and pragmatic felicity, as will be discussed in more detail below.

Locative inversion constructions such as illustrated in (1b) have been subject to some discussion in the Bantu linguistics literature. In an influential paper, Bresnan and Kanerva (1989) provide a detailed analysis of locative inversion in Chichewa and identify several morpho-syntactic characteristics. The construction is brought into a comparative context by Demuth and Mmusi (1997), who draw primarily on data from Setswana, but also on data from Kichaga, Chishona and Sesotho. The analyses by Bresnan and Kanerva, and by Demuth and Mmusi are summarized in sections 2 and 3. In the main section of this paper, section 4, I present a description of locative inversion in Otjiherero (R30), spoken in Namibia and Botswana, and show how the evidence from Otjiherero further enriches the picture of variation in locative inversion in Bantu.

2 Locative inversion in Chichewa

Bresnan and Kanerva (1989) establish a number of structural characteristics of locative inversion in Chichewa, summarized below:

¹ The following abbreviations are used in this paper: 1, 2, 3, ... = Noun Class, APPL = Applicative, CC = Complement Case, DC = Default Case, DM = Demonstrative, FV = Final Vowel, HAB = Habitual, LOC = Locative, Narr = Narrative, OC = Object Concord, PASS = Passive, REL = Relative, RemImpv = Remote Imperfective, SC = Subject Concord. Acute accent = high tone, grave accent = low tone, down arrow = downstep.

² The different tonal patterns of *òv-á-ndù* and *m-ò-ngándá* in (1a) and (1b) indicate their different ‘tone cases’ in these examples. See Section 4.1, below.

- The locative NP is the grammatical subject
- The post-verbal NP expresses the logical subject and cannot be omitted or separated from the verb
- The post-verbal NP is presentationally focused
- The verb and the post-verbal NP are phonologically phrased together
- No object marker referring to the post-verbal logical subject is permitted in locative inversion
- Locative inversion is only possible with unaccusative predicates

These observations are briefly illustrated with examples in what follows. Examples (2) to (4) show locative inversion with the unaccusative predicates *-li*, ‘be’, *-bwéra*, ‘come’, and *-khala*, ‘sit’. In these examples, the locative NP precedes the verb and the verb shows subject agreement with the locative NP (all Chichewa examples are from Bresnan and Kanerva 1989):

- (2) ku-mu-dzi ku-li chi-tsîme [Chichewa]
 17-3-village SC17-be 7-well
 ‘In the village is a well’
- (3) ku-mu-dzi ku-na-bwér-á a-lendô-wo
 17-3-village SC17-PAST-come-FV 2-visitors-those
 ‘To the village came those visitors’
- (4) m-mi-têngo mw-a-khal-a a-nyăni
 18-4-tree SC18-PERF-sit-FV 2-baboons
 ‘In the trees are sitting baboons’

Further tests, such as subject relatives and other cases of subject extraction, confirm the impression conveyed by the agreement morphology, namely that the locative NP is the grammatical subject. Like other grammatical subjects, locative subjects in locative inversion can be omitted, or be post-posed (5a), but the locative NP cannot intervene between the verb and logical subject (5b), showing that the logical subject has to follow the verb immediately:

- (5) a. mw-a-khal-a a-nyăni m-mi-têngo
 SC18-PERF-sit-FV 2-baboons 18-4-trees
 ‘In the trees are sitting baboons’

- b. *mw-a-khal-a m-mi-têngo a-nyăni
 SC18-PERF-sit-FV 18-4-trees 2-baboons
 Intd.: ‘In the trees are sitting baboons’

Bresnan and Kanerva propose that, while the locative NP is the grammatical subject and fulfils the function of discourse topic, the post-verbal NP is the thematic subject, but syntactically an (ergative) object, and that it is presentationally focused.³ This explains why the post-verbal NP cannot be omitted or displaced. Further evidence for this analysis comes from phonological phrasing which shows that the post-verbal NP, like objects in transitive clauses, forms a single phonological phrase with the preceding verb (6a) and cannot be phrased separately (6b), indicating that the post-verbal NP is not a topic, as topics tend to be phrased separately (cf. Downing et al. 2005):

- (6) a. (ku-muu-dzi) (ku-na-bwér-á a-lendó átáàtu)
 17-3-village SC17-PAST-come-FV 2-visitors three
 ‘To the village came three visitors’
- b. *(ku-muu-dzi) (ku-na-bwéèr-a) (a-lendó átáàtu)
 17-3-village SC17-PAST-come-FV 2-visitors three
 Intd.: ‘To the village came three visitors’

The examples in (6) show right edges of phonological phrases (indicated by bracketing) marked by the lengthening of the pen-ultimate vowel, and by the tonal alternation of the final vowel of the verb (H in (6a) and L in (6b)). The contrast between (6a) and (6b) shows that the post-verbal NP in locative inversion is phrased with the preceding verb, like a transitive object.

Another, related piece of evidence comes from the fact that the post-verbal NP cannot be expressed by an object marker:

³ Part of Bresnan and Kanerva’s theoretical argument is that locative inversion provides evidence against derivational models of syntax, but supports models like Lexical Functional Grammar (LFG) with distinct levels of representation for constituent, thematic and discourse structure, where the post-verbal NP can be analysed as fulfilling different functions at different levels. Since the aim of this paper is descriptive, I will not go into the details of the argument.

- (7) *ku-mu-dzi ku-na-wá-bwér-a a-lendô-wo
 17-3-village SC17-PAST-OC2-come-FV 2-visitors-those
 Intd.: ‘To the village came they, those visitors’

As the contrast between (7) and (3), above, shows, the post-verbal NP cannot be cross-referenced with an object marker. This can be explained by assuming that the object marker itself cannot be focused, and that lexical objects cross-referenced with an object marker are always topics (cf. Bresnan and Mchombo 1987), thus further confirming the view that the post-verbal NP is focused.

