Category Mismatches[1]

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1 The Problem

By 'category mismatches' I refer to two separate but related classes of phenomena. The first class, which I call 'movement paradoxes', is illustrated in (1) through (4). In movement paradoxes there is a mismatch in category type between seemingly moved phrases such as the initial *that* complement and locative PP in in (1a) and (2a) and the positions they are supposed to be moved from, as illustrated in (1b) and (2b).

Movement paradoxes:

(1) a. *That he was sick* we talked about __ for days. (Higgins 1973)

b.*We talked about *that he was sick* for days. (Emonds 1972)

(2) a. *On this wall* I expect __ to be hung a portrait of our founder. (Bresnan 1994: ex. (98b))

b.*I expect *on this wall* to be hung a portrait of our founder. (Bresnan 1994: ex. (101a))

Other examples involve passivization and raising, as in (3) and (4):

(3) a. *That languages are learnable* is captured __ by this theory.

b.*This theory captures *that languages are learnable.* (Grimshaw 1982, Jacobson 1992)

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(4) *Out of the wall* seemed __ to step President Lincoln.
(Postal 1977, Bresnan 1994)

Related phenomena occur in other Germanic languages, as documented by Webelhuth 1992 for topicalization and scrambling of *that* clauses.

The second class of category mismatches includes cases of 'nonuniformity of categorization' across different languages, as illustrated in (5) and (6), which pair similar examples in English and Chicheŵa. In cases of nonuniformity of categorization, parallel semantic categories receive different syntactic categorizations across languages. (5a,b) illustrate contrasting categorizations of locatives in English and Chicheŵa, and (6a,b) illustrate contrasting categorizations of sentential complements which designate reported speech or propositions, about which I will have more to say below.[2]

Nonuniformity of categorization:

(5) a. **In San Jose* makes me happy.

b. *Ku San Josê* kú-ma-ndi-sangalâts-a.
17 San Jose 17.SB-PRS.HAB-i.sg.OB-please-FV
'It pleases me in San Jose, (Being in) San Jose pleases me.'
Lit.: 'In San Jose pleases me.' (Bresnan 1994: ex. (111a))

(6) a. *We are surprised by *that you get drunk every day.*

b. Ti-ku-dábwíts-idw-á ndí *kútí ḿu-ma-ledzér-á*
i.pl.SB-PRS-amaze-PASS-FV by that ii.pl.SB-PRS.HAB-get.drunk-FV
tsíkú ndí tsîku.
day and day

[2]Chicheŵa orthography (explained in Bresnan and Mchombo 1987) is used for examples, with the addition of high (´), falling (ˆ), and rising (ˇ) tones; low tones are unmarked. See Kanerva 1990b for an excellent recent analysis of Chicheŵa phrasal phonology. The following abbreviations are used in the glosses: ASC associative; ASC.INF associative infinitive; CAUS causative; COP copula; DEM demonstrative; DEM.NONPROX nonproxomate demonstrative; DEM.PROX proximate demonstrative; FV final vowel; i,ii,iii first, second, third person; IM.FUT immediate future (marked tonally on subject prefix); OB object; PASS passive; pl plural (also used for honorification of an individual); POSS possessive; PRF perfect; PRS present; PRS.HAB present habitual; PST past; PST.HAB past habitual; REC.PST recent past; SB subject; sg singular; STAT stative; SUBJN subjunctive.

'We are surprised that you get drunk every day.'
Lit.: 'We are surprised by that you get drunk every day.'

Category mismatches are problematic for two basic assumptions of current transformational grammar: the representational assumption that the syntactic categories of elements are uniformly projected from their semantic types, and the derivational assumption that the surface configurations of phrase structure categories are derived by transformational movements from basic syntactic representations of the same type.[3]

Various proposals for accounting for movement paradoxes in this general framework have been proposed (Koster 1978, Stowell 1981, Webelhuth 1992, Postal 1993), but none of them is completely satisfactory. One idea is that the fronted *that* complement is base-generated in initial position and a demonstrative resumptive pronoun occurs within the clause, which is then extracted by *wh*-movement and obligatorily deleted (Koster 1978).[4] Although such pronouns do occur with Dutch topicalized sentential complements, and possibly reflect part of the historical development of English *that* complements (cf. Hopper and Traugott 1993), they are not visible in the synchronic grammar of modern English. In English the distribution of overt pronouns does not match the class of movement paradoxes, and the resort to pronoun deletion or 'pro-drop' is typologically unmotivated (Bresnan 1994). Substituting a null operator for the resumptive pronoun could solve this problem, but whether the moved item is a *wh*-moved pronoun or a null operator, this analysis of topicalization has further problems observed by Grimshaw 1993. She argues that if topicalization involved covert operator movement, we would expect

[3]The representational assumption is frequently motivated by an appeal to the logical problem of language acquisition. For example, Wexler and Culicover 1980 prove that classical transformational grammars are learnable only if it is assumed that the language learner has direct access to deep structures through their transparent relation to meaning. Similarly, in arguing against the existence of syntactically nonconfigurational languages, Baker (1991: 538–9) writes that "the underlying structure of languages should be as similar as possible in order to account for the fact that any language can be learned without explicit training". These assumptions are certainly not necessary, however (Bresnan 1994).

[4]Postal 1993 proposes a variant in which the *that* complement is moved from within the clause, leaving a resumptive pronominal, which in turn is moved and deleted. This analysis seems not to generalize to locative cases. The locative examples such as (4) and others discussed by Bresnan 1994 do not allow a resumptive locative pronominal to appear overtly.

evidence of the operator to show up in weak crossover effects and topicalization from *wh*-complements, but these are not found. Topicalization must therefore be overt movement of the topicalized phrase—adjunction to IP, she argues. How then are the movement paradoxes to be explained?

Another solution to the problem of movement paradoxes is that category oppositions are reducible to other modules of the grammar such as Case theory and can be eliminated from the $\overline{\mathrm{X}}$ component altogether (Stowell 1981).[5] The problem with this proposal is that the categorial oppositions turn out not to be eliminable—they are tacitly reintroduced elsewhere in the grammar of English, and they cannot explain the nonuniformity of categorization of locatives in English and Chicheŵa (Bresnan 1994).

2 Theoretical Assumptions

In contrast to these movement approaches, such category mismatches are expected in alternative architectures of grammar based on parallel structures. Consider, for example, how the movement paradoxes are explained in the framework of Bresnan 1994 and related work. The syntactic part of the framework employs three levels of parallel structure—a-structure, f-structure, and c-structure, as illustrated in (7).

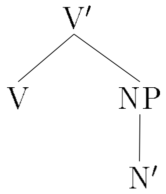
[5]Webelhuth 1992 proposes that moved CPs can only bind DP traces and that the complementizer provides a nominal feature which must agree with that of the trace. However, this account does not generalize to the locative PP movement cases discussed by Bresnan 1994. There are also cases of CP "movement" in German which do not fit the generalization, as when the CP appears to the right of the auxiliary verb *habe* in I^0: *... daß ich geglaubt habe daß Maria den Jungen liebt*, rather than as sister to the verb *glauben* that assigns it its θ role. CPs in this last position may show "non-nominal" properties, in Webelhuth's scheme, despite their moved status.

