Passive without morphology: A case for implicit arguments

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Abstract This paper examines the syntax of a novel construction I call Passive without Morphology (PwM) constructions in Bùlì and the question of whether they have projected external arguments. The main proposal that I argue for is that PwM constructions in all their occurrences possess projected implicit external arguments. The discussions presented in the paper provide empirical as well as theoretical support for the classification of passives (Keenan and Dryer 2007) and a theory of passives and implicit arguments (Collins 2021). This paper argues that the internal argument moves to Spec,TP in two steps: first, the VP moves into Spec,VoiceP and from there the internal argument raises to Spec,TP (Collins 2005, 2021).

Keywords: Bùlì, implicit argument, movement, short passive, smuggling, syntax

1 Introduction

Argument structure alternation is a pervasive property of human language. Many languages demonstrate these alternations in constructions such as passivization, middles, and anticuasatives among others. Bùlì grammar, for example, allows for the constructions in (1) and (2).

(1) **Active sentences**

a. Asibi bɔ̀nì lāmmú.
Asibi chop meat.DEF
'Asibi chopped the meat.'

b. Asouk kpà tálímŭ.
Asouk weed farm.DEF
'Asouk weeded the farm.'

c. Bí:ká chì:n gbáŋká.
child.DEF read book.DEF
'The child read the book.'

Even though the verbs *bɔ̀nì'* 'chop', *kpà*, 'weed' and *chì:m* 'read' are transitive verbs and thus require two arguments as in (1) above, there is a passive-like construction in Bùlì in which the internal argument is made the surface subject and crucially, the external argument cannot surface as a by/for phrase in the structure, (2).

(2) **Passive without morphology**

a. Lāmmú bɔ̀nì.
meat.DEF chop
'The meat was chopped.'
b. Tálímŭ kpài.
farm.DEF weed
'The farm was weeded.'
c. Gbáŋká chì:n.
book.DEF read.
'The book was read'

This paper investigates and analyzes the properties of the constructions in (2). I will argue that the constructions exemplified in (2) are indeed passive constructions and these constructions will therefore be called Passives without Morphology (PwM) in this paper. The fact that they lack morphology can be witnessed by the fact that the verb forms in the PwM construction are the same as their active counterparts in (1). If the constructions in (2) are indeed passives, they raise a number of theoretical as well typological issues chief among them being: is the external argument (the agent) ever projected in these constructions? Concretely, I show using a set of well-established diagnostics that the external argument in PwM constructions is syntactically present just like the external argument of the active sentences in (1). The only difference being that while the external argument is overt in the active sentence, it is projected as an implicit argument (null pro) in PwM constructions.

Questions raised by this conclusion including: how the implicit argument is represented in the structure, and the internal argument ends up in the subject position are addressed. The major theoretical contribution of this paper is that it motivates an analysis of implicit arguments that requires that they be syntactically projected (Stroik 1992,1995,1999, 2000; Hoekstra and Roberts 1993; Sichel 2009; Collins 2021; Gotah 2022). Alternative

analyses where an implicit argument is not syntactically present (Fiengo 1980; Roberts, 1987; Fagan 1992,1988; Condoravdi 1989; Zribi-Hertz 1993; Ackema and Schoorlemmer 1995; Bruening 2013; Sigurðsson and Wood 2021; Newman 2021) are to unable capture the Bùlì data.

The rest of the paper is organized as follows: In section 2, I present some of the defining properties of PwM construction. In section 3, I argue that the PwM constructions have a null external argument in their syntactic representation. Section 4 discusses the featural specifications of the null argument essentially concluding the null external argument is pro. The analysis of PwM construction is presented in section 5. In section 6, I present alternative analysis to the one proposed in section 5 and highlight the issues associate with them. I conclude the paper in section 7.

2 Properties of passive without morphology

I outline some of the basic properties of passive without morphology constructions. One property of the PwM construction in Bùlì is that the external argument can not be overtly expressed, (3).

(3) a. Lāmmú bɔ̀nì (*Asibi) .
meat.DEF chop (Asibi)
Intended: 'The meat was chopped (by Asibi).'
b. Tálímŭ kpà (*Asouk).
farm.DEF weed Asouk
Intended: 'The farm was weeded by Asouk.'
c. Gbáŋká chì:n (*bí:ká).
book.DEF read child.DEF
Intended: 'The book was read (by the child).'

Keenan and Dryer (2007) calls this 'basic passive' which is characterized by (i) the lack of an agent phrase, (ii) the main verb in its non-passive form is transitive (cf.(1)), and (iii) the main verb expresses an action, taking agent subjects and patient objects in its non-passive form (Keenan and Dryer 2007: 328-329). Since Bùlì is a language that has a passive without an agent phrase, it conforms to the generalization that "If a language has passives with agent phrases then it has them without agent phrases" Keenan and Dryer (2010:330).

The absence of an agent phrase (by phrase) in these constructions could suggest that they are 'middles'[1]. In the discussion of the middle construction in English, for instance, others have used the absence of an overtly expressed syntactic agent to argue that they lack agents altogether (Roberts, 1987; Fagan 1992,1988). Since the PwM construction lacks an overtly expressed external argument, this could lead one to incorrectly conclude that PwM constructions also lack external arguments. As I will show, they have syntactically projected external (agent) arguments.

When an argument is introduced by way of *tè* 'give/for' as in (4), it must be understood as the beneficiary and not as an agent argument.

(4) a. Lāmmú bɔ̀nì tè Asibi.
meat.DEF chop give Asibi
'The meat was chopped for Asibi.'
b. Tálímŭ kpà tè Asouk.
farm.DEF weed give Asouk
'The farm was weeded for Asouk.'
c. Gbáŋká chì:n tè bí:ká.
book.DEF read give child.DEF
'The book was read for the child'

This could once again be taken as an argument in favor of a lack of an external argument. In his discussion of the middle construction in English, Stroik (1992) argues, using sentences like (5) which has a *for phrase*, that the external argument is syntactically present. He based this on the fact that the only available interpretation for the object of the preposition in (5) is that it must understood as an Agent. Thus in (5) Mary and Bill are the agents of the respective constructions. Since this interpretation is lacking in the PwM constructions above, one could conclude that they lack external arguments.

(5) (**Stroik 1992:131**)
a. That book reads quickly for Mary.
b. No Latin text translates easily for Bill

Another property of PwM constructions is that the internal argument must appear in subject position at PF, (6).

[1] Newman (2020) mentions these and calls them *syntactic middles* (s-middles) arguing that they lack an agent

(6) a. *bɔ̀nì lāmmú.
chop meat.DEF
Intended: 'The meat was chopped.'
b. *kpà tálímŭ
weed farm.DEF
Intended: 'The farm was weeded.'
c. *chì:n gbáŋká
child.DEF read book.DEF.
Intended: 'The book was read'

We can tell that the internal arguments appear in subject positions by considering A-bar extractions. Ferreira and Ko (2003), Hiraiwa (2003, 2005), and Sulemana (2019) point out that when a subject is A-bar extracted, it is accompanied by the complementizer *ālì*, (7a) and non subjects followed by *ātì*, (7b). The following examples are taken from Sulemana (2019:4).

(7) a. (ká) wānā *(ālì) dìg lāmmú:?
Q who ALI cook meat.DEF
'Who cooked the meat?'
b. (ká) b^{w}ā *(ātì) bí:ká dìgì:?
Q what ATI child.DEF cook
'What is it that the child cooked?'

As we can see in (8), when the internal argument is A-bar extracted in a PwM construction it is followed by *ālì* patterning with subject extraction in (7a) an indication that it is in subject position.

(8) (ká) b^{w}ā *(ālì) dìgi yā?
Q what ALI cook PRT
'What was cooked?'