A final observation Bresnan and Kanerva make is that locative inversion is not possible with any kind of predicate, but only with predicates whose highest thematic role is <theme>. This analysis of the restriction on predicates available for locative inversion is based on the thematic classification of verbs developed in LFG and summarized in Table 1, below:

Table 1: Verb types and thematic roles (from Demuth and Mmusi 1997)

Verb Type	Active	Passive
Unergatives	<ag, loc>	<(ag), loc>
Unaccusatives	<th, loc>	<(th), loc>
Transitives	<ag, th, loc>	<(ag), th, loc>
Ditransitives	<ag, th, pat, loc>	<(ag), th, pat, loc>

The table shows how different predicate types are derived from a classification of their thematic information. According to Bresnan and Kanerva’s analysis, only active unaccusatives and passivised transitives and ditransitives (i.e. those predicates with <theme> as their highest role) can be found in locative inversion. A relevant Chichewa example is given in (8):

- (8) *m-mi-têngo mu-kú-imb-á a-nyăni
 18-4-tree SC18-PROGR-sing-FV 2-baboons
 Intd.: ‘In the trees are singing baboons’

The ungrammaticality of (8) results, according to Bresnan and Kanerva, from the fact that the verb *-imba*, ‘sing’, is an unergative predicate, whose highest thematic role is <agent>, and which thus cannot be used in locative inversion.⁴

⁴ My own (brief) Chichewa fieldwork indicates that thematic restrictions on locative inversion are not as strict as stated above; (8) improves if the predicate used is ‘make

Bresnan and Kanerva raise the possibility that this restriction is a universal quality of locative inversion, but subsequent work, discussed in the next section, shows that it does not hold in all Bantu languages.

To summarize, Bresnan and Kanerva argue that in locative inversion in Chichewa the locative NP is structurally a topical subject, and is therefore in agreement with the subject marker of the verb, while the logical subject is expressed by the post-verbal NP which is focused. This analysis explains the phonological phrasing of the post-verbal NP together with the verb, the obligatory immediate post-verbal position of the post-verbal NP, and the unavailability of object marking. In addition, Bresnan and Kanerva argue that locative inversion is restricted to unaccusative predicates, whose highest thematic role is <theme>. Comparative work on Bantu locative inversion, reported in Demuth and Mmusi (1997) and discussed in more detail in the next section, has shown that many structural and pragmatic characteristics of Chichewa locative inversion are also found in related Bantu languages. However, variation exists with respect to the function of locative subject markers, and to the thematic restrictions on predicates which can be used in locative inversion, where it is found that not all Bantu languages restrict locative inversion to unaccusative predicates.

3 Variation in locative inversion

Demuth and Mmusi (1997) present an analysis of locative inversion and presentational focus constructions in Setswana, and compare the Setswana facts with locative inversion structures in Chichewa, Kichaga, Sesotho and Chishona. They show that locative inversion in Setswana is in some respects identical to locative inversion in Chichewa, but that, in contrast to Chichewa, locative inversion clauses in Setswana have a presentational, but not a locative interpretation under pro-drop, and that, furthermore, locative inversion is possible with all predicates except active transitive ones. To add to this, Demuth and Mmusi point out differences between Chichewa and Setswana with respect to the morphological expression of locative classes. The similarities and differences between locative inversion in Chichewa and in Setswana can be summarized as follows:

noise' (as baboons don't sing), and even examples with transitive (object drop) predicates are acceptable (Al Mtenje, p.c.; for applicatives in locative inversion, cf. Section 4.5):

- (i) kù-nyùmbà kù-nà-pík-ír-á à-lèndó
17-house SC17-PRES-cook-APPL-FV 2-guests
'At the house are cooking guests'

Like in Chichewa,

- the locative NP is the grammatical subject
- the post-verbal NP is the logical subject and cannot be omitted or separated from the verb
- the post-verbal NP is presentationally focused

However, unlike Chichewa,

- Setswana has only one locative SC, class 17, and not, like Chichewa, a three-way distinction between classes 16, 17, and 18
- in the absence of a full locative NP subject (i.e. in ‘pro-drop’), no locative reading results, but only a presentational focus reading
- locative inversion in Setswana is possible with any predicate, except for active transitives and active ditransitives

The first difference between Chichewa and Setswana mentioned above, i.e. the absence of a three-way distinction of locative subject markers, is illustrated by the following examples (all examples in this section are from Demuth and Mmusi 1997):

- (9) Fá-se-tlharé-ng gó-émé ba-símané [Setswana]
16-7-tree-LOC SC17-stand/PRF 2-boys
‘By the tree stand the boys’
- (10) Kó-Maúng gó-tlá-ya roná maríga
17-Maung SC17-FUT-go 1plDM winter
‘To Maung we shall go in winter’
- (11) Mó-le-fátshé-ng gó-fúla di-kgomo
18-5-country SC17-graze 10-cattle
‘In the country are grazing the cattle’

The examples in (9) to (11) show that the locative NP precedes the verb, and that the logical subject follows in immediate post-verbal position. However, in Setswana, in contrast to Chichewa, there is a mismatch between the noun class marking of the locative NP and the subject marker on the verb. While the three locative NPs show different locative marking – class 16 *fá-* (9), class 17 *kó-* (10)

and class 18 *mó-* (11) – the subject marker in all three examples is class 17 *gó-*. In other words, while in the domain of nominal morphology, Setswana retains the full three-way distinction of locative (classes 16-18) marking, in the domain of verbal agreement morphology, only one subject marker, class 17, is used for agreement with any of the locative classes. Demuth and Mmusi argue that this difference in agreement marking is related to the interpretive range of locative inversion in different Bantu languages, that is, the second difference between Chichewa and Setswana mentioned above.