(7) Parallel Levels of Structure (LFG):

argument (a-)structure: $\begin{array}{ccccc} \mathrm{R} < & \theta_1 & \ldots & \theta_n & > \\ & [f_1] & \ldots & [f_n] & \end{array}$

functional (f-)structure: $\left[\begin{array}{ll} \textsc{subj} & \left[\ \vdots\ \right] \\ \textsc{obj} & \left[\ \vdots\ \right] \\ \textsc{pred} & \ldots \end{array}\right]$

categorial (c-)structure:

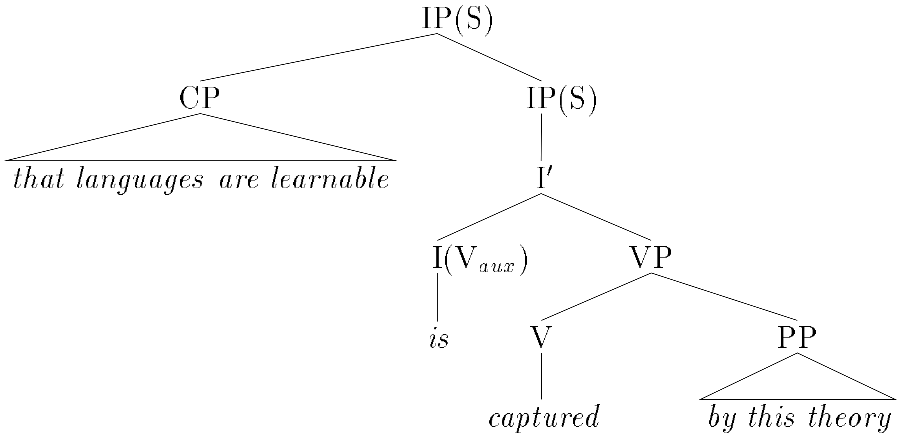


Each level models a different dimension of grammatical structure: role, function, and category. Roles correspond to the grammatically expressible participants of eventualities (modelled by a-structure), functions belong to the inner or 'covert' grammatical relations (modelled by f-structure), and categories belong to the outer structure of forms of expression (modelled by c-structure). Each level has its own distinctive prominence relations, characterizing the logical subject, the functional subject, and the structural subject. The levels are associated by principles of functional correspondence (also called 'linking' or 'mapping' principles).

Let us take example (3a) by way of illustration.[6] The surface categorial structure can be depicted as in (8):

[6]Grimshaw 1982 sketches the essential outlines of the solution I adopt here.

(8)



Observe that the *that*-complement is base-generated in topicalized position as a CP adjoined to IP in the c-structure. The evidence for a subject-external position of the CP in Engish, due originally to Koster 1978, includes the observation that auxiliary inversion with the CP is not possible:

(9) a. That he'll be late is quite likely.

b.*Is that he'll be late likely? (Koster 1978)

c.*How likely is that he'll be late? (Higgins 1973)

General principles of structure-function correspondence for configurational structures define the position of the adjoined CP as that of a topic (TOP) function, and tell us that the entire structure corresponds to a single functional structure nucleus (cf. Kroeger 1993, King 1993).[7] Because this CP is a nonnominal category (Emonds 1972, Grimshaw 1991), it cannot occupy the subject NP position as sister of I′. (Here I use the term 'NP' to cover NP and DP (Abney 1987) categories, both of which are nominal (Grimshaw 1991).) This follows from the constraint on structure-function association shown in (10):[8]

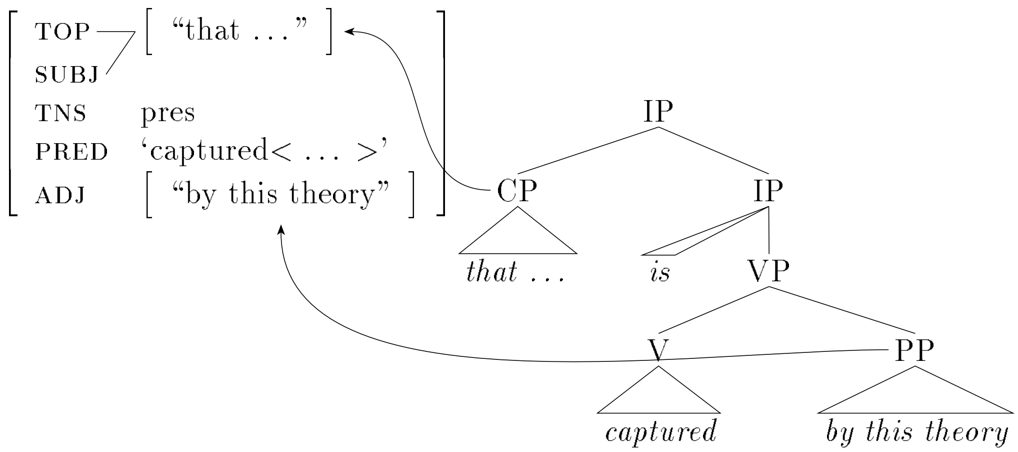
[7]—corresponding to what Grimshaw 1991 calls an 'extended projection'.

[8]The concept of 'canonical structural realization' as used here differs from Grimshaw's 1981, which links semantic types to phrase structures.

(10) The canonical structural realization of subject and object functions is nominal (Bresnan 1994: ex. (88)).

Although the CP cannot appear in the usual structural position of the subject, which is an NP position by (10), general principles of the theory nevertheless link the topic with the subject function in f-structure, as shown in (21).[9]

(11) Correspondences between c- and f-structures of (3a):

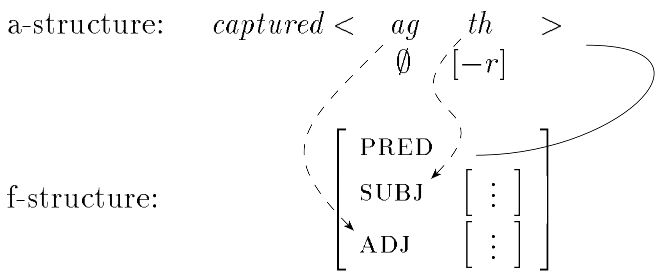


The general principle of COMPLETENESS requires that the verbal a-structure requirements, including the demand for a subject, be met; so something must fill the SUBJ function in f-structure. COHERENCE requires that the grammaticized discourse functions (TOP) and (FOC) be identified with a syntactic function such as SUBJ or OBJ (Bresnan and Mchombo 1987); so the topicalized CP must fill some other function in the clause. UNIQUENESS prevents identifying the TOP with a syntactic function borne by a lexically filled constituent in c-structure; so there must be an unfilled function—a gap—for the topic to fill. The gap is represented as the omission of the subject NP from its normal c-structure position as sister of I′. In this way the typical elements of an extraction configuration—namely, the identification of a displaced constituent with a lexically empty position—arise nonderivationally from general principles.

[9] On the formal mechanism of functional identification, see Kaplan and Zaenen 1989 and the references cited therein.

Finally, the passive relation follows not from NP-movement, but from principles of a-structure to f-structure correspondence provided by the lexical mapping theory (see Bresnan 1994: n. 25 for references), as illustrated in (12). The passive a-structure is morpholexically associated with the passive participle of *capture*; it differs from the active in that the agent role is suppressed, and may be associated with an optional *by* phrase argument adjunct. The underspecified a-structure allows the theme role to be associated with either the SUBJ or the OBJ function, depending on context. It is the suppression of the agent which allows the theme role to correspond to the SUBJ function in this case.