I will argue that PwM constructions exemplified in this section are indeed passive constructions. This will be done by showing that it shares more properties with passives in languages that have passive morphology than with a closely related construction like the middle. As already noted, Keenan and Dryer (2007) calls this the 'basic passive'. The major differences between the Middle and the PwM constructions is that (i) unlike a middle, PwM constructions lack generic and modal readings often associated with middles (Lasersohn 1997, Williams 2014, Ackema and Schoorlemmer 2017, and Bhatt and Pancheva 2017) (ii) PwM constructions can license purpose clauses, which middles, have been argued, cannot (Roeper 1987, Manzini 1983, Bhatt and Pancheva 2017, Gotah 2022).

3 Diagnosing the external argument

I would like to start this section by noting that the discussions here could be regarded as a direct response to the following statement "...it would be interesting to look into languages that do not have a long passive.... Is it possible to find diagnostics for a syntactically projected implicit external argument in those languages? The clear prediction is that all implicit arguments should be syntactically projected, even in languages that do not possess by-phrases." Collins (2021:79). Bùlì is the best place to test the validity of this statement since it has only short passives. As it turns out, the PwM constructions project implicit external arguments, providing evidence that implicit arguments are guaranteed as part of UG (Collins 2021).

To argue that PwM constructions have syntactically present external arguments, I will use a set of well-established diagnostics that indicate that PwM constructions participate in a number of grammatical dependencies that their active counterparts participate in. This is essentially the same diagnostics that are used in a number of works to make similar points in other languages (Stroik 1992, Williams 2014, Bhatt and Pancheva 2017, Collins 2021, Gotah 2022). The diagnostics that I use here are based on binding, entailments, control and secondary predicates. All these are unified by the fact that they require syntactically present antecedents somewhere in the sentence in order to be licensed. In this section, I am essentially arguing for for (9):

(9) The implicit external (agent) argument in PwM constructions is syntactically present.

Now we turn to the diagnostics in the following subsections.

3.1 pro-DEK-nyiŋ

Before using this constituent as a diagnostic for the presence of an external argument, it is necessary to devote some space to make some general remarks concerning its morphology and distribution. More so, because it is made-up of three different constituents with independent distributions, and secondly it has not been noted in the Bùlì literature until now.

Pro-DĒK-nyīŋ is an anaphoric constituent that can be translated roughly as: 'for the sake of the antecedent DP' and requires a syntactically present antecedent to be licensed.

Pro-DĒK-nyīŋ has three different morphemes: pro, this morpheme is simply a pronoun which can be any of the pronouns we find in the language. In general pronouns have the distribution of DPs as in (10). The sentences in (10), where no antecedent for the pronoun is present in the sentences, are well-formed.

(10) a. Wà bɔ̀nì lāmmú.
3SG chop meat.DEF
'He chopped the meat'
b. Núrmà wìen āyīn wà bɔ̀nì lāmmú.
people say C 3SG chop meat.DEF
'The people said that he chopped the meat'

When the pronoun occurs as part of the pro-DĒK-nyīŋ constituent, however, it has to be bound by a syntactically present antecedent DP, (11).

(11) a. Asibi$_i$ bɔ̀nì lāmmú wà$_{i/*j}$-dēk-nyīŋ.
Asibi chop meat.DEF 3SG-SELF-BODY
'Asibi chopped the meat for his own sake.'
b. Núrmà$_i$ bɔ̀nì lāmmú bà$_{i/*j}$-dēk-nyīŋ.
people chop meat.DEF 3PL-SELF-BODY
'The people chopped the meat for their own sake.'
c. *Núrmà$_i$ bɔ̀nì lāmmú wà$_{i/j}$-dēk-nyīŋ.
people chop meat.DEF 3SG-SELF-BODY
'The people chopped the meat for their own sake.'

Example (11a) is grammatical on the coindexed reading with *Asibi* because *Asibi* is an appropriate antecedent for the pronoun. This pronoun cannot be bound by any other argument as indicated by the ungrammaticality of the index **j*. This crucially shows that unlike an ordinary pronoun, its referent cannot be provided by the context. The pronominal must also match in number with its antecedent (11b), *núrmà* 'the people' is an appropriate antecedent for the pronoun. Example (11c) is ungrammatical because, *núrmà* 'the people' is not an appropriate antecedent for the pronoun because of the number mismatch, and also a contextual referent cannot be an antecedent. As we shall see below (in the following section), pro-DĒK without nyīŋ forms a reflexive in the language and this obeys condition A of the binding theory.

Also, the antecedent and pronoun must be in a local c-command relation.

(12) Asibi$_i$ nyámmà$_j$ bɔ̀nì lāmmú *wà$_i$/bà$_j$-dēk-nyīŋ.
Asibi parents chop meat.DEF 3SG/3PL-SELF-BODY
'Asibi's parents chopped the meat for their own sake.'

In (12), the pronoun must refer to *Asibi*'s parents and cannot refer to *Asibi* , since *Asibi* doesn't c-command the pronoun.

Also when *DĒK* is attached to a DP, as in (13), it has an emphatic interpretation.

(13) Asibi-DĒK álī dìg lāmmú.
Asibi-SELF ALI cook meat.DEF
'Asibi cooked the meat (by) himself.'

Finally, *nyīŋ* can also be attached to a DP, when this happens it means 'because of the DP' as in (14a). When attached to a pronoun, it has the distribution of pronouns. In (14b), *Asibi* cooked the meat because of another person it cannot be because of *Asibi* himself.

(14) a. Asibi dìg lāmmú Asouk-nyīŋ
Asibi cook meat.DEF Asouk-body
'Asibi cooked the meat because of Asouk.'
b. Asibi dìg lāmmú wà-nyīŋ
Asibi cook meat.DEF 3SG-body
'Asibi cooked the meat because of him.'

The examples in (10)-(14) show that *pro-DĒK-nyīŋ* is a constituent, that is idiomatic in nature when all the three components are present, and it requires a syntactically present DP as an antecedent. This constituent reminds one of Helke's (1973) *restricted possessive* pronominal determiner. In the sentences in (15a)-(15b), the possessive pronouns have appropriate antecedents that bind them. In (15c)-(15d), on the other hand, the possessive pronouns lack appropriate antecedents, hence the ungrammaticality.

(15) a. The poor girl lost her mind.
b. We nodded our heads.
c. *The poor boy lost her mind.
d. *I nodded our heads. (Helke 1973:10).

All in all, the pronoun in pro-DĒK-nyīŋ is an anaphoric constituent that requires a syntactically present locally c-commanding antecedent in order to be licensed. Essentially, it has similar distributions to reflexives, obeying condition A of the binding theory. Now that we have clearly stated the distributional requirement of pro-DĒK-nyīŋ, we can employ it in our diagnosis of the implicit external argument in PwM constructions.

Now consider its distribution with the PwM constructions in (16). In (16a), the pronoun refers to the chopper and there is no other interpretation.

Similarly in (16b), the pronouns refers to the weeder no other interpretation is possible for the pronoun. The context for a sentence like (16a) for instance will be the following: I saw Asibi chopping some meat in the kitchen, and I asked my friend if Asibi was helping his mother cook. My friend responds with (16a):

(16) a. Lāmmú bɔ̀nì wà-dēk-nyīŋ.
meat.DEF chop 3SG-SELF-BODY
'The meat was chopped for his own sake.'
b. Tálímŭ kpài bà-dēk-nyīŋ.
farm.DEF weed 3PL-SELF-BODY
'The farm was weeded for their own sake.'

The data in (16) demonstrate that the pro-DĒK-nyīŋ constituent can be licensed in PwM. But how is this licensed considering the fact that it requires a syntactically present c-commanding antecedent? There are two possibilities: one of these has already been ruled out, which is to assume that it can be licensed in the context. The second, which I am arguing for, is that it is licensed by the syntactically present implicit (null) external argument.