As already pointed out in relation to Chichewa, locative inversion is related to pragmatic information in that the post-verbal NP is presentationally focused and typically introduces new information. Demuth and Mmusi further observe that the contribution of the locative NP is to locate the event or state expressed by the verb as holding or taking place at a specific location. However, they argue that in Setswana, but not in Chichewa, there is a further, more fine-grained distinction to be made. In Setswana, a locative reading of a locative inversion clause is only available if the locative NP is expressed lexically. If the locative NP is dropped ('pro-drop'), the locative reading is no longer available, and only a presentational focus reading results. This is illustrated by the difference in interpretation of (11), above, with an overt locative NP subject, and (12), where no locative NP is present:

- (12) *Gó-fúla* *di-kgomo*
SC17-graze 10-cattle
'It's cattle that are grazing/There are cattle grazing'

According to Demuth and Mmusi, the difference between the two readings is the absence of any locational sense in (12), which is present in (11). Both (11) and (12) are presentational focus constructions, but only (11) has locative reference. Since the subject marker in (12) does not make any semantic contribution to the sentence, examples like (12) are also sometimes called 'impersonal constructions', and they can be seen as constructions in which the logical subject is brought out of the topic position before, and into the focus position after the verb, as the logical subject presents new information (cf. Zerbian, this volume). Demuth and Mmusi analyse the difference in reading as resulting from the semantics of the subject marker *gó-*, which, according to Demuth and Mmusi's analysis, does not itself contain any locative information (i.e., no locative, or indeed any other, phi-features) and thus functions as an expletive, fulfilling only syntactic requirements. The locative interpretation of examples like (11), then, results solely from the presence of an overt lexical locative subject. The situation in Setswana contrasts with the locative subject markers of Chichewa,

where subject markers for all three locative classes are distinguished, and which, possibly because of this, include locative meaning. Thus, in Chichewa, a locative interpretation results from the information of the subject markers, and is hence available even without an overt lexical locative NP. The difference between Chichewa, where, according to Demuth and Mmusi's analysis, locative inversion always has a locative meaning component, and Setswana, where a locative reading only arises in the presence of a full lexical locative NP subject, can thus be related to the morphological differentiation of locative subject markers.

The third difference between locative inversion in Chichewa and Setswana observed by Demuth and Mmusi is that, in contrast to Chichewa, Setswana allows locative inversion also with predicates which do have an <agent> role, as, for example, the unergative predicates *-léma*, 'plough', and *-bíná*, 'sing':

(13) Gó-léma ba-nna
 SC17-plough 2-men
 'There are men ploughing'

(14) Gó-bíná ba-sádi
 SC17-sing 2-women
 'There are women singing'

As the examples in (13) and (14) show, Setswana is more liberal than Chichewa with respect to which predicates can be used in locative inversion. However, Setswana does impose restrictions on locative inversion, namely that it is not possible with transitive predicates:⁵

(15) *Gó-ét-ela ba-símané kokó
 SC17-visit-APPL 2-boys 1a.grandmother
 'There are boys visiting the grandmother'

⁵ There is some indication that there is dialectal variation with these examples. In contrast to the Rolong dialect examples from Demuth and Mmusi, (i) is grammatical in Sengwato and Sekgatla. The example has a transitive predicate, but note that there is no applicative morpheme, in contrast to (16). Examples corresponding to (15), with or without applicative, seem to be ungrammatical in Sengwato and Sekgatla as well (cf. McCormack in prep.):

(i) Gó-kwálá ríkùkù lè-kwálò
 17-write 1a. grandmother 5-letter
 'There is writing the grandmother a letter'

- (16) *Gó-kwál-éla kokó lo-kwálo
 SC17-write-APPL 1a.grandmother 5-letter
 ‘There is writing the grandmother a letter’

In terms of thematic roles, locative inversion in Setswana appears to be licensed except with those verbs which have both an <agent> and a <theme> role. Based on these findings, and drawing on further data from Sesotho and Chishona, Demuth and Mmusi provide an overview of the availability of locative inversion with different predicate types, which is summarized in Table 2.

Table 2: Verb classes found in locative inversion/presentational focus constructions (adapted from D&M 1997)

Verb Type		Chichewa	Chishona	Sesotho	Setswana
unergatives	active	*	*	OK	OK
	passive	*	OK	OK	OK
unaccusative	active	OK	OK	OK	OK
	passive	*	OK	OK	OK
transitive	active	*	*	*	*
	passive	OK	OK	OK	OK
ditransitives	active	*	*	*	*
	passive	OK	OK	OK	OK

Table 2 shows that locative inversion is most restricted in Chichewa, where only unaccusative and passivised transitives and ditransitives are possible. In contrast, in Setswana and Sesotho, only active transitives and ditransitives are disallowed. Chishona constitutes yet another type, in that in addition to transitives, also active unergatives are barred from locative inversion, or, in terms of thematic roles, any predicate with an <agent> thematic role.