(12) Correspondences between a- and f-structures of (3a):



Thus the reason that there can be a mismatch between the topicalized category CP and the object position of the verb *capture* is that the topicalized *that* complement is not linked to its argument role by a series of transformational movements from an underlying object position. And the reason for THIS is that the logical roles of phrases are not uniformly represented in phrase structure form. Role, function, and category are independent dimensions of linguistic structure. Within the constraints on their correspondences, mismatches are possible.

This linguistic architecture is also supported by the nonuniformity of categorization across languages. Exactly the same types of category mismatches that we see in these movement paradoxes with PP and CP in English appear in the categorization of locatives and sentential complements in English and Chicheŵa.

3 Categorization of Locatives in English and Chicheŵa

The first case of nonuniformity of categorization comes from locatives in English and Chicheŵa, as studied by Bresnan and Kanerva 1989, Bresnan 1994, and Bresnan and Mchombo 1994.

3.1 Similarities

Locatives in English and Chicheŵa have many parallelisms in meaning and function. Both can be used 'adverbially', that is, as sentential adjuncts and as (oblique) complements to locational verbs, as shown by examples (13a,b) and their translations (from Bresnan (1994: (114b)) and Bresnan and Kanerva (1989: 4), respectively):

(13) a.

Ku	*mu-dzi*	*kw-âthu*	ndí-ma-súng-á	gálímoto
17	3-village	17-i.pl.POSS	i.sg.SB-PRS.HAB-keep-FV	9.car

y-ángá	m'	garâji.
9-i.sg.POSS	18	5.garage

'In our village I keep my car in the garage.'

b.

Mw-ăna	a-na-péz-édw-á	*kú*	*dâmbo.*
1-child	1.SB-REC.PST-find-PASS-FV	17	5.swamp

'The child was found in the swamp.'

Both undergo locative inversion, as discussed in detail in Bresnan and Kanerva 1989 and Bresnan 1994. Compare examples (14a,b) and their respective translations:

(14) a.

Ku	*mu-dzi*	*uku*	ku-na-bwér-á
17	3-village	17.DEM.PROX	17.SB-REC.PST-come-FV

a-lendô-wo.
2-visitor-2.DEM.NONPROX
'To this village came those visitors.'

b.

Ku	*dâmbo*	ku-na-péz-édw-á	mw-ána.
17	5.swamp	17.SB-REC.PST-find-PASS-FV	1-child

'In the swamp was found the child.'

In their meaning and function, the Chicheŵa locatives are similar enough to the English that they have been analyzed as having the syntactic category of English prepositional phrases, the nonnominal category PP.[10]

Nevertheless, I show in Bresnan 1994 that locatives in English differ clearly in their categorial properties from locatives in Chicheŵa.

3.2 Differences: structural positions

First, English locative PPs cannot occupy the structural position of subject, object, or prepositional object.[11] We see this in (5a) and in (15a,b):

(15) a. *I like in San Jose.

b. *I'm pleased by in San Jose.

In contrast, Chicheŵa locatives can directly occupy all of these positions, as we see in the following examples from Bresnan (1994: (111a–c)). The locative phrase is a subject in (5b), an object in (16b), and the object of the preposition 'by' in (16c), which is the passivized version of (5b):

[10] Trithart 1977 and Baker 1992 are examples. Trithart assumes that Chicheŵa locatives are structurally ambiguous between a preposition taking an NP with inner concord and a nominal prefix taking locative concord. Baker 1992 proposes that the canonical structural realization of locatives in universal grammar is PP—which, however, is assumed not to be a Case resistent category in Chicheŵa. To account for this unexpected property, Baker proposes that either locatives are structurally ambiguous in Chicheŵa as proposed by Trithart 1977, or they are "some kind of neutralized category (see Stowell 1981)" that shares some of the properties of P and some of the properties of N (Baker 1992: 35). Bresnan and Mchombo 1994 show that concord provides no evidence for structural ambiguity: in both their PP-like and their NP-like uses, Chicheŵa locatives allow inner or outer concord or both simultaneously. Bresnan 1994 gives detailed arguments against Stowell's 1981 underspecification analysis of the categories PP and NP. Another possible solution, that Chicheŵa locatives are PPs embedded within a null-headed nominal category such as NP, is discussed in greater detail below.

[11] Although these locatives do not appear in subject or object positions, they can be interpreted as filling those argument positions indirectly by means of extraposition (Fillmore 1968). In (i)–(ii) from Bresnan 1994, the locative is extraposed and is related to the subject or object positions which it cannot occupy, through the intermediary pronoun *it*:

(i) It makes me happy in San Jose.

(ii) I like it in San Jose.

(16) a. Ndí-ma-kónd-á ku San Josê.
i.sg.SB-PRS.HAB-love-FV 17 San Jose
'I like it in San Jose.'

b. Ndí-ma-sangalats-ídw-á ndí ku San Josê.
i.sg.SB-PRS.HAB-please-PASS-FV by 17 San Jose
'I'm pleased by (being in) San Jose.'

Bresnan and Mchombo 1994 show that the full range of structural object positions can be occupied by locatives in Chicheŵa.

Secondly, while English locative inversions show strikingly systematic similarities to those of Chicheŵa, there are certain differences. Bresnan and Kanerva 1989 give evidence that the inverted Chicheŵa locative is a subject and can occupy all of the normal structural positions of the subject, which in Chicheŵa include both pre-VP and post-VP positions. Corroborative evidence for this conclusion comes from phrasal phonology. Simplifying somewhat (see Kanerva 1990b), the basic generalizations are that objects are obligatorily phrased together with the verb, non-object VP material is optionally phrased together with the verb, and a post-VP subject is obligatorily phrased apart from the VP. In Chicheŵa locative inversions we find that the postposed locative subject must be phrased apart from the VP, as shown in (17), exactly like other subjects (18):

(17) (kwayaka m<u>óòto</u>)(kumuudzi)
*(kwayaka m<u>ótó</u> kumuudzi)
'In the village has flared a fire.'

(18) (wag<u>òóna</u>)(mwàána)
*(wagon<u>á mwá</u>ána)
'The child is asleep.' (Bresnan and Kanerva 1989: (19))

The phrasing boundaries, notated by parentheses in these examples, are phonologically indicated by lengthening, tonal retraction, and the absence of doubling of a high tone across the phrase boundary. In contrast, locative complements to locational verbs can be phrased together with the verb internal to the VP:

(19) (wathamangá kúdáàmbo)
(wathamàánga) (kudáàmbo)
'He/she has run in the swamp.' (Bresnan and Kanerva 1989: (14))

In contrast, the English inverted locative gives signs of not being in the structural subject position. First, it disallows auxiliary inversion in (20):[12]

(20) a. Do you remember? *Did on the wall hang a Mexican serape?

b. *Was among the ruins found a skeleton?

Secondly, as Kaisse (1985: p. 48) has observed, there are phonological constrasts that appear sensitive to the subject position. The reduced clitic form of *is* occurs when the pre-clitic phrase occupies the subject position, but not when the phrase is in a fronted nonsubject position. Kaisse observes that locative-inverted PPs do not allow the reduced clitic form, which I illustrate by the contrast in (21a,b):

(21) a. ANY place in San Jose /z/ a great place to live.

b. In San Jose */z/ a great restaurant. (Kaisse 1985)

Thus both word order and phrasal phonology suggest that the English inverted locatives, unlike the Chicheŵa locatives, do not directly occupy the canonical structural positions of the subject.