This analysis predicts that if a construction lacks an external argument (overt or null) or an argument that can function as an antecedent for *pro-DĒK-nyīŋ* , then it will not be licensed and that construction will be ungrammatical. The examples in (17) test this prediction. In the examples in (17), which lack external arguments, *pro-DĒK-nyīŋ* is not licensed.

(17) a. *Lì:kă mɔ̄bī wà-dēk-nyīŋ.
pot.DEF break 3SG-SELF-BODY
Intended: 'The pot broke for his own sake'
b. *Tí:mú lɔ̄ bà-dēk-nyīŋ.
Tree.DEF fall 3PL-SELF-BODY
Intended' The tree fell for their own sake.'

Given the analysis outline above, the ungrammaticality of (17) is expected since the anaphors lack a c-commanding antecedents. Using anaphoric constituents as diagnostics for the presence of null/implicit arguments can be found in (Stroik 2000 and Collins 2021), as well. Collins argues convincingly that there must be an implicit argument in (18) binding the possessor pronouns (see Collins 2021: 19-21).

(18) a. No, it was done on my own.
b. It was done on your own, right?
c. It was done on his own, right?

d. Homework done on one's own is never easy.

3.2 Binding conditions A and B

A related argument suggesting the presence of the external argument comes from conditions A and B of the Binding theory: the implicit argument can bind a reflexive, and can also trigger a condition B effects. There has been some discussions of the reflexives in Bùlì, focusing on different aspects of its behavior, such as the fact that the pronominal part of the reflexive agrees in phi-features with its antecedent (Agbedor 2002, Sulemana 2019). In these discussions, it is acknowledged that Bùlì reflexives are not different from the English reflexive in requiring a locally c-commanding antecedent. Consider the following examples (19). The anaphor needs an antecedent within the same clause in order to be licensed (19a). When the antecedent is not local to the reflexive, the result is ungrammatical (19b). Similarly when the antecedent fails to c-command the anaphor, the result is ungrammatical (19c).

(19) a. Asibi$_i$ tòm gbáŋká tè wà$_i$-dēk.
Asibi send book.DEF. give 3SG.SELF
'Asibi$_i$ sent the book to himself$_i$.'
b. *Asibi$_i$ wè:ni āyīn mì tòm gbáŋká tè wà$_{*i}$-dēk.
Asibi say C 1SG send book give 3SG-SELF
Intended: 'Asibi$_i$ said that I sent the book to himself$_i$.'
c. *Asibi$_i$ doama tòm gbáŋká tè wà$_{*i}$-dēk.
Asibi friend.DEF.PL send book.DEF. give 3SG-self
Intended: 'Asibi's friends send the book to himself. '

Now, let us consider the PwM construction in (20b) below in which a reflexive can be licensed. In (20a), the reflexive is referring to the sender which in this case is *Asibi* and thus the sender and recipient of the book must be the same individual. In (20b), the reflexive is referring to the sender and nobody else.

(20) a. Asibi$_i$ tòm gbáŋká tè wà-dēk$_{i/*j}$.
Asibi send book give 3SG-SELF
'Asibi$_i$ sent the book to himself$_{i/*j}$.'
b. Gbáŋká tòm tè wà-dēk.
book send give 3SG-SELF
'The book was sent to himself.'

'*Wà-dēk*' is a reflexive pronoun obeying condition A of the binding theory in requiring the presence of a locally c-commanding antecedent in order to be licensed. In (20a), this antecedent is Asibi. In (20b) however, I argue that the antecedent of the reflexive is the implicit argument.

A similar example that uses the second person singular, but is equivalent to the generic *oneself* in English, is given in (21).

(21) a. Asī gbáŋká dīn tòm tè fì-dek, númà àlì mīŋ.
if book DIN send give 2SG.SELF, people.DEF FUT know
'If a book is sent to yourself/oneself, the people will know'
b. Asī gbáŋká dīn tòm tè fù, númà àlì mīŋ.
if book DIN send give 2SG., people.DEF FUT know
'If a book is sent to you, the people will know'

We observe the same condition A and B effects in (21), crucially, the sender and the recipient cannot be the same individual in (21b) due to condition B of the binding theory. Consider also the examples in (22). In (22a), for instance, the sender and the recipient of the book cannot be the same individual because of condition B. *Wà* is a pronoun, which is subject to binding condition B, and as such cannot take a locally c-commanding DP as its antecedent. As such, the pronoun cannot refer to *Asibi*. Similarly in the PwM construction in (22b), the sender and the recipient cannot refer to the same individual. I argue that this is as a result of the implicit argument present in PwM constructions. Because the implicit argument c-commands the pronoun, it precludes any coreference relation between them.

(22) a. Asibi$_i$ tòm gbáŋká tè wà$_{*i/j}$.
Asibi send book give 3SG
'Asibi sent the book to him$_{*i/j}$.'
b. Gbáŋká tòm tè wà.
book send give 3SG
The book was sent to him.'

These facts follow straightforwardly from the assumptions that the external argument is syntactically present as an implicit argument. This implicit argument of the PwM constructions can bind a reflexive pronoun (20b), its presence also triggers condition B effects (22b). Since reflexives and pronouns are subject to Conditions A and B of the Binding Theory respectively, the data suggest that the implicit argument of PwM constructions is syntactically present.

There is, however, a certain usage of English reflexives that makes them different from their Bùlì counterparts. English reflexives can be used in structures in which condition A appears to be violated in not requiring a locally c-commanding antecedent (23). These usages of the English reflexives have been analyzed as involving logophors or exempt anaphors (For discussions on logophors and exempt anaphors see Reinhart and Reuland 1993, Charnavel and Zloger 2015, Charnavel and Sportiche 2016 a.o).

(23) (Collins 2021:14)

a. Bill$_i$ said that the rain had damaged pictures of himself$_i$ /him$_i$.
b. In her$_i$ opinion, physicists like herself$_i$ /her$_i$ are rare.
c. Max$_i$ boasted that the Queen invited Lucie and himself$_i$ /him$_i$ for a drink.

Crucially, Bùlì reflexives do not have logophoric or exempt uses (24) which make them different from their English counterparts.

(24) a. *Asibi$_i$ wè:ni āyīn mì à-yā: wà-dēk$_i$ foto wà-dɛ̄.
Asibi say C 1SG IMPF-like 3SG-self picture DET-DEM
'Asibi said that I like this picture of himself.'
b. Asibi$_i$ wè:ni āyīn mì à-yā: wà$_i$ foto wà-dɛ̄.
Asibi say C 1SG IMPF-like 3SG picture DET-DEM
'Asibi said that I like this picture of him.'

As we just showed, Bùlì reflexives resist logophoric uses so it makes sense to assume that in the example in (20) we have a clear case of a non-logophoric reflexive that is standardly analyzed as being subject to Condition A.

3.3 *Entailment and DEK*

A further evidence supporting the syntactic presence of the external argument in PwM constructions comes from entailments (Keyser and Roeper 1984, Williams 2014, Bhatt and Pancheva 2017, Collins 2021) and the distribution of *DEK* '-self' in Bùlì. Specifically, *DEK* '-self' is incompatible with PwM constructions. Consider the examples in (25).

(25) a. Lāmmú bɔ̀nì.
meat.DEF chop
'The meat was chopped.'

b. Gbáŋká chì:n.
book.DEF read.
'The book was read.'
c. Lì:kă mɔ̀bì.
pot.DEF break
'The pot broke

The sentences in (25a)-(25b) entail that someone chopped the meat and someone read the book. If it true that the meat is chopped, then it is true that somebody chopped the meat. Similarly, if it true that the book was read, then it is true that somebody read the book. The entailment relations can be taken as evidence for the presence of an agent argument. Such an entailment relation is absent in (25c), an indication that it lacks an external argument. The fact that the sentences in (25a)-(25b) have entailment relations can made particularly clearly with the distribution of *DĒK* '-self'.