Taking all this together, Demuth and Mmusi show that while locative inversion constructions in Bantu have several structural characteristics in common, they differ in terms of their pragmatic and semantic properties: in Chichewa, locative inversion always has a locative reading, while in Setswana the availability of locative reading depends on the presence of an overt lexical locative NP. Furthermore, while in Chichewa locative inversion is restricted to unaccusative verbs, in Setswana locative inversion is possible with any verb except for those which have both an <agent> and a <theme> role. In addition,

variation exists in the morphological expression of locatives: Chichewa has three locative subject markers, while Setswana has only one. Demuth and Mmusi propose that this variation in morphological forms is related to the availability of locative and expletive readings. In languages with a morphological distinction of locative markers, locative readings are always available, while in languages with only one subject marker, the absence of a full locative NP leads to an expletive reading. Consideration of further languages makes this picture even more clear. Demuth and Mmusi draw on additional evidence from Kichaga, Chishona, and Sesotho (based on work by Demuth (1990), Harford (1990) and Machobane (1995)), and show how these languages fit into the analysis of locative inversion they propose. Their findings are summarized in Table 3, which details differences between the five languages with respect to locative morphology (nominal and verbal), to the grammatical function of the locative subject marker as giving rise to a locative reading or not, and to the thematic structure of verbs participating in locative inversion.

Table 3: Variation in Locative Inversion (1) (adapted from D&M 1997)

<i>Language</i>	<i>Constituent Structure</i>			<i>Thematic Structure</i>	
	<i>Locative Morphology</i>	<i>SM Morphology</i>	<i>Gramm. Function of SM</i>	<i>Highest Thematic Role</i>	<i>Verb Type</i>
Chichewa	16/17/18	16/17/18	locative	theme	unaccusative
Kichaga	-	17/18	locative	theme	unaccusative
Chishona	16/17/18	16/17/18 17	locative expletive	- agent	all except agent actives
Setswana	16/17/18	17	expletive	*(agent + theme)	all except active transitives
Sesotho	-	17	expletive	*(agent + theme)	all except active transitives

Table 3 shows that the grammatical function of the subject marker depends on the morphology of subject markers in a given language. Evidence from Kichaga shows that even a two-way distinction (between classes 17 and 18) is sufficient to give rise to locative readings, and it also shows that locative nominal morphology (i.e. the presence of locative noun class prefixes) is not relevant for the distinction between locative and expletive readings (as does the evidence

from Sesotho). Chishona provides an intermediate case, in that the class 17 marker is ambiguous. Under pro-drop, an expletive reading may result only with the class 17 subject marker, which is thus ambiguous between being specified for locative information or not, whereas the Chishona class 16 and 18 subject marker are fully specified for locative information and thus always result in a locative reading, even if no overt locative NP is present. The Chishona system can thus be seen to provide an intermediate stage in a grammaticalization process which leads to the loss of locative information of one locative subject marker, which ultimately becomes an expletive marker.⁶ Demuth and Mmusi discuss this historical approach, and then provide an analysis in terms of partial information, where the lexical content of subject markers can be either specified for locative information or not. While the relation between the loss of agreement morphology and the bleaching of the (remaining) subject marker is analysed by Demuth and Mmusi as being inter-dependent, there is another question arising from the summary in Table 3, and that is whether there is a causal relation between reduced agreement morphology (and concomitant change in semantic function) and the thematic restrictions on verbs in locative inversion. While the picture is not entirely clear, it seems that the two languages with only a class 17 subject marker (Setswana and Sesotho) impose the least restrictions on the thematic structure of locative inversion predicates. Conversely, the three languages with a morphological contrast between locative subject markers – Chichewa, Kichaga and Chishona – impose more restrictions. However, the match is not perfect: Chichewa and Chishona pattern together with respect to subject marker morphology, but differ in terms of thematic restriction, while Chichewa and Kichaga impose the same thematic restrictions but differ in subject marker morphology. Yet, it is still worth wondering whether there is a relation between subject agreement morphology and function, and thematic structure. Demuth and Mmusi, after considering this possibility, tentatively reject it and leave it for further research. As we will see in the next section, evidence from Otjiherero supports this decision.

In summary, Demuth and Mmusi provide a typology of locative inversion in different Bantu languages and point out the relation between the function and the morphological inventory of locative subject markers. In languages with only one locative subject marker, the subject marker is semantically bleached and does not independently encode locative meaning. Furthermore, variation exists as to the thematic restrictions imposed on locative inversion, and three different types are found in the data considered by Demuth and Mmusi: Chichewa and Kichaga allow only unaccusatives, Chishona allows any predicate except those with an <agent> thematic role, and in Setswana and Sesotho locative inversion

⁶ See below for a more grammaticalised subject marker of class 16, as opposed to class 17.

is possible except with predicates with both an <agent> and a <theme> role. As will be seen below, Otjiherero provides yet another type of language.

4 Locative inversion in Otjiherero

In this section, I discuss locative inversion in Otjiherero in some detail, against the background of the preceding sections. Locative inversion in Otjiherero shows many parallels with the locative inversion constructions discussed above. However, there are a number of differences which further complete the typology of locative inversion discussed in the preceding sections. Locative inversion in Otjiherero can be contrasted with Chichewa and Setswana as summarized below:

Like in Chichewa and Setswana,

- the locative NP is the grammatical subject
- the post-verbal NP is the logical subject and cannot (easily) be omitted or separated from the verb
- the post-verbal NP is presentationally focused

Like Chichewa (but unlike Setswana),

- Otjiherero has a three-way contrast of locative (class 16, 17, 18) subject markers

Unlike in Chichewa and Setswana,

- locative inversion is permitted with any type of predicate except ditransitives
- all locative subject markers support a locative reading, but the class 16 marker can also be used in expletive contexts (similar to Chishona)
- post-verbal object clitics are permitted in locative inversion

Otjiherero is like Chichewa and Setswana with respect to the grammatical status of the locative and the post-verbal NPs. However, unlike in the languages discussed so far, locative inversion in Otjiherero is also possible with transitive predicates, and only disallowed for ditransitives. As Otjiherero has a three-way distinction in its locative agreement morphology, this can be seen as evidence

that there is no relation between rich morphology and thematic restrictions in locative inversion. Furthermore, the possibility of having transitives in locative inversions results in interesting interactions between locative inversion, valency, and word-order. In terms of function of the locative subject markers, Otjiherero presents, like Chishona, a split system where all markers support locative readings, but where one of them is also used in expletive contexts. In contrast to Chishona, though, this is the class 16, rather than the class 17 marker. Another relevant feature of Otjiherero locative inversion structures is that, while object markers are not allowed in locative inversion, post-verbal object clitics are. Aspects of Otjiherero locative inversion are discussed in detail below.