3.3 Differences: agreement features

English and Chicheŵa locatives also contrast in agreement features. English PPs show no morphological agreement at all. In Chicheŵa, in contrast, the three forms of locatives have the full range of agreement and concord

[12]This pattern is in contrast to the presentational *there*, which is an expletive subject:

(i) Do you remember? Did there hang on the wall a Mexican serape?

(ii) ?Was there found among the ruins a skeleton?

These facts suggest that the expletive occupies canonical subject position, and that the ill-formedness of (20) cannot be attributed only to the presentational discourse function, which is shared by (i) and (ii). (Bresnan 1994).

relations of the other gender classes. Thus locatives induce subject and object agreement on the verb, as well as locative concord on specifiers and modifiers such as possessives, demonstratives, quantifiers, adjectives, relative clauses, relative verbal phrases, and the like. One example is shown in (22). Here the class 16 locative 'village' is modified by a class 16 possessive 'our' and a class 16 relative verbal phrase 'attracting interest', and the verb shows class 16 subject agreement with the entire locative phrase. See Bresnan and Mchombo 1994 for a fuller discussion.

(22)

Pa	mu-dzi	p-áthú	p-ó-chítítsa	chǐ-dwi
16	3-village	16-our	16-ASC.INF-attract	7-interest

pá-ma-kond-édw-á	ndí	á-lĕndo.
16.SB-PRS.HAB-love-PASS-FV	by	2-visitor

'Our interesting village is loved by visitors'
(Bresnan 1994: (113b))

The same is true for locative inversions in Chicheŵa (see (14)): the locative subject shows normal subject agreement with the verb.

3.4 NP vs. PP

An explanation for these differences is proposed in Bresnan (1991, 1994) and Bresnan and Mchombo 1994. First, locations are syntactically categorized in different ways in the two languages: as illustrated in (23), they are PPs in English and NPs in Chicheŵa.[13] PP is a nonnominal category to be distinguished from nominal adpositional phrases such as the Chicheŵa locatives (Bresnan and Mchombo 1994):

(23)

[13] Recall again from the discussion of (10) that I am using the term 'NP' to cover both NP and DP.

From this difference in categorization, together with the constraint on canonical structural realization given in (10), it follows straightforwardly that the English locatives, being categorized as nonnominals, will be excluded from the canonical subject, object and prepositional object positions, while those of Chichewâ will not. The differences in agreement can also be naturally related to this categorial difference, because agreement features—person, number, and gender—universally reflect the referentially classificatory features of nominals. In Bresnan 1994 I argue that this difference in category reflects a deeper typological difference between the categorization of locatives within a case-like system which opposes direct and indirect phrases, and categorization of locatives within a gender class system. Indeed, Greenberg 1978 has proposed that the Niger-Congo gender class markers developed historically from demonstratives or articles, typically nominal categories, and Heine and Claudi's 1986 detailed work on the "birth of a gender" in the East Nilotic language Maa (of which the best-known dialect is Maasai) shows convincingly that locative gender can also arise historically from the same type of nominal source.

3.5 [$_{\mathrm{NP}}$ PP] in English

Interesting confirmation for this category difference comes from considering the properties of a class of PPs in English that do appear in NP positions:

(24) a. *Under the chair* is a nice place for the cat to sleep.
(Stowell 1981: 268: ex. (27a))

b. He had spent *from eleven to one* at his church.
(Jespersen (1927: 5ff), cited by Jaworska 1986)

In contrast to the locative PPs discussed above, these PPs can appear in object positions, as in (24b) and allow subject auxiliary inversion, as in (25):

(25) Is *under the bed* a good place to hide?

Moreover, the PPs that have NP distribution allow plural verb agreement when they are conjoined in subject position (26b), unlike the inverted locative PPs (26a) (Levine 1989: 1015).[14]

[14]Levine 1989 also points out that the verbs with [$_{\mathrm{NP}}$ PP] subjects can be negated, unlike the verbs with inverted locative subjects; cf. Bresnan 1994.

(26) a. *In dry open country and along the roadside *are* found the turkey vulture. (Bresnan 1994: ex. (106b))

b. From eleven to one on Sunday and from two to three on Monday *are* spent in practice. (cf. Levine 1989)

In all these respects these examples behave like nominal phrases, not PPs. In Bresnan 1994 I conclude that they are simply place or time NPs whose missing nominal heads are contextually interpreted as instances of ellipsis:

(27) $[_{\mathrm{NP}}$ (*a place*) $[_{\mathrm{PP}}$ under the bed]],
$[_{\mathrm{NP}}$ (*a time*) $[_{\mathrm{PP}}$ between six and seven]].

This analysis can also explain why these examples have an elliptical flavor and are best in contexts in which the semantics require or the context presupposes a place or time argument. For example, (24a) explicitly predicates being a place of the subject and in (24b) the verb *spend* implies a temporal object. If we substitute these same PPs into our earlier examples (5a) and (15a–b) where the context does not impose a temporal or locative interpretation on the subject or object, the results are quite odd:

(28) a. ??Under the chair makes me happy.

b. ??I like from eleven to one.

c. *I'm pleased by under the bed.

Finally, this analysis can account for the contrast in auxiliary cliticization illustrated in (29):

(29) a. Under the bed /z/ a great place to hide.

b. In San Jose */z/ a great restaurant.

The PPs with NP distribution allow auxiliary cliticization just as a subject NP does, in contrast to the fronted PP of locative inversion.

We find, then, that the PPs that can occupy NP positions show the cluster of categorial properties we have attributed to NPs: they occupy object as well as subject positions, allow subject-auxiliary inversion, and permit subject-verb agreement.

3.6 [$_{\text{NP}}$ PP] in Chicheŵa?

Should the the Chicheŵa locatives be analyzed in the same way, as illustrated in (30b)?[15]

(30) a. [$_{\text{NP}}$ (*a place*) [$_{\text{PP}}$ under the bed]]

b. [$_{\text{NP}}$ (...) [$_{\text{PP}}$ [$_{\text{P}}$ ku] [$_{\text{NP}}$ San Jose]]]

There is clear evidence in Chicheŵa against this analysis.

First, unlike the English examples of the form (30a), there are no lexical instantiations of the missing head noun in Chicheŵa (30b). In fact, in contrast to English PPs, Chicheŵa locatives cannot be used as direct adnominal modifiers at all. There must be a linking particle -*á* 'of' inflected for gender class concord; this is called the 'associative marker' in Orr and Scotton, and is glossed ASC.

(31) a. *mw-aná ku mu-dzi kw-âthu
1-child 18 3-village 18-i.pl.POSS
≠ 'a child at our village' (Bresnan and Mchombo 1994: (53c))

b. mw-aná w-á ku mu-dzi kw-âthu
1-child 1-ASC 18 3-village 18-i.pl.POSS
'a child from our village' (Bresnan and Mchombo 1994: (53d))

If these Chicheŵa locatives were embedded in headless NPs, there would be visible evidence in the presence of the linking particle, as there is in the headless nominals formed from locative phrases in (32a,b):

(32) a. w-á ku mu-dzi kw-âthu
1-ASC 18 3-village 18-i.pl.POSS
'one (of class 1) from our village'

b. ch-á ku mu-dzi kw-âthu
1-ASC 18 3-village 18-i.pl.POSS
'something (of class 7) of our village'

[15]A similar analysis is proposed in Carstens 1991 and 1994.