DĒK 'self' attaches to a DP that is either the agent or has the ability undergo an action/event described by the predicate without an external causer. In (26a)-(26b), the subject DPs are the agents of the verbs. In (26c)-(26d), the subjects can undergo the actions of the predicates without external causers, that is, a pot can break on its own, a tree can fall by itself. Therefore (26c)-(26d) do not require agents. This explains why all the subjects in (26) are able to license DĒK.

(26) a. Asibi-DĒK álī bɔ̀nì lāmmú.
Asibi-SELF ALI chop meat.DEF
'Asibi chopped the meat (by) himself.'
b. Asouk-DĒK álī kpà tálímŭ
Asouk-SELF ALI weed farm.DEF
'Asouk weeded the farm (by) himself.'
c. Lì:kă-DĒK álī mɔ̄bī.
pot.DEF-SELF ALI break
'The pot broke/is broken by itself/on its own
d. Tí:mú-DĒK álī lɔ̄.
Tree.DEF-SELF ALI fall
'The tree fell (by) itself.'

Consider (27) in contrast where DĒK is not licensed.

(27) a. *Lāmmú-DĒK álī bɔ̄nī.
meat.DEF-SELF ALI chop
‘ The meat is/was chopped (by) itself.’
b. *Gbáŋká-DĒK álī chī:n.
book.DEF-SELF ALI read.
‘The book is/was read (by) itself.’

The subjects in (27) are unable to take DĒK because they cannot by themselves undergo the actions described, they require an external argument. That is, the meat cannot chop by itself and the book cannot read by itself. I assume that it is the requirement for the presence of the external arguments that excludes the cooccurrence of DĒK with the subject DPs in the sentences in (27). Given these distributions of DĒK in (26), we must conclude that the requirement for the presence of the external arguments in (27) excludes the licensing of DĒK. This external argument, I assume, is the implicit argument.

The ungrammaticality of (27) with DĒK might be taken to cast doubt on this conclusion. If there were a syntactically present external argument in (27), then it should be able license DĒK, since it has been shown that this argument is syntactically active. But (27) is ungrammatical with DĒK, suggesting that there is no external argument in (27). My response to this line of thinking is that DĒK can only be attached to overt elements, otherwise we would expect the null external argument to license it.

3.4 Control into purpose clauses

Another piece of evidence supporting the syntactic presence of an implicit external argument comes from control into purpose clauses (Roeper 1987, Manzini 1983, Bhatt and Pancheva 2017, Gotah 2022). PwM constructions are able to license purpose clauses, (28).

(28) a. Lāmmú bɔ̀nì wà chārī.
meat.DEF chop 3SG distribute
‘ The meat was chopped in order to distribute. ’
b. Tálímŭ kpài bà bōrī zá:
farm.DEF weed 3PL plant millet
‘The farm was weeded in order to plant millet.’

Example (29) in contrast cannot license a purpose clause.

(29) *Tí:sà-ŋá lɔ̀ wà sē yérí.
Trees-DEF fall 3SG build house
‘ The trees fell in order to build a house.’

The external argument, I assume is responsible for licensing the PRO[2] subject of the rationale clause in the PwM constructions in (28). Its absence in (29) means that the PRO subject of the rationale does not have a controller, hence the ungrammaticality. The ability to control into rationale clauses has also been used to distinguish between middles and passives. Middles have been observed to not license rationale clauses[3], (30a) as opposed to passives that readily allow them(30b). Thus, PwM constructions patterns more with passives than middle constructions.

(30) (Bhatt and Pancheva 2017: 2)
a. This ship was sunk [PRO to collect the insurance].
b. *This ship sinks easily [PRO to collect the insurance].

3.5 Secondary predicates

Depictive secondary predicates licensing presents another context where we can test the presence of an implicit argument. This argument is predicated on the assumption that secondary predicates need to be licensed by a locally c-commanding DP (See Collins 2021 for more on this issue). Consider the following examples:

(31) a. George left the party angry. (Schultze-Berndt & Himmelmann 2004:60).
b. At the commune, the campers usually eat breakfast nude. (Collins 2021:29).

Secondary predicates modify arguments of the main predicate. In the sentences above, the ‘controller’ of the depictive secondary predicate is *George* in (31a) and *the campers* in (31b). Thus, a syntactic ‘controller’ is required in order to license these predicates. Several authors including (Roeper 1987, Baker 1988, Sroik 1992, Collins 2005, 2021, Meltzer-Asscher 2012) have shown that secondary predicates are possible with passive constructions. Collins (2005, 2021) explains this by arguing that secondary predicates are licensed by the implicit external argument in the passive.

[2] See Sulemana 2019, 2021 for arguments that PRO is overt in Bùlì.
[3] see Williams 1974,1985 for an alternative view.

We observe in Bùlì that secondary predicates are licensed in PwM constructions, a fact I take to suggest that there is a syntactically projected implicit argument in these constructions. In example (32a), the secondary predicate *chābōlā* 'naked' is licensed by the external argument *Asibi*, indicating that *Asibi* chopped the meat while being naked. In (32b) also, the secondary predicate is licensed by the presence of the implicit external argument. The absence of this argument in (33) renders it ungrammatical because the secondary predicate does not have a c-commanding DP as a licensor.

(32) a. Asibi bɔ̀nì lāmmú chābōlā.
Asibi chop meat.DEF naked
'Asibi chopped the meat naked.'
b. Lāmmú bɔ̀nì chābōlā.
meat.DEF chop naked
'The meat was chopped naked. '

(33) a. *Lì:kǎ mɔ̀bì chābōlā.
pot.DEF break naked
'The pot broke naked.
b. *Tí:mú lɔ̄ chābōlā.
Tree.DEF fall naked
'The tree fell naked.

In this section, we have demonstrated that PwM constructions are able to participate in syntactic processes that require syntactically present arguments, including licensing of anaphors, secondary predicates and purpose clauses, and also excludes DĒK 'self'. Thus, despite the non-overtness of the external argument in PwM, these constructions have two structural arguments just like their active counterparts: the overt theme in subject position and an implicit argument. This confirms the prediction that "...all implicit arguments should be syntactically projected, even in languages that do not possess *by-phrases*." Collins (2021:79). This conclusion supports the view that implicit external arguments are syntactically projected (Stroik 1992, 1995,1999, 2000; Hoekstra and Roberts 1993; Collins 2021; Gotah 2022) and thus are part of UG (Collins 2021).

4 Feature specification of the implicit argument

It has been demonstrated in the previous section that there is an implicit external argument which is syntactically active able to license anaphors,

purpose clauses and secondary predicates. In this section, I answer the question: what is the feature specification of this argument? We have already seen some of the feature specifications of this argument. Consider the examples below:

The implicit external argument can be either singular (34) or plural (35). It can be third, second or first person (34)-(35). On this feature the implicit argument is similar to the null external argument of a short passive in Italian (Bianchi, 2015).

(34) a. Lāmmú bɔ̀nì wà-dēk-nyīŋ.
meat.DEF chop 3SG-SELF-BODY
'The meat was chopped for his own sake.'
b. Lāmmú bɔ̀nì ǹ-dēk-nyīŋ.
meat.DEF chop 1SG-SELF-BODY
'The meat was chopped for my own sake.'
c. Lāmmú bɔ̀nì fì-dēk-nyīŋ.
meat.DEF chop 2SG-SELF-BODY
'The meat was chopped for your own sake.'