4.1 Grammatical status of locative and post-verbal NPs

Like in Chichewa and Setswana, the locative NP in Otjiherero can be analysed as grammatical subject of locative inversion constructions. In (17), the locative NP agrees with the verb in a simple locative inversion structure, while (18) shows that the locative NP can be raised to subject position of a raising verb like *-múníká*, ‘be visible, seem’. Both the matrix verb and the lower verb show agreement with the locative NP. Finally in (19), the locative NP is the head of a subject relative construction. All these constructions indicate that the locative NP behaves as a grammatical subject:

- (17) mò-ngàndá mw-á-hítí òvá-ndù [Otjiherero]
 18-9.house SC18-PAST-enter 2-people
 ‘Into the house entered people’
- (18) mò-ngàndá má[↓]-mú-múníká ààyó mw-á-hítí òvá-ndù
 18-9.house PRES-SC18-seem as_if SC18-PAST-enter 2-people
 ‘Into the house there seems as if there entered people’
- (19) mò-ngàndá mú-mw-à-hítí òv-à-ndù y-á-pì
 18-9.house REL18-SC18-PAST-enter 2-people SC9-PAST-burn
 ‘The house into which people entered burnt’

With respect to the last example, it has to be added that the head of the relative here does not have to be marked as locative, as (20) shows:

- (20) òngàndá mù-mw-á-hítí òvâ-ndù y-á-pì
 9.house REL18-SC18-PAST-enter 2-people SC9-PAST-burn
 ‘The house into which people entered burnt’

The example in (20) is identical to (19) except for the absence of locative marking of the head. The example is an illustration of the ambiguous status of locative morphology observed also elsewhere. Thus, in nominal morphology, the locative noun class prefix precedes the prefix of the locativised noun, but does not replace it (cf. Möhlig et al. 2002). In verbal morphology, as can be seen in (20), both the class 18 relative concord, and the class 18 subject marker can ‘agree’ with the class 9 noun *òngàndá*, which is the head of the relative. Space does not permit to discuss the structure of agreement in relative clauses in Otjiherero, but I take the examples in (19) and (20) to indicate that, on the one hand, the locative NP in locative inversion structures can be analysed as subject (or topic, cf. Bresnan and Mchombo 1987), and that, on the other, the lexical information of Otjiherero subject and relative locative markers includes fully specified locative information, which accounts for the locative interpretation in (20). Thus, I assume that the locative NP in locative inversion in Otjiherero functions, like in Chichewa and Setswana, as subject or topic.

The status of the post-verbal NP in Otjiherero is, like the locative NP, similar to the post-verbal NP in Chichewa and Setswana. In most circumstances, the post-verbal NP cannot be omitted (21), although examples with a generic or impersonal interpretation like (22) are acceptable, in which case focus falls on the predicate.⁷

- (21) *mò-ngàndà mw-á-hít-í
 18-9.house SC18-PAST-enter-FV

- (22) pò-ngàndá pé-térék-à
 16-9.house SC16.HAB-cook-FV

‘At home there is usually cooking going on/being cooked’

Furthermore, like in Chichewa, there is phonological evidence for the close relation between the verb and the post-verbal NP. Otjiherero has a system of tonal nominal inflection, or ‘tone cases’, which is functionally similar to the conjoint/disjunct system of, for example, Setswana (cf. Marten and Kavari, in prep.). Complement case (CC) is found on nouns (and other constituents)

⁷ The final sequence *-ek-* of the verb in (22) looks like a stative suffix, although synchronically this is not easy to prove, as there is no base **-ter-*.

immediately following the verb, including objects, which usually introduce new information, as well as the post-verbal NP in locative inversion (23), but not on ‘dislocated’ NPs, for example post-posed topics, which show default case (DC) (24):

(23) p-á-hìtí òvá-ndù
 SC16-PAST-enter 2CC-people
 ‘There entered (some) people’

(24) v-á-hìtì, òvâ-nâtjé
 SC2-PAST-enter 2DC-children
 ‘They entered, the children (did)’

The contrast between (23) and (24) shows that the post-verbal NP in (23) takes complement case, signalling a close relation with the verb, while a post-posed topic as in (24) takes default case. This indicates that post-verbal NPs in locative inversion are part of new information, and not topics.

Finally, locative inversion constructions are often found in contexts where they present new information, for example at the beginning of stories (example from Möhlig et al. 2002: 105):

(25) Pà rí òmú-rúmèndũ wà t-íré
 SC16.RemImpv be 1CC-man SC1.RemPerf die-PERF
 ná péndúkà
 and.Narr.SC1 resurrect
 ‘There was a man, he had died and then he resurrected’

Uses like in (25) confirm the view that locative inversion is used to express presentational focus. It is not quite so clear, however, to what extent (25) has truly locative reference, unless by metaphorical extension to a time in the past. I will return to this point in the next section.

The structural status of the locative NP and the post-verbal logical subject in Otjiherero is thus parallel to locative inversion in Chichewa and Setswana.