In particular, a missing place noun head as in (30) would be marked by -*á* with high tone, inflected for classes 16, 17, or 18: *pá*, *kwá*, *mwá*. We see this with the overt place noun heads in (33) and (34):[16]

(33) a. pa-katí p-á mí-têngo
16-middle 16-ASC 4-tree
'between or in the middle of the trees'

b. m-katí mw-á mí-têngo
18-middle 18-ASC 4-tree
'inside or in the midst of the trees'

(34) a. ku-njá kw-á nyúmba
17-outside 17-ASC 9-house
'the yard or outside of the house'

b. pa-njá p-á nyúmba
16-outside 16-ASC 9-house
'the yard or outside of the house (closer proximity)'

These adnominal locatives are clearly distinguishable from the simple locatives introduced by the gender class markers *pa*, *ku*, and *mu*, which cannot occur as direct adnominal complements to a place noun without the associative marker:

(35) a. *pa-katí pá nyŭmba
16-middle 16 9-house
'in the middle of the house'

b. *ku-njá kú nyúmba
17-outside 17 9-house
'the yard of (or outside of) the house'

c. *m-katí ḿ' mi-têngo
18-middle 18 4-tree
'in the middle of the trees'

[16] As noted by Bresnan and Mchombo 1994, Chicheŵa has a few inherently locative noun stems which can only be prefixed by class 16, 17, or 18 noun class markers and which do not permit alternative 'inner' concord. These include -*kăti* 'middle' and -*njá* 'outside, yard'.

Observe that the absence of associative *-á* is evident in all three examples. In (35b,c) we have *ku* and *m* compared to *kwá* and *mwá*, while in (35a) the absence of associative *-á* is revealed by the tonal pattern. The underlying high tone on the associative marker would double onto the initial syllable of the following noun. Thus, there is a clear tonal contrast between **pakatí pá mitêngo* 'in the middle of the trees' and the grammatical (33a), and between (35a) and (34b). (Both of the other examples (35b,c) are ungrammatical whether the associative tone pattern is used, as in (35b), or not, as in (35c).)

These examples could not make it clearer that the hypothetical structure in (30) is not the source of the nominal properties shown by Chicheŵa locatives (and the same reasoning carries over to variants based on KP rather than PP (Carstens 1994)). The missing place head noun shown in (30) cannot be instantiated with any lexical locatives, as we see in (35a–c). When inherently locative nouns ARE used as heads of nominals, as in (33a–b) and (34a–b), the associative linker *-á* must be used, and the presence of *-á* can be detected phonologically.

Secondly, on this analysis it is unexplained why the nominal specifiers and modifiers of the locative NP show concord with the supposed embedded PP. True PPs in Chicheŵa, such as the instrumental or agentive *ndí* 'with, by' have no gender class and disallow concord altogether.

Thirdly, unlike the English PPs, these putative Chicheŵa PPs would never appear unembedded outside of NPs. All Chicheŵa locatives allow NP specifiers and modifers, even in what are generally 'PP positions' in English (the positions of adjuncts and oblique arguments). We have seen examples of this in (13).

It has been argued by Carstens ((1991: 45) and 1994) that the locative marker cannot be a nominal category because elsewhere nominals do not take direct NP complements. However, the relation an NP bears to its sister locative marker is NOT one of complementation, but classification (Bresnan 1994). These locative particles are noun class markers, not relational complement-taking predicates. It has also been pointed out, again by Carstens, that if the classifiers were nouns they would violate a Bantu contraint against monomoraic nouns, which would not be violated if they are prepositions. It is true that all major lexical categories in Chicheŵa must contain at least one foot of two syllables (Kanerva 1990). But clitics are exempt from this requirement, and the locative classifiers can be naturally analyzed as nominal proclitics. Indeed, the phonological reduction or "erosion" of syntactic elements into clitics is a typical stage in their historical evolution into morphological affixes (Givón 1976, Heine and Reh 1984, Heine and Claudi 1986. Another example of monosyllabic nominal clitics in Chicheŵa is the class of disyllabic demonstratives, which have a monosyllabic clitic form: *mwalá awu* > *mwalâ(w)u* 'this rock (class 3)', *njóká iyi* > *njókayi* or *njókáyi* 'this snake (class 9)', *zinthu izi* > *zinthŭzi* 'these things (class 8)'.

I conclude that English locatives are categorized as PPs, a nonnominal category headed by a preposition,[17] while Chicheŵa locatives are categorized as a nominal category headed by an adpositional noun class marker. This, then, is a true instance of nonuniformity of categorization.

4 Categorization of Sentential Complements in English and Chicheŵa

The second case of nonuniformity of categorization comes from propositional complements which designate reported speech, thoughts, and perceptions—*that* complements in English and *kŭti* clauses in Chicheŵa.

4.1 Similarities

These sentential complements have many parallelisms in meaning and function, as illustrated by the Chicheŵa examples and their translations in (36):

(36) a. A-na-nén-á *kutí á-daní á-ku-bwêr-a.*
1.SB-PST-say-FV that 2-enemy 2.SB-PRS-come-FV
'S/he said that enemies are coming.'

b. A-na-lémb-á *kutí á-máyí ă-ke*
1.SB-PST-write-FV that 2-mother 2-iii.sg.POSS
a-ná-mwálĭr-a.
2.SB-REC.PST-be.dead-FV

[17] There are a number of English verbs like *enter*, which are commonly described as having locative objects. However, Jackendoff's 1983 insight that these verbs semantically incorporate a locative place or path function leaves their NP objects designating a reference point, and hence having no specifically locative role by themselves.

'S/he wrote that her/his mother died.'
(Orr and Scotton 1980, Book 2: 201)

c. Nd-a-on-a *kutí ú-ndí-uz-a bôdza.*
i.sg.SB-PRF-see-FV that ii.sg.SB IM.FUT-i.sg.OB-tell-FV lies
'I see that you're going to tell me lies.'

d. Ndi-na-lót-á *kutí á-daní á-ma-gúmúl-a*
i.sg.SB-PST-dream-FV that 2-enemy 2.SB-PST.HAB-demolish-FV
mu-dzi w-âthu.
3-village 3-i.pl.POSS
'I dreamed that enemies were demolishing our village.'

e. Zi-ku-ónék-a *kutí kú-gw-á mvûla.*
17.SB-PRS-seem-FV that 17.SB IM.FUT-fall-FV rain
'It seems that it's going to rain.'

In all of these examples, the main verb of the *kǔti* clause carries indicative tense inflections. With a verb in the subjunctive, the *kǔti* clause can be used with desiderative verbs (37a) or as a purpose clause (37b):

(37) a. A-ku-fún-á *kutí mú-gulits-é má-ukonde.*
1.SB-PRS-want-FV that ii.pl.SB-sell-SUBJN 6-net
'S/he wants you to sell nets.' Lit.: 'S/he wants that you sell nets.'

b. Ti-na-bwér-á *kutí tí-phunzǐr-e.*
i.pl.SB-PST-come-FV that i.pl.SB-learn-SUBJN
'We came (so) that we (may) learn.'

Given these similarities in meaning and function, uniformity of categorization would require that the sentential complements of both languages be assigned the same category, which in current theory is designated 'CP' for complementizer phrase. CP is taken to be a projection of the 'functional', or closed-class, category C (complementizer).[18]

[18] The X′-theoretic difference between functional and lexical categories is articulated by Abney (1987). The idea that complementizers syntactically head CPs is originally due to Ken Hale.

4.2 Differences: CP vs. NP

However, a closer examination of the comparative syntax of the two languages reveals that they differ in categorial properties. While English *that* clauses behave like CPs, a nonnominal category, Chicheŵa *kŭti* clauses behave like NPs.