(35) a. Lāmmú bɔ̀nì bà-dēk-nyīŋ.
meat.DEF chop 3PL-SELF-BODY
'The meat was chopped for their own sake.'
b. Lāmmú bɔ̀nì nì-dēk-nyīŋ.
meat.DEF chop 2PL-SELF-BODY
'The meat was chopped for your own sake.'
c. Lāmmú bɔ̀nì tì-dēk-nyīŋ.
meat.DEF chop 1PL-SELF-BODY
'The meat was chopped for our own sake.'

It can also refer to a non-human animate entity as in (36).

(36) Túkkú yògì bù lōbī jíen.
nest.DEF weave 3SG lay egg
'The nest was weaved to lay an egg.'

It is not easy to construct examples where the implicit argument can refer to non-human inanimate entities. I see no reason why it shouldn't be possible, however. Until there is evidence to the contrary, I will assume that it possible. We have demonstrated that the antecedent of the anaphor is the null argument. As indicated by the grammaticality of the different interpretations, the null argument can license a singular or plural anaphor, it can be first, second or third person. I conclude that the null external

argument in PwM constructions is a null pro. This conclusion is consistent with Collin's (2021) conclusions for the definite implicit arguments in short passives: "...I conclude that the implicit argument can be a null pro with any combination of phi-features." (Collins 2021:23).

5 Analyzing PwM constructions

The purpose of this section is to provide an account of the PwM constructions that is consistent with the generalizations from the previous sections. In particular:

(37) a. PwM constructions have an implicit external argument that is syntactically projected.
b. The external argument of PwM is a null pro.
c. The internal argument must appear in subject position on the surface.

The observed data in sections (1) and (2) appear to require an analysis in which the null external argument is projected in the syntax, as in (Stroik, 1992, 1995, 1999, 2000, 2006; Collins, 2021, Gottah 2022). This is necessary because, the null argument in Bùlì is syntactically active, evidenced in the fact that it can license anaphors, purpose clauses and secondary predicates. I will, however, adopt Collins (2021) approach to implicit arguments which argues that principles of UG including the Theta-Criterion force implicit arguments to be syntactically projected. An advantage of this approach is that it provides a mechanism by which implicit arguments across different constructions are licensed. In this section, I outline the assumptions of this approach.

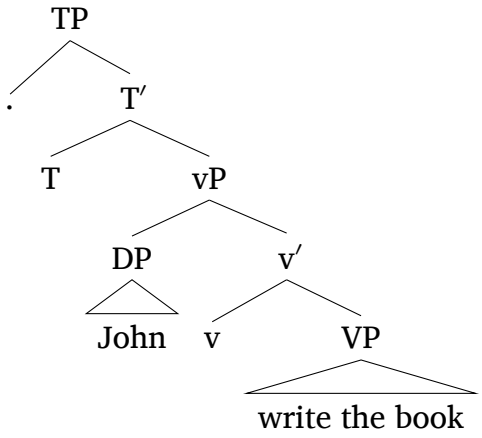
5.1 Collins on Implicit Arguments

Collins (2021) argues that UG principles forces implicit arguments to be syntactically projected. He supports this claim by invoking the Theta-Criterion which simply states the external Merge positions of Arguments.

(38) Theta-Criterion.
Each argument α appears in a chain containing a unique visible theta-position P, and each theta-position P is visible in a chain containing a unique argument α. (Chomsky 1986: 97)

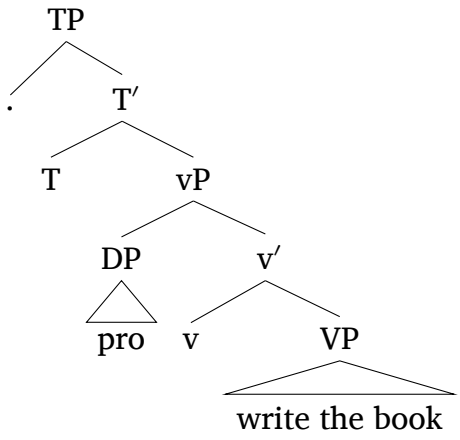
The fundamental assumptions are; first, in an active sentence such as (39a) the external argument is projected in Spec vP as in (39c) an indication that Spec vP is a theta-position, and by the Theta-Criterion, arguments must occupy theta-positions.

(39) a. John wrote the book.
b. The book was written (by John)
c.



Second, the passive such as (39b) involves vP. If the passive involves vP, then an argument must fill Spec vP by the Theta-Criterion because Spec vP is a theta-position. Not having an argument in this position violates Theta-Criterion. The passive must involve a syntactically projected null external argument as in (40). The presence of this null argument is detectable using various syntactic tests (entailments, secondary predicates, Principle A, Principle B and Helke expressions).

(40)



The Theta-Criterion ensures that theta-positions once projected must be filled by arguments. This means that the external argument in both the active and passive is Merged in the same place, Spec vP. The only difference is that while in the active sentence the external argument is overt, the passive has an implicit (null) external argument, *pro*. On the questions of what the category of the null implicit arguments are and how they are licensed, He argues that implicit arguments are caseless DPs appealing to (41):

(41) Implicit argument pro lacks structural Case feature [uCase]. (Collins, 2021:44).

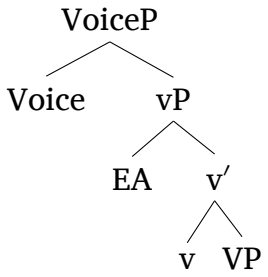
He draws the following conclusions:

(42) a. Implicit arguments are covert.
b. Implicit arguments cannot be the goal for Agree.
c. Implicit arguments are always in-situ.
d. When the implicit argument alternates with an overt argument, the overt argument is a PP not a DP.

The conclusions in (42) are crucial because they explain the nature and licensing condition on implicit arguments. Implicit arguments by their nature are never realized overtly because they lack a structural Case feature. An implicit argument will never be a goal for Agree because the implicit argument lacks a Case feature and thus will not be able to check the Case features of the probing head. The consequences of this is that the implicit argument will never agree with T. If A movement is preceded by Agree, then there will be no A movement of the implicit argument, which is thus forced to remain in-situ in their externally merged position, Spec vP.

Another assumption of this model is the Realization Theory of VoiceP. VoiceP in this model has nothing to do with the external Merge position of arguments but instead plays a role in how arguments are realized in A-positions (such as TP) Collins (2005, 2021) contra Kratzer (1996). Spec, VoiceP is not a theta-position and by the Theta-Criterion no argument can be externally merged in Spec VoiceP. A representation of Voice under the Realization Theory is given in (43).

(43)



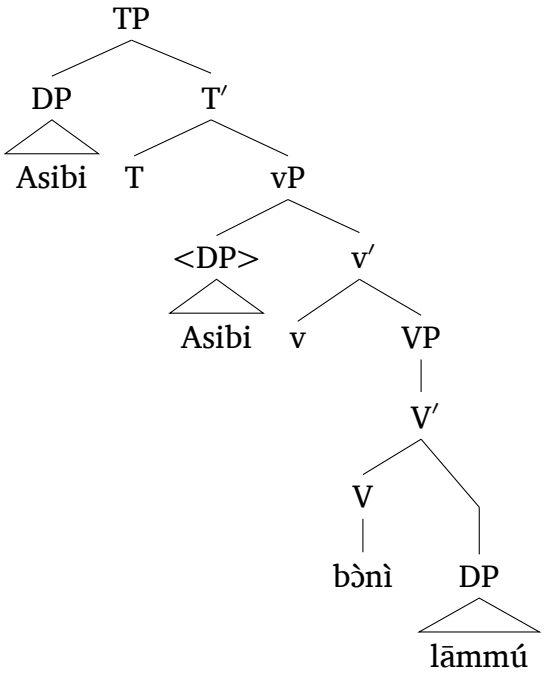
The external argument (EA) is not externally merged into Spec VoiceP, but rather it is externally merged into the specifier of vP a theta-position (Chomsky 1995, Collins and Thrainsson 1996). In Collins (2005), in the passive, the external argument is Merged in Spec vP. The complement of v, which is a participial phrase, moves as whole to Spec VoiceP 'smuggling' the internal argument past the external argument. From this position, the T head can probe the internal argument (See Collins 2005 for more on smuggling). This conception of VoiceP differs considerably from the conception of VoiceP dubbed the Projection Theory which plays a role in projecting the external argument such as Kratzer (1996). I will now show how the approach outlined in this section for implicit arguments provides a model for null external arguments in Bùlì.