4.2 Morphology and function of locative subject markers

Another shared feature of Otjiherero and Chichewa, but one not shared by Setswana, is the three-way morphological contrast of locative subject markers:

- (26) pò-ndjúwó p-á-rará é-rúngá
 16-9.house SC16-PAST-sleep 5-thief
 ‘At the house slept a/the thief’
- (27) kò-mù-tí kw-á-pósé òzó-ndjì má
 17-3-tree SC17-PAST-make_noise 10-baboons
 ‘In the tree made noise (the) baboons’
- (28) mò-ndùndú mw-á-váz-éw-á ómu-àtjé
 18-9.mountain SC18-PAST-find-PASS-FV 1-child
 ‘On the mountain was found a/the child’

The examples in (26) to (28) show that the verb agrees with the locative subjects of classes 16, 17, and 18.

In terms of function, Otjiherero resembles Chishona in that locative subject markers are specified for locative features, but that one locative subject maker can be used in expletive constructions. In Otjiherero, this is the class 16 marker *pa-*, rather than the class 17 marker as in Chishona. Evidence for the locative specification of *pa-* comes from the following examples:

- (29) a. pò-ngàndá p-á-rár-á òvá-ndù
 16-9.house SC16-PAST-sleep-FV 2-people
 ‘The house/home slept people’
- b. p-á-rár-á òvá-ndù
 SC16-PAST-sleep-FV 2-people
 ‘There (that place) slept people’

In (29a), the locative subject provides the place where the people slept. However, the locative interpretation is also available in (29b), even though the overt locative subject has been dropped, and it thus results from the lexical specification of the subject marker. On the other hand, as pointed out above, in examples like (25), there does not seem to be any clear locative sense implied. Similarly, the locative subject marker *pa-* can be used in questions like (30) without a specific locative sense:

- (30) p-á-tjít-w-á-yé?
 SC16-PAST-do-PASS-FV-what
 ‘What happened (lit. it/there happened what)?’

In (30), *pa-* functions more like a ‘dummy subject’ than a locative pronominal-like element. Furthermore, *pa-* can be used as an expletive subject in raising constructions (32):

(31) òv-à-èndá v-á-múník-á kútjà v-á-rì mó[↓]-ngándá
 2-guests SC16-PAST-be.seen-FV that SC2-PAST-be 18-9.house
 ‘The guests were seen (seemed) to be (lit.: that they were) at home’

(32) p-á-múník-á kútjà òv-à-èndá v-á-rì mó[↓]-ngándá
 SC16-PAST-be.seen-FV that 2-guests SC2-PAST-be 18-9.house
 ‘It was seen (seemed) that the guests were at home’

The example in (31) shows that the lower subject *òv-à-èndá* has been raised to the subject position of the matrix clause. In contrast, in (32), *òv-à-èndá* remains in the lower clause, and the matrix verb takes *pa-* as subject marker. In this case, *pa-* seems to function purely as an explicit element, indicating that the form does not have locative features. Like in Chishona, then, Otjiherero has developed an ambiguous form of locative subject marker, which can be used without locative reference. However, Otjiherero differs from Chishona, as well as from Setswana and Sesotho, in that the more grammaticalised form is the class 16 marker *pa-*, and not the class 17 marker *ku-*. As will be shown in the following section, Otjiherero also differs from the languages discussed so far in terms of thematic restrictions on locative inversion.

4.3 Thematic structure

Otjiherero imposes fewer restrictions on the thematic structure of predicates participating in locative inversion than the languages discussed so far. The examples in the preceding section illustrating the morphological differentiation of subject markers also show that locative inversion is possible with unaccusatives, unergatives, and passivised transitives: *-rará* in (26) is an unaccusative, while *-vázéwá* in (28) is a passivised transitive; both of these predicate types are also found in Chichewa and Setswana. However, *-pósé* in (27) is an active unergative predicate, as found in Setswana, but not in Chichewa.

Locative inversion in Otjiherero is also possible with transitives, as (33) with the predicate *-rísá*, ‘feed’ (a causativised form of *-ryá*, ‘eat’), shows. As with locative inversion with intransitive predicates, the logical subject has to follow the verb immediately, as shown by the ungrammaticality of (34). The

example in (35) contrasts with the ungrammatical Setswana example (15), above, showing that *-kávàrùrìrà*, ‘visit’, can be used in Otjiherero locative inversion.

(33) pé-rísá òvá-èndá òzò-ngòmbè
 SC16.HAB-feed 2-guests 10-cows
 ‘There feed guests cattle’

(34) *pé-rísá òzó-ngòmbè òvà-èndá
 SC16.HAB-feed 10-cows 2-guests
 Intd.: ‘There feed guests cattle’

(35) pò-ngàndá pé-kávàrùrìrà òvá-nàtjè òvà-èndá
 16-9.house SC16.HAB-visit 2-children 2-guests
 ‘At home visit (the) children (the) guests’

Furthermore, locative inversion in Otjiherero is also possible with transitive predicates with an applicative morpheme:

(36) pò-ndjúwó pé-tjáng-èr-à òvá-nàtjè ò-mbàpírà
 16-9.house SC16.HAB-write-APPL-FV 2-children 9-letter
 ‘At the house write (the) children a letter’

In (36), the transitive verb *-tjángà*, ‘write’, takes the applicative morpheme, although no beneficiary is expressed (or implied), and so the applicative has to be analysed as introducing the locative NP which becomes the grammatical subject. The interaction between locative inversion and applicatives will be further discussed in Section 4.5, below. In any event, the examples in this section show that locative inversion in Otjiherero is possible with transitive predicates as well as intransitive ones. In terms of thematic roles, it seems that in Otjiherero the only restriction on locative inversion is on predicates which have <agent>, <theme> and <beneficiary> roles. This means that in Bantu at least four types of languages can be distinguished with respect to the thematic restrictions found in locative inversion: Languages where locative inversion is restricted to unaccusatives (Chichewa), languages where locative inversion is allowed for all predicates except unergatives and transitives (Chishona), languages where it is found with all predicates except transitives (Setswana), and languages where it is found with all predicates except ditransitives (Otjiherero).