Prepositional object position English *that* complements cannot occur in the position of prepositional object NPs (Emonds 1973). We saw this in (1b) and (6a). Nevertheless, it is clear from the topicalization phenomenon in (1a) and in (38) that *that*-complements are semantically compatible as prepositional object arguments.

(38) *That we could never agree*, I think we were all affected by __ in the end.

In Chicheŵa the *kŭti* clause can appear in the position of prepositional object NPs. Like other Bantu languages, Chicheŵa has only a few prepositions, including the locative/temporal *mpâka* 'until, up to' and *ndí* 'by, with', which is used as an instrumental, comitative, and agentive marker with passive and 'stative' (middle, decausative) verbs (Mchombo 1993). In (6b) the *kŭti* clause is a passivized sentential subject appearing as the object of the preposition that marks the passive agent *ndí* 'by'. Example (39b) shows a *kŭti* clause prepositional object with a stativized verb, where a NP typically occurs as in (39a):

(39) a. A-lenje á-ma-vut-ík-á ndí *má-funso a-wa.*
2-hunter 2.SB-PRS.HAB-trouble-STAT-FV by 6-question 6-DEM.PROX
'The hunters are troubled by these questions.'

b. A-lenje á-ku-vút-ík-á ndí *kútí*
2-hunter 2.SB-PRS-trouble-STAT-FV by that
mú-wá-land-a mi-koñdo.
ii.pl.SB IM.FUT-2.OB-take.from-FV 4-spear
'The hunters are troubled that you are going to confiscate their spears.'

Subject positions As we have already observed in connection with (9), English *that* clauses function as subjects of predicates, but there is evidence that they do not themselves occupy the structural position of the NP subject.

In Chicheŵa *kŭti* clauses appear as subjects of verbs (40a) and of the copula *ndi* (40b). (The copula *ndi* can be distinguished from the preposition *ndí* by its low tone.)

(40) a. *Kutí mú-wá-land-a mi-kôndo*
that ii.pl.SB IM.FUT-2.OB-take.from-FV 4-spear
zí-ma-vút-á a-lenje.
10.SB-PRS.HAB-trouble-FV 2-hunter
'That you are going to take their spears away from them troubles the hunters.'

b. *Kutí ḿ-phunzitsi w-ánú á-ma-dy-á mbewa*
that 1-teacher 1-ii.pl.POSS 1.SB-PRS.HAB-eat-FV 10.mice
ndi z-ó-dábwíts-a.
COP 10-ASC.INF-amaze-FV
'That your teacher eats mice is amazing.'

The *kŭti* clause can occupy the normal structural positions of the NP subject, which are both VP-initial as in (40a,b) and post-VP as in (41a,b) (Bresnan and Mchombo 1987, Bresnan and Kanerva 1989).

(41) a. Zí-ma-vút-á a-lenje *kutí*
10.SB-PRS.HAB-trouble-FV 2-hunter that
mú-wá-land-a mi-kôndo.
ii.pl.SB IM.FUT-2.OB-take.from-FV 4-spear
'That you are going to take their spears away from them troubles the hunters.'

b. Ndi z-ó-dábwíts-a *kutí ḿ-phunzitsi w-ánú*
COP 10-ASC.INF-amaze-FV that 1-teacher 1-ii.pl.POSS
á-ma-dy-á mbewa.
1.SB-PRS.HAB-eat-FV 10.mice
'That your teacher eats mice is amazing.'

Further, under passivization the *kŭti* clause subject behaves like any other NP subject, as we saw above.

Subject agreement In Chicheŵa as in Bantu in general, all NPs are assigned a gender class which determines grammatical concord. Observe in (40) and (41) that the *kŭti* clause induces class 10 subject agreement and predicate concord across the copula. This is a specialized use of class 10, which normally marks a plural class. This use of class 10 may be an innovative feature of Chicheŵa. A number of other Bantu languages have class 15 concord with sentential complements, for reasons I discuss below.

In Chicheŵa, however, not all of class 10 markers can be used to refer to or agree with *kŭti* clauses. In (42a) we have a left-dislocated *kŭti* clause resumed by the pronominal use of the class 10 subject marker (see Bresnan and Mchombo 1987). In (42b), the same left-dislocated clause is resumed by the pronominal class 10 inflection on the bound prepositional stem *na-* 'with, by', but the result is ungrammatical. Finally, in (42c), the pronominal class 10 object marker resumes the left-dislocated clause, but it too is ungrammatical:

(42) a. *Kutí mú-ma-lédzér-á tsíkú ndí tsîku* m-phunzitsi
that ii.pl.SB-PRS.HAB-get.drunk-FV day and day 1-teacher
w-a-tí-tsímikizir-a kutí **zí**-ku-mú-dábwĭts-a.
1.SB-PRF-i.pl.OB-assure-FV that 10.SB-PRS-ii.pl.OB-amaze-FV
'That you get drunk day after day, the teacher has assured us that it surprises her/him.'

b. **Kutí mú-ma-lédzér-á tsíkú ndí tsîku* m-phunzitsi
that ii.pl.SB-PRS.HAB-get.drunk-FV day and day 1-teacher
w-a-tí-tsímikizir-a kutí á-ku-dábwíts-idw-á ná-**zo**.
1.SB-PRF-i.pl.OB-assure-FV that 1.SB-PRS-amaze-PASS-FV by-10.DEM
'That you get drunk day after day, the teacher has assured us that s/he is surprised by it.'

c. **Kutí pá chiwerú a-nthu s-á-mw-a mowa*
that 16 Saturday 2-person NEG-2.SB-drink-FV beer
ti-na-**zí**-íwăl-a.
i.pl.SB-PST-10.OB-forget-FV
'That on Saturday people do not drink beer, we forgot it.'

The non-subject pronominal concords of class 10 have only a plural sense, while the subject pronominal concord is ambiguous between the plural and the sentential senses. Thus if we replace the dislocated *kŭti* clauses in (42a–c) by the plural class 10 NP *nthano z-ânu* 'your stories', the result is full grammaticality in all three cases.

In sum, the evidence from agreement supports the status of *kŭti* clauses as subjects, but the use of the class 10 marker for sentential concord is not generalized to object and prepositional object markers of class 10.

Object positions Some English verbs take only CP complements, and not NP objects (e.g. *boast, comment, complain, hold* (Postal 1993: 72)), while others take either (e.g. *believe, know, prove, regret*). There are also verbs which unambiguously require an NP object, and with these verbs *that* complements are ill-formed even when semantically compatible, as shown in (3b) and (43a,b):[19]

(43) a. *I never gave *that he was unhappy* a thought.

b. *He blames *that he is unhappy* on you.

Therefore it is commonly assumed, first, that verbs may syntactically select for object or nonobject complements (or both) and secondly, that *that* clause complements in English do not themselves occupy NP positions, but have a special XP-final complement position (Emonds 1976, Koster 1978, Grimshaw 1982, Webelhuth (1992: 108–10)). This analysis of English is entirely consistent with our constraint (10), assuming that CP is a nonnominal category.