5.2 Analysis of PwM constructions

Here I present an analysis of the PwM construction explaining the properties we identified for this construction in the language. But before doing that, I will like to present a sample derivation for a simple active sentence like (44a).

(44) a. Asibi bɔ̀nì lāmmú.
Asibi chop meat.DEF
'Asibi chopped the meat.'

b.

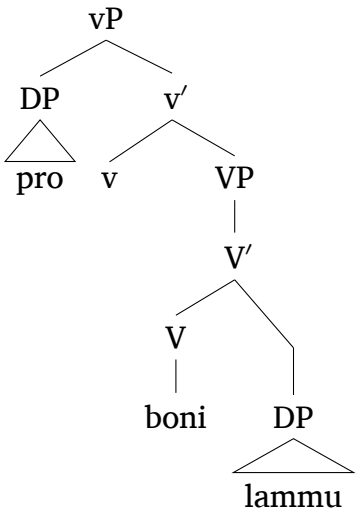


An active sentence like (44a), has a structural representation such as (44b). The external argument, *Asibi* merges in Spec vP. It enters an Agree relation with the T head which assigns it Nominative Case. The T head endowed with EPP property attracts the external argument to Spec TP.

Next we consider the derivation of a PwM construction such as (45a). As already established in section 4, the external argument in PwM constructions in Bùlì is a null pro. This argument, just like the subject of its active counterpart in (44a), is externally Merged in Spec vP, (45b), as required by the Theta-criterion (Chomsky 1995, Collins and Thrainsson 1996, Collins 2021). Following Collins (2021), this null argument lacks structural Case features and cannot be the goal for Agree, and thus cannot agree with T when it is eventually introduced into the derivation. The result of this is that the null external argument remains in situ (42).

(45) a. Lāmmú bɔ̀nì.
meat.DEF chop
'The meat was chopped.'

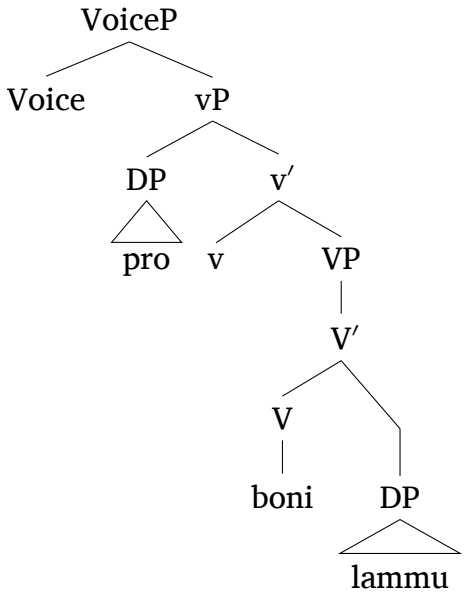
b.



What is the mechanism through which the internal argument ends up in Spec,TP? Collins (2005, 2021) argues that the internal argument in the English passive is 'smuggled' via participial movement into Spec VoiceP and from that position the internal argument is moved to Spec,TP without violating the Minimal Link Condition (Chomsky 2000) or Relativized Minimality (Rizzi 1990). Gaining insights from his analysis, I assume that the internal argument moves to Spec,TP in two steps: first, the VP moves into Spec VoiceP and then the internal argument to Spec,TP.

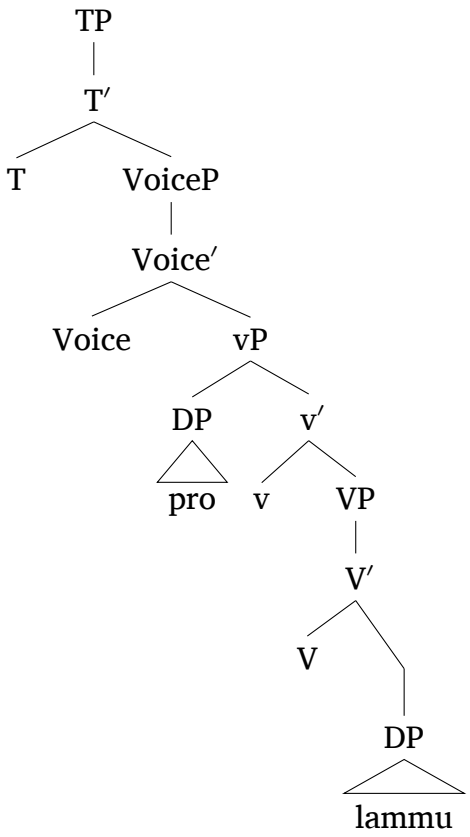
In order to fully spell out this analysis, some assumptions are made as follows: Since PwM constructions are passives, I assume that there is a null voice head in Bùlì which heads VoiceP. Thus, unlike in English where *by* occupies the head of VoiceP (Collins 2005) and Mandarin where *bei* occupies the head of VoiceP (Liu and Huang 2016), in Bùlì VoiceP is occupied by a null head. Therefore, I assume that in PwM constructions, Voice is introduced into the projection of the PwM construction, (46), in accordance with the Realization Theory of VoiceP (Collins, 2021). As noted, this plays a role in how arguments are realized in A-positions, especially in Spec,TP.

(46)



Voice in this regard is different from the Voice of Kratzer (1996) which introduces the external argument. Note that, the external argument is not introduced in Spec, VoiceP. VoiceP not only serves to indicate that we have a passive construction, but also explains how the internal argument ends up in Spec,TP without violating the Minimal Link Condition (Chomsky 2000) or Relativized Minimality (Rizzi 1990) when pro, the external argument, intervenes between T and the internal argument when T is introduced (47)

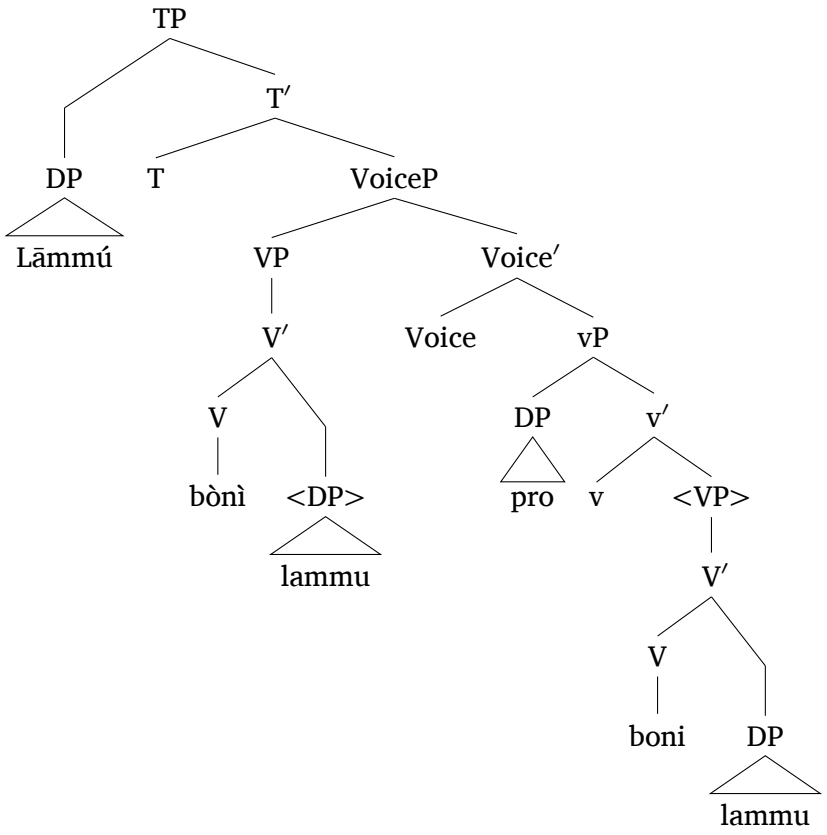
(47)



Another assumption for Bùlì is that the VP moves to Spec VoiceP 'smuggling' the internal argument past the external argument as shown in (48). From this position, T is able to probe and attract the internal argument to its Spec without violating the Minimal Link Condition (Chomsky 2000). Under this analysis, T does not enter an Agree relation with the null external argument per (41). The external argument stays in-situ in its externally merged position, Spec vP.