4.4 Summary

The Otjiherero data discussed so far can be contextualized within the typology developed by Demuth and Mmusi as in Table 4:

Table 4: Variation in Locative Inversion including Otjiherero

<i>Language</i>	<i>Constituent Structure</i>			<i>Thematic Structure</i>	
	<i>Locative Morphology</i>	<i>SM Morphology</i>	<i>Gramm. Function of SM</i>	<i>Highest Thematic Role</i>	<i>Verb Type</i>
Chichewa	16/17/18	16/17/18	locative	theme	unaccusative
Kichaga	-	17/18	locative	theme	unaccusative
Chishona	16/17/18	16/17/18 17	locative expletive	- agent	all except agent actives
Setswana	16/17/18	17	expletive	*(agent + theme)	all except active transitives
Sesotho	-	17	expletive	*(agent + theme)	all except active transitives
Otjiherero	16/17/18	16/17/18 16	locative expletive	*(agent + theme + ben)	all except ditransitives

The addition of Otjiherero to the table shows that there is no correlation between agreement morphology and thematic structure: In terms of agreement morphology Otjiherero patterns with Chichewa and Chishona, but with respect to thematic structure Otjiherero constitutes a type of its own, and furthermore presents the most liberal system, while Chichewa presents the least liberal system. This strongly indicates that any variation in thematic structure in locative inversion is independent of constituent structure. In terms of the more important correlation observed by Demuth and Mmusi, that is, the correlation between morphology and function of locative subject markers, Otjiherero confirms the hypothesis of this correlation. Otjiherero is like Chishona in that all locative subject markers support a locative interpretation in the absence of an overt locative subject, and that, in addition, one member of the locative markers

– class 16 in Otjiherero, class 17 in Chishona – can be used in expletive contexts, indicating the loss of locative information. Evidence from Otjiherero thus confirms both of Demuth and Mmusi’s hypotheses about locative inversion in Bantu, and it furthermore provides two more details of the typological variation observed with the construction: the use of the class 16, rather than class 17, as expletive subject marker, and yet another set of thematic restrictions on predicates in locative inversion.

4.5 Further points

Before concluding, I briefly discuss two further points of Otjiherero locative inversion, which are, however, at the present stage not fully developed, as more work in the areas is necessary.

As already pointed out above, the applicative morpheme contributes in specific ways to locative inversion constructions. It can be used with transitive predicates, but is optional: Both (37), without applicative morpheme, and (38), with applicative morpheme, are acceptable:

(37) pò-ngàndá pé-térék-à òmú[↓]-kázéndú ònyàmà
 16-9.house SC16.HAB-cook-FV 1-woman 9.meat
 ‘At home cooks a/the woman meat’

(38) pò-ngàndá pé-térék-èr-à òmú[↓]-kázéndú ònyàmà
 16-9.house SC16.HAB-cook-APPL-FV 1-woman 9.meat
 ‘At home cooks a/the woman meat’

This optionality corresponds to an optionality also observed with locative applicatives without locative inversion:

(39) òmù-kázéndú ú-térék-à ò-nyàmà (pò-ngàndá)
 1-woman SC1.HAB-cook-FV 9-meat 16-9.house
 ‘The woman cooks meat at home’

(40) òmù-kázéndú ú-térék-èr-à ò-nyàmà pò-ngàndá
 1-woman SC1.HAB-cook-APPL-FV 9-meat 16-9.house
 ‘The woman cooks meat at home’

In (39), the locative NP fulfils adverbial function and can be omitted, or placed at the beginning of the sentence. In contrast, in (40), the locative NP is an

argument of the applicative verb and cannot be omitted or fronted (see e.g. Creissels (2004), Marten (2003) for discussion of these ‘non-canonical’ applicatives). From these data, it is clear that locative inversion is possible in both cases: if the locative NP is an adjunct (37) or an applicative argument (38). However, what is not possible is to have a locative inversion structure in which the applicative licenses a benefactive argument such as *òvà-èndá* in (41):

- (41) **pò-ngàndá pé-térék-èr-à òmú¹-kázéndú ò-nyàmà òvà-èndá*
 16-9.house SC16.HAB-cook- 1-woman 9-meat 2-guests
 APPL-FV

Intd.: ‘At home cooks a/the woman meat for the guests’