In Chicheŵa the *kŭti* clause serves as the complement of transitive verbs, but many of the usual tests for object status cannot be applied. The class 10 object marker *zi-* cannot be used to refer to a sentential complement, but this is true of all class 10 non-subject markers, as we have just seen. Another possible test for object status would be causativization, which takes different forms with transitive and intransitive verbs in Chicheŵa. In particular, intransitive verbs differ from transitive verbs in not permitting the *kwá* 'to' marker on the causee, as observed by Alsina (1992: 518):

[19]Semantic compatibility can be established in various ways (Jacobson 1992). Perhaps the clearest is the well-formedness of topicalized structures such as *That he was unhappy, I never gave a thought*, *That he is unhappy, he blames on you.* When extraction configurations are base generated and resolved at a noncategorial level of structure, as in the present non-movement framework, these examples pose no problems for complement selection.

(44) Chatsalĭra a-ku-nám-íts-á (*kwá) mw-ána.
1.NAME 1.SB-PRS-lie-CAUS-FV to 1-child
'Chatsalira is making the child lie (tell lies).'

When we causativize a verb such as 'think' which takes a *kŭti* complement, we find that the *kwá* marker cannot be used, as shown in (45a):

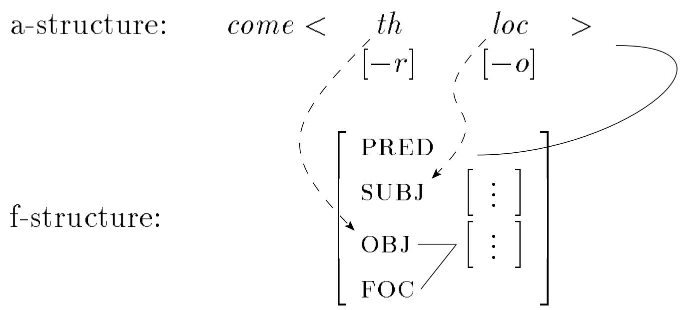
(45) Kalulu a-ku-gáníz-its-a (*kwá) njovu kutí ...
1A.hare 1.SB-PRS-think-CAUS-FV to 9.elephant that
'The hare makes the elephant think that ...'

This could be interpreted as evidence that the base verb *kugániza* 'to think' is intransitive, and hence that the *kŭti* clause must not occupy object NP position. But Alsina (1992: 527–8) has shown that to induce the 'transitive' pattern of causativization, a verb must have not only an object, but an affected object. For example, a verb of perception like *kŭmva* 'to hear' takes unaffected objects: if I hear your voice, I do not thereby affect your voice. The objects of perception verbs are clearly objects, undergoing normal object marking and passivization, but they disallow *kwá* 'to' marking on the causee. Thus (45) does not bear on the transitivity of 'think' and the possible object status of its *kŭti* complement; it shows merely that sentential complements are not affected objects, as Alsina observes.

There is one unusual but interesting test for object status that can be applied here, however, and that is locative inversion. Bresnan and Kanerva 1989 argue that in Chicheŵa locative inversions the inverted NP subject, though it is clearly the logical subject in a-structure, is actually a presentationally focussed unaccusative object in the f-structure, and in Bresnan 1994 I argue the same for English locative inversions.[20] At the levels of a-structure and f-structure, locative inversions in the two languages are virtually identical:

[20]The unaccusative analysis of locative inversions in English is due originally to Levin 1985.

(46) A- to f-structure mapping of locative inversion in English and Chichewa:



In locative inversion the logical subject of the verb—for example, the theme argument of 'come' in (46)—is mapped onto the object function. Because this object is both presentationally focussed and unaccusative, it lacks certain typical properties of transitive objects, as discussed by Bresnan and Kanerva 1989 and Bresnan 1994. For example, in neither Chichewa nor English can it undergo extraction relations, and in neither language can it be filled by an anaphoric pronoun.

Given this analysis of locative inversion, we make a straightforward prediction. Suppose we have a verb which takes both a sentential subject and a locative complement. For example the verb 'to write' in both English and Chichewa can take a locative complement designating the surface on which the writing appears. If we further suppose that what is written on the surface is expressed by a *that* or *kŭti* complement, we can arrange for sentences of the following forms:

(47) a. That enemies were coming was written on the roof.

b. Kutí á-daní á-ku-bwêr-a zi-na-lémb-édw-á pá tsîndwi.
that 2-enemy 2.SB-PRS-come-FV 10.SB-PST-write-PASS-FV 16 5.roof
'That enemies were coming was written on the roof.'

Here the passive verbs meaning 'written' have an argument structure similar to that in (46): the agent has been surpressed and the theme argument can be presentationally focussed, which will prevent it from being mapped onto the SUBJ function. Alternatively, it can be mapped onto the OBJ function, and the locative can become the functional subject, giving rise to locative inversion.

English has a problem with this locative inversion, however. The English *that* clause is of the nonnominal category CP and cannot occupy object positions in c-structure, by constraint (10). Nor can it be related to the object functionally by topicalization, because extraction of the locative inversion object is ruled out for independent reasons.[21] Thus locative inversion of the English example (47a) should be ungrammatical, though it should be fine with the CP embedded in an NP. This prediction is correct, as shown in (48):

(48) a. On the roof was written the warning that enemies are coming.

b. ??On the roof was written that enemies are coming.
(cf. On the roof it was written that enemies are coming.)

The observation illustrated in (48) is due originally to David Pesetsky (personal communication), who pointed out the contrast between *In this room was discovered the cure for cancer* and **In this very room was discovered that cancer can be cured by tomatoes*.

Chichewa, in contrast, should have no problem with the locative inversion. The Chichewa *kŭti* clause is categorized as an NP and (as we have seen) has the syntactic distribution of NPs elsewhere in the syntax of Chichewa. Hence, it can appear in an object position in the constituent structure and locative inversion of (47b) should be grammatical. This prediction is also correct:

(49) Pa tsîndwi pa-na-lémb-édw-á kútí á-daní á-ku-bwêr-a.
16 5.roof 16.SB-PST-write-PASS-FV that 2-enemy 2.SB-PRS-come-FV
'On the roof it was written that enemies are coming.'
Lit.: 'On the roof was written that enemies are coming.'

This, then, is very clear evidence for the nonuniformity of categorization of propositional sentential complements in English and Chichewa.

5 Conclusion: Explaining Categorization

Why are locatives and sentential complements categorized differently in English and Chichewa? I have already referred to my argument in Bresnan 1994

[21] See Bresnan 1994 for discussion. This argument assumes that the heavy-NP-shifted (right focus) position in English is a canonical object position for constraint (10).

that the difference in categorization of locatives can be traced to a fundamental typological difference between the two languages: locatives in Chicheŵa are categorized within a gender class system which governs all nominals and nominal concord, while locatives in English are assimilated to the case-like opposition of direct and indirect phrases. With sentential complements, the story is somewhat different.

Chicheŵa has a verb stem *-ti* meaning 'say', which is exceptional in that it lacks the usual final vowel *-a*. The verb can be used either for direct quotation or for indirect speech, as illustrated in (50a,b) from Orr and Scotton (1980, Book 2: 1980):

(50) a. A-nǎ-ti: "ndi-dzá-pit-a."
1.SB-PST-say i.sg.SB-FUT-go-FV
S/he said, "I'll go."

b. A-na-tí á-dzá-pit-a.
1.SB-PST-say 1.SB-FUT-go-FV
S/he said s/he will go.