(48) a. Lāmmú bɔ̀nì.
meat.DEF chop
'The meat was chopped.'

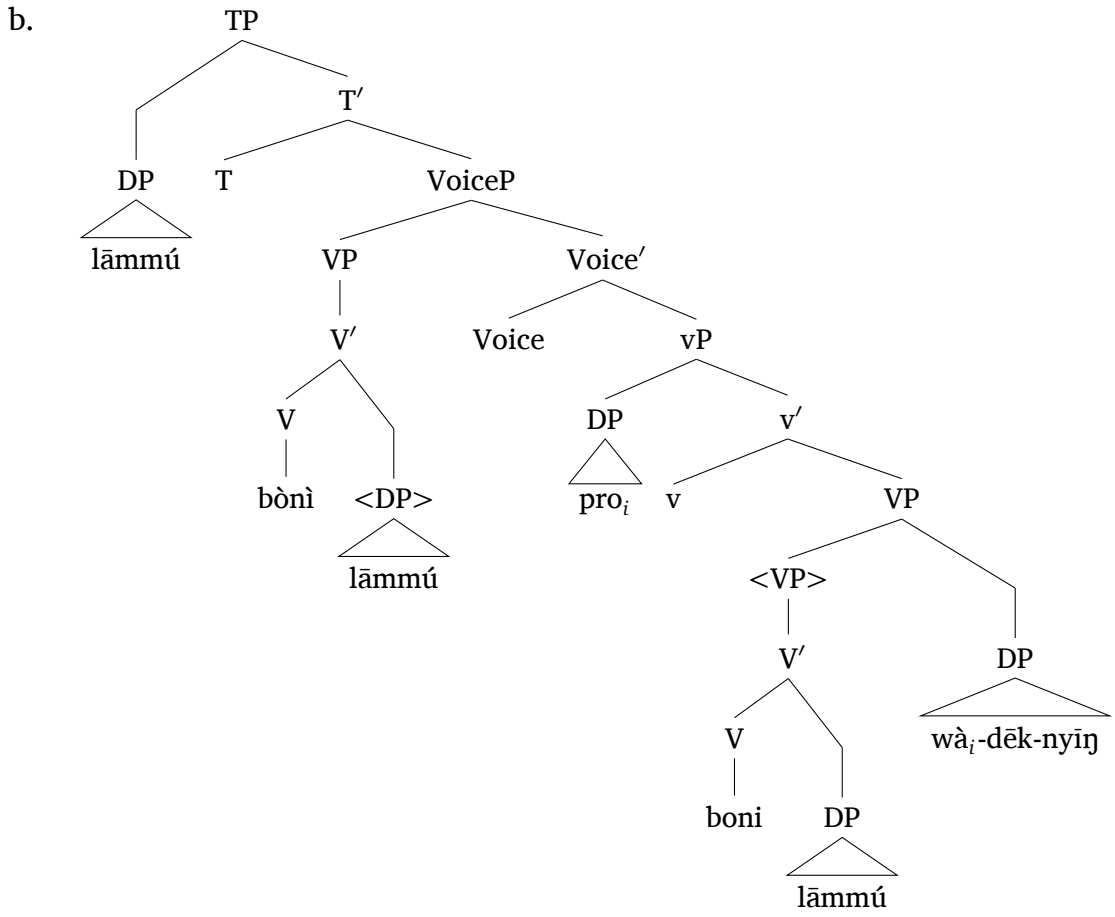
b.



The analysis I proposed for the PwM constructions where the external argument is merged into Spec, vP equally explains distribution of anaphors, condition B effects, secondary predicates, and purpose clauses. Assuming that pro-DĒK-nyīŋ, secondary predicates, and purpose clauses are all VP-level adjuncts, they can be adjoined to the VP. Note that in this position, the implicit external argument in Spec,vP will c-command the VP and its adjuncts hence is able to license them. I illustrate this with pro-DĒK-nyīŋ in the structure in (49).

(49) a. Lāmmú bɔ̀nì wà-dēk-nyīŋ.
meat.DEF chop 3SG-SELF-BODY
‘The meat was chopped for his own sake.’

b.



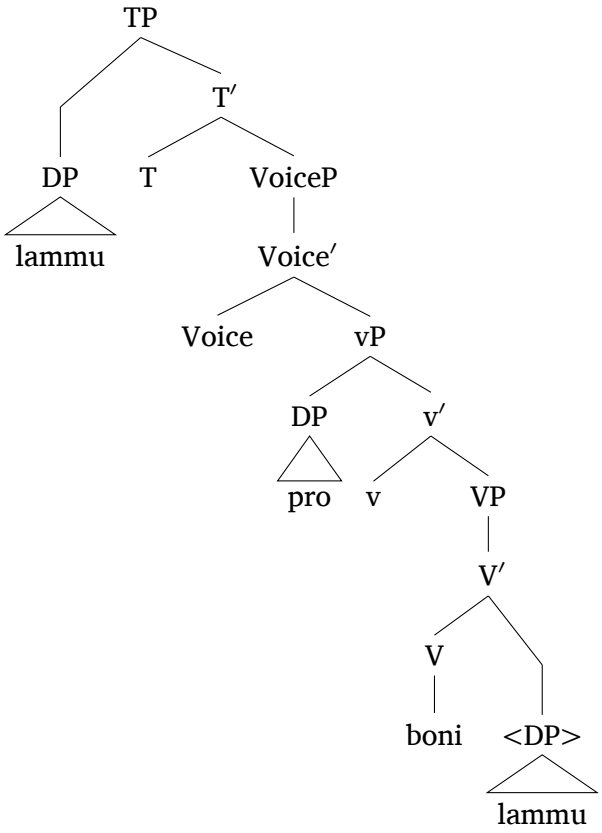
As noted in section 3 above, the pronoun in pro-DĒK-nyīŋ is an anaphoric constituent that requires a syntactically present locally c-commanding antecedent in order to be licensed. The implicit argument, *pro*, is present in (49) and it c-commands pro-DĒK-nyīŋ. The subject remains in situ in Spec,vP and the internal argument is raised to Spec,TP to check the EPP property of T resulting into an OV order as noted earlier.

6 Alternative analyses

In this section, I present alternative analyses to the 'smuggling' approach adopted for the PwM constructions. As we shall see, as appealing as they are I note a number issues with these proposals that will require us to reject them or subject them to further scrutiny.

The first alternative account I wish to address I will call the *direct movement approach* (DMA). In this account, the movement of the internal argument to Spec,TP is done directly from the complement of VP, (50), supported by the provisos in (51).

(50)



(51) a. Bùlì is subject to the EPP that must be satisfied in overt syntax (i.e PF).
b. Null arguments cannot satisfy the EPP requirement of T in Bùlì.