In terms of thematic roles, this corresponds to a bar on the inclusion of a <beneficiary> role in locative inversion, as indicated in Table 4, above. However, one might wonder if an account in terms of thematic roles captures the restrictions on locative inversion in Otjiherero correctly. The use of thematic roles for the explanation of locative inversion originates from Bresnan and Kanerva’s (1989) analysis of Chichewa, where, as discussed above, they analyse locative inversion as being restricted to unaccusative predicates. This restriction, as Bresnan and Kanerva argue, can be straightforwardly expressed as licensing locative inversion only if the highest thematic role encoded by the predicate is <theme>. However, as Demuth and Mmusi (1997) observe, once comparative evidence is taken into account, the characterisation of locative inversion in terms of thematic roles becomes more difficult and less intuitive. For example, in the case of Otjiherero, it seems unclear how the bar of the <beneficiary> role can be motivated: Since the <beneficiary> role is usually assumed to be lower than <agent> in the thematic hierarchy, but higher than <theme> (cf. e.g. Bresnan and Kanerva 1989: 23), it is unclear why a language which allows both <agent> and <theme>, separately and jointly, to be present in predicates participating in locative inversion would not allow the intermediate <beneficiary> role. In view of this, an alternative analysis could possibly be proposed along the following lines. First, as shown above, the logical subject follows the verb immediately, also in locative inversion with transitive predicates. However, in benefactive applicative constructions, this is also the preferred position for the benefactive object – in both cases, this presumably results from the relevance of the position immediately after the verb for the expression of focus. Thus, locative inversion constructions with benefactive applicatives are ruled out because both the logical subject and the applied, benefactive object need access to the same position. A slightly different way of looking at this is to take into account the licensing potential of the applicative morpheme. As was shown above, locative NPs in locative inversion constructions need not be licensed by the applicative.

However, on the assumption that if the applicative morpheme is present in locative inversion constructions, it will license the locative NP, and assuming that the applicative in general licenses only one NP, then locative inversion constructions with benefactive NPs are not possible because the benefactive NP cannot be licensed. Both these explanations need to be worked out in detail, but the outlines given here are meant to show that the Otjiherero data discussed in this paper provide evidence for critically assessing previous analyses of locative inversion in Bantu.

A second point worth mentioning relates to the unavailability of the object marker in locative inversion. As Bresnan and Kanerva (1989) observe, the object marker cannot occur in locative inversion clauses, and this is also true for Otjiherero, as the contrast between (42) and (43) shows:

(42) mò-ngàndá mw-á-hítí òvá-ndù
18-9.house SC18-PAST-enter 2-people
'Into the house entered people'

(43) *mò-ngàndá mw-é-vè-hítí
18-9.house SC18-PAST-OC2-enter
Intd.: 'Into the house entered they'

However, Otjiherero has, in addition to pre-verbal object markers, a series of post-verbal object pronominal clitics which are reduced forms of full pronouns and occur in complement case. As (44) shows, post-verbal object clitics can be used in locative inversion:

(44) mò-ngàndá mw-á-hítí[↓]-vó
18-9.house SC18-PAST-enter-OBJCL2
'Into the house entered they'

In many contexts, object marker and object clitics are interchangeable, and they cannot occur together (with the same reference). However, as these examples show, they behave differently with respect to locative inversion. It remains to be seen whether a fuller analysis of the structural and semantic properties of object marker and object clitics can explain this difference, and what this means for the analysis of locative inversion in Otjiherero. However, further research is needed to address this question fully.

5 Conclusions

The study of locative inversion in Bantu has shown several aspects in which the construction is uniform across many Bantu languages. Locative inversion can be characterized by the locative NP which functions as grammatical subject and discourse topic, and with which the verb shows subject agreement. The logical subject is expressed by an NP in immediate post-verbal position. It is, like grammatical objects, in close relation to the verb, as shown by phonological evidence, and cannot in general be omitted. Furthermore, the post-verbal NP is presentationally focused.

However, variation exists with respect to the semantic information encoded in locative subject markers, and with respect to the thematic restrictions imposed on predicates available for locative inversion. Demuth and Mmusi (1997) show that differences in the semantic information encoded in locative subject markers are related to their morphological differentiation, and data from Otjiherero confirm their claim that languages with a three-way contrast in locative agreement morphology support a locative reading of locative inversion structures even if no overt locative subject is present. Otjiherero also provides an example of a Bantu language where the class 16 subject marker, as opposed to the class 17 marker like in Chishona and Setswana, can be used in expletive constructions. Furthermore, the evidence from Otjiherero in this paper shows that there is no relation between agreement morphology and thematic structure, as Otjiherero patterns with Chichewa in terms of morphology, but differs maximally from Chichewa with respect to thematic restrictions. While the languages discussed by Demuth and Mmusi show that locative inversion is restricted to different kinds of intransitive predicates, this is not the case in Otjiherero where locative inversion is also possible with active transitives. Evidence from Otjiherero thus shows that thematic restrictions provide an independent parameter of variation in Bantu, and that at least four different types of thematic restrictions have to be postulated.

Locative inversion in Otjiherero interacts in complex ways with valency and applicative marking. While this is probably true of all Bantu languages, this interaction is more pronounced in Otjiherero since the language allows transitive predicates in locative inversion. The applicative morpheme in Otjiherero locative inversion optionally licenses the locative NP, but it cannot license a benefactive NP. I have suggested that, while this can be stated in terms of thematic roles (essentially by imposing a restriction on the <beneficiary> role), a better motivated analysis might relate the absence of benefactive applicatives in locative inversion to the specific word-order requirements of the logical subject and the applied object, or to the licensing potential of the applicative morpheme. However, no explicit analysis of these examples has been given here, and further

research on the structure and function of locative inversion with applicative verbs is needed.

A final point noteworthy in relation to locative inversion in Otjiherero is that while Otjiherero supports the generalization that object marking with pre-verbal object markers is not possible in locative inversion, post-verbal object clitics can be used. Again, further research into the function of these post-verbal object clitics is needed in order to develop a full analysis.

The evidence presented in this paper has further illustrated the extent of variation of locative inversion constructions in Bantu. As in other areas, variation found in Bantu languages provides important evidence for understanding morpho-syntactic micro-variation more generally and for the development of theoretical models of language. Furthermore, locative inversion is not an isolated phenomenon, but is embedded in the wider structure of the language, and further research will show in more detail the interaction between locative inversion and Bantu clause structure, and with other structures related to inversion and focus.

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