This verb 'say' inflects for subject and tense/aspect like other Chicheŵa verbs. Its infinitival form is also regular:

(51) kǔ-ti
15-say
'saying, to say'

The infinitive in Chicheŵa as in other Bantu languages is part of the noun class system. Infinitive verbs belong to class 15 and induce class 15 concord. Bresnan and Mchombo 1994 analyze infinitive phrases in Chicheŵa as verbal phrases which can be embedded exocentrically in nominal phrases, the verb being the functional (f-structure) head of the NP. The inner VP layer can be used without the nominal superstructure—for example, as complement to a class of intransitive modal verbs, where it prohibits nominal modifiers, cannot be replaced by object agreement on the matrix verb, and in one dialect studied by Tabor 1992 undergoes contraction with the matrix verb. The same VP, when embedded in the NP superstructure, can be used as object of transitive verbs, can have nominal modifiers, can be replaced by class 15 object agreement on the matrix verb, and prohibits contraction in the dialect just mentioned.

The complementizer *kŭti* in fact shares some syntactic and morphological properties of the infinitive verb *kŭti*. First, just as one can question the complement of a verb of saying or speaking as in (52)—

(52) a. A-ku-nén-á chi-yâni?
1.SB-PST-say-FV 7-what
'What is s/he saying?

b. A-ku-yánkhúla chi-yâni?
1.SB-PST-speak-FV 7-what
'What (language) is s/he speaking?

—so one can question the complement of *kŭti* used as a complementizer as in (53):[22]

(53) a. A-ku-nén-á kutí chí-yâni?
1.SB-PST-say-FV that 7-what
'What is s/he saying?

b. A-ku-yánkhúla kutí chí-yâni?
1.SB-PST-speak-FV that 7-what
'What is s/he saying?'

In this respect *kŭti* is quite unlike the English complementizer *that*: **What is she saying that?*, *??She is saying that what?*

A second property which the complementizer *kŭti* shares with verbs is a striking morphological characteristic of Chichewa: the allomorph *ó* produced by the contraction of associative *-á* with infinitive *ku-*. Mchombo (p.c.) has observed that this is a property only of the class 15 infinitive marker, and not, for example, the class 17 locative marker *ku* (see Bresnan and Kanerva (1989: n. 13) and the references cited there):

(54) a. zódábwítsa <*z(i)-á + kú-dábwítsa
'amazing (class 10)' 10-ASC + 15-amaze

[22]The verb *kuyánkhula* means 'speak' when it takes a simple object NP and 'say' when it takes a *kŭti* 'that' complement.

b. zóti <*z(i)-á + kú-ti
'saying' or 'of that' (class 10)' 10-ASC + 15-say

Thus we have examples like (55):

(55)	izi	zó-tí	á-ma-dy-á	mbewa
	10.DEM.PROX	15-that	1.SB-PRS.HAB-eat-FV	10.mice
	'these (stories) that he eats mice'			

Other class markers can be used with this adnominal form of *kŭti*, including classes 9 and 1. They appear to be circumscribed only by finding a semantically appropriate noun for the *kŭti* clause to describe.[23]

While the complementizer *kŭti* has some syntactic and morphological properties of infinitives, as we have just seen, it has clearly lost the verbal meaning of the infinitive of 'say'. First, we cannot replace the complementizer *kŭti* with another verb of saying, as illustrated in (56):

(56)	a.	A-na-tí	kútí ...
		1.SB-PST-say	that
		'S/he said that ...'	
	b.	*A-na-tí	kú-nén-á ...
		1.SB-PST-say	15-say-FV
		'S/he said saying ...'	

Secondly, there is no entailment of saying that can be attributed to the complementizer. For example, sentence (57a) does not entail (57b) or (57c):

(57)	a.	Físí	a-na-ón-á	kutí	ḿ-kángó	ú-mú-dy-a.
		1A.hyena	1.SB-PST-see-FV	that	3-lion	3.SB IM.FUT-1.OB-eat-FV
		'The hyena saw that the lion would eat him/her.'				

[23]The *kŭti* clause itself cannot have any nominal modifiers, whether of class 15 or class 10:

*uku/izi	kutí	á-ma-dy-á	mbewa
15.DEM.PROX/10.DEM.PROX	that	1.SB-PRS.HAB-eat-FV	10.mice
'these (stories) that he eats mice'			

This may be because as a complementizer *kŭti* has lost its verbal meaning (see below). Zucchi 1993 provides a semantic basis for distinguishing between the meanings of gerundive phrases and propositions, but I have not yet investigated this in Chichewa.

b. A-na-tí ḿ-kángó ú-mú-dy-a.
1.SB-PST-say-FV 3-lion 3.SB IM.FUT-1.OB-eat-FV
'S/he said that the lion would eat her/him.'

c. A-nă-ti: "ḿ-kângo ú-ndí-dy-a."
1.SB-PST-say-FV 3-lion 3.SB IM.FUT-i.sg.OB-eat-FV
'S/he said, "The lion is going to eat me." '

Finally, as I have observed above, *kŭti* clauses replace the class 15 concord of Bantu infinitives with class 10.

These properties of *kŭti* clauses are anomalous if we assume uniformity of categorization: *kŭti* has categorial properties of an infinitival verb, but it has the functions and semantics of a complementizer. Yet this kind of mismatch is typical of the pattern of grammaticalization wherein verbs of saying become clausal complementizers (Lord 1976, Heine and Claudi 1986). The pattern is apparently widespread in Africa (Heine et al. 1993), and it occurs in other Bantu languages than Chicheŵa. We have *kw-amba* in Kiswahili (Ashton 1947: 309), *kha*+ PRON in Gitonga, which is spoken on the coast of southern Mozambique (Lanham 1955: 224–5), *ku-ti* in Chishona (Fortune 1955: 406), *uku-thi* in Isizulu (Doke 1988: 306–8), and *ho-rē* in Sesotho (Doke and Mofokeng 1985: 403–5). Except for Gitonga's *kha*, a verb stem for 'say, think' which Lanham believes to derive from the class 15 infinitive by dropping the prefix *gu-*, each of these examples is an infinitival form of a verb of saying (I have indicated the infinitival prefix by a hyphen), and all but *kha* and *amba* 'tell' are apparently based on cognate verb stems.

Detailed and precise language-internal studies of the structure and uses of these constructions are few, and perhaps that is why contemporary generative grammarians have for the most part simply ignored them. Another contributing factor is the deemphasis of descriptive and historical studies in American linguistics, which has been justly deplored by Dimmendaal 1993. Nevertheless, it is clear that the nonuniformities of categorization that I have observed between English and Chicheŵa are not isolated and unrepresentative phenomena.

What conclusions can we draw from these facts of English and Chicheŵa? Throughout the history of generative grammar the same types of formal categorial structure have been used to represent very different linguistic dimensions—semantic roles such as the 'logical subject and object', functions such as subject and object as well as topic and focus, and the surface morphosyntactic forms of expression of language. These have all been uniformly represented in the same formal vocabulary. Because these dimensions differ, this representational assumption requires powerful transformational operations to link them. To limit the power of these operations, increasingly rigid constraints have been imposed on categorial structures, so that the class of possible syntactic structures can be deduced from first principles.

But what we see both within and across languages is that there are category mismatches manifested by movement paradoxes and nonuniformities of categorization. I have suggested that these category mismatches reflect a different and more flexible architecture of grammar which factors role, function and category into parallel structures. From this point of view the categorial structure of each language jointly reflects both abstract, possibly universal constraints on role and function, function and structure (such as I have illustrated in (10), (12), and (46)) and also the historical development of the specific typological patterns and individual categories which give it its distinct identity. Let us not lose this individual identity and diversity. African languages have much to teach us.

6 References

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