Thus, when T is introduced into the structure, the phi-features of T are checked by the null pro in spec of vP, (50), (note that this violates (42b) above), while the phi-features of T will be fully checked, its EPP property is not satisfy because null pro lacks phonetic content. Since the null implicit argument is incapable of checking the EPP property in T, the external argument remains in Spec,vP and the internal argument is instead raised to Spec,TP to check the EPP property of T resulting into an OV order. This view differs significantly from the 'smuggling' account presented in this paper

that the implicit argument cannot agree with T. In DMA, it agrees with it but cannot satisfy its EPP property hence the need for T to probe further for another DP. This approach has a number issues. The direct movement of the internal argument crossing the null external argument is prevented by Relativized Minimality (Rizzi 1990) or Minimal Link Condition (Chomsky 2000). Another problem with the DMA is that the internal argument will be moving directly to Spec,TP from within vP crossing a phase thus violating the Phase Impenetrability Condition (PIC) Chomsky (2000, 2001, 2008). To circumvent the PIC, one will have to either reject the Phase Theory or assume that vP is not a Phase in Bùlì, these are not without further issues, however. Other questions that arise in this type of approach is why can't null arguments satisfy the EPP in Bùlì? What is the Case of the internal argument in these constructions? Do PwM constructions completely lack accusative Case, and the internal argument moves to check the nominative case as well as EPP property of the T? or is the internal argument assigned accusative, and movement is not for Case reasons but solely to satisfied the EPP feature of T? or the internal argument receives both accusative and nominative case?

The second alternative to 'smuggling' I will consider is called 'leapfrogging' (Legate 2014, Liu and Huang 2016). Liu and Huang (2016) point out that there is no 'smuggling' for the Mandarin passive because, Mandarin v allows two specifers, and an internal argument may move to the inner specifier of vP on its way to Spec,TP. The derivation of a 'raising' passive such as (52a) under this view is given in (52b):

(52) (Liu and Huang 2016:387)

a. Zhangsan bei lisi da le.
Zhangsan BEI Lisi hit LE
'Zhangsan was hit by Lisi.'

b. [TP e2 T [BeiP bei [VoiceP voice [vP Lisi [vP e1 [v [VP V da le [DP Zhangsan]]]]]]]]

In order to form a 'raising' passive, the internal argument needs to first move to *e1*, the inner Spec,vP in the manner of tucking in (Richards 1997), and from this position it can move to *e2*, Spec,TP. Since Mandarin allows v to V movement, both the internal and external arguments become equidistant to higher destinations (Chomsky 1995), hence no violation of minimality. One of the pieces of evidence for the presence of the inner specifer of vP comes from floated quantifiers. As can be seen in (53). The floated quantifier *quandbu* 'all' can appear after *Lisi*, (53a) the external argument even though

it is modifying apples. It can also appear right after *apples*, (53b). Crucially, the floated quantifier in (53a) signifies where DP movement has passed through.

(53) (Liu and Huang 2016:397)

a. pingguo bei Lisi quanbu mai-zou-le.
apple BEI Lisi all buy-away-LE
'The apples were all bought up by Lisi.'

b. pingguo quanbu bei Lisi mai-zou-le.
apple all BEI Lisi buy-away-LE
'The apples were all bought up by Lisi.'

We immediately face an empirical problem extending 'leapfrogging' to explain the PwM constructions. In Bùlì, the floated quantifier *mìená* 'all' can appear either before the verb, (54a) or after the verb, (54b), crucially when it is before the verb it must be before T as well (54c). The floated quantifier data in (54c) argues against 'leapfrogging' since it makes the prediction that quantifier float should be possible in Spec vP, but this is not the case.

(54) a. Lāmmú mìená dīem bɔ̀nì.
meat.DEF all PST chop
' All the meat was chopped.'

b. Lāmmú dīem bɔ̀nì mìená.
meat.DEF PST chop all
' All the meat was chopped.'

c. *Lāmmú dīem mìená bɔ̀nì.
meat.DEF PST all chop
' All the meat was chopped.'

The third and final alternative I discuss is called the Tough-movement approach (Chomsky 1977, Hartman 2009, 2012, Hicks 2009). This accounts presents us an alternative route to getting the internal argument into Spec,TP where case assignment and intervention wouldn't be an issue. We could assume (55):

(55) The movement of the internal argument to Spec,TP involves (as one of its steps) an A-bar movement.

We could consider (55) as an explanation for the movement of the internal argument into the Spec of TP. This movement involves an "improper movement" chain (Chomsky 1977, Hartman 2009, 2012, Hicks 2009) where an A-bar movement is followed by an A movement just as has been argued for

tough-constructions. Following this, the internal argument A-bar moves from its external merged position to an outer specifier of little v which is considered a phase head (Chomsky 1995, 2000), and then from there, it A moves to the specifier of TP. Considering this movement as an "improper movement" chain will explain the obviation of the Minimal Link Condition (Chomsky 2000) since this movement will place the internal argument in a position to be probed by T when T is introduced into the derivation. As appealing as this, it runs into empirical issues. While A-bar movement can target both the direct and indirect object in a double object construction (56b)-(56c), in PwM constructions, (57b)-(57c), passivizing the indirect object in a double object construction is not rightly available.

(56) a. Bí:ká tòm lāmmú tē Asibi.
child.DEF send meat.DEF give Asibi
'The child sent the meat to Asibi.'

b. (ká) b^{w}ā *(ātì) bí:ká tòm tē Asibii?
Q what ATI child.DEF send give Asibi
'What is it that the child sent to Asibi?'

c. (ká) wānā *(ātì) bí:ká tòm lāmmú tē:?
Q who ATI child.DEF send meat.DEF give
'Who is it that the child sent the meat to ?'

(57) a. Bí:ká tòm lāmmú tē Asibi.
child.DEF send meat.DEF give Asibi
'The child sent the meat to Asibi.'

b. Lāmmú tòm tē Asibi.
meat.DEF send give Asibi
'The meat was sent to Asibi.'

c. ?Asibi tòm lāmmú tē
Asibi send meat.DEF give
'Asibi was sent the meat.'

In addition to this, we also note that while locations after the verb *chèŋ* can be A-bar extracted it cannot be passivized (58). From these examples there is a difference between A-bar movement and passivization suggesting that PwM is not A-bar movement.

(58) a. Bí:ká chàlì chèŋ Sandema.
child.DEF run go Sandema
'The child ran to Sandema.'

b. Sandema *(ātì) Bíːká chàlì chèŋ.
Sandema ATI child.DEF run go
'It is Sandema that the child ran to.'
c. *Sandema chàlì chèŋ.
Sandema run go
'Sandema was run ran to.'

7 Conclusion

In this paper we investigated and analyzed the properties of constructions I called Passives without Morphology (PwM) constructions. The main claim of the paper is that PwM constructions are indeed passive constructions. Concretely, I showed using a set of well-established diagnostics that PwM constructions have a syntactically projected external argument, which we argued is a null pronoun. The major theoretical contribution of the paper is that it motivates an analysis of implicit arguments that requires that they be syntactically projected (Stroik 1992,1995,1999, 2000; Hoekstra and Roberts 1993; Sichel 2009; Collins 2021; Gotah 2022). Alternative analyses where an implicit argument is not syntactically present (Fiengo 1980; Roberts, 1986; Fagan 1992,1988; Condoravdi 1989; Zribi-Hertz 1993; Ackema and Schoorlemmer 1995; Bruening 2013; Sigurðsson and Wood 2021; Newman 2021) are to unable capture the Bùlì data. This paper also argued that the internal argument moves to Spec,TP in two steps: first, the VP moves into Spec,VoiceP and from there the internal argument raises to Spec,TP (Collins 2005, 2021).

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