Issues in Kwa syntax:
Pronouns and clausal determiners

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Abstract

This dissertation discusses the distribution of object pronouns, subject and object resumptive elements, and clausal determiners in Kwa (Niger-Congo) languages, particularly Gã and Akan. The empirical issues addressed are as follows. First, some object pronouns are always overtly realised while others are always null. The aim was to provide a unified analysis for their distribution. Second, while Akan has been argued to have resumption for both subjects and objects in various A-bar constructions, only A-bar extracted object arguments yield an independent resumptive pronoun; the subject resumptive element is a bound form. Furthermore, extracted local subject arguments always permit a default subject prefix in the extraction site. The aim was to provide a re-analysis of the empirical facts, to the effect that the subject case cannot be considered as a resumptive pronoun. Third, it has been long observed that in Gã and several other Kwa languages, a determiner-like element shows up in complement clauses (CPs) from which A-bar extraction has taken place. It turns out that morphologically-similar functional elements are found in relative clauses and subject CPs, as well as adverbial clauses like conditional and time clauses when they occur to the left of a matrix clause. The aim was to account for the uniform behaviour of constructions which have this determiner-like element. An overview of the above issues is outlined in chapter 1. A summary of the details of the remaining major chapters is given below.

In chapter 2, I argue that object pronouns that are always overtly realised, as in (a) those that precede an adverbial in (what looks like a) clause-final position, (b) when they occur as the object argument of a change of state predicate, (c) when they occur as the only argument of a depictive (secondary) predicate, and (d) when they are animate, are pronounced in a specifier position in the structure. For object pronouns that are null on the surface, however, the proposed analysis suggests that their phonological contents are deleted in a complement position in the VP. Furthermore, I demonstrate that the predictions of the analysis are borne out in several other languages.

In chapter 3, I argue that contrary to claims by previous authors, Akan has no subject resump-

tive pronouns, and that what have been hitherto analysed as such can easily be accounted for as realisations of *phi* agreement on the T(ense) head, which is realised on the verb. This is argued to result from a configuration in which a *phi* element stranded by an A-bar-marked element moves to spec, TP. This is the mechanism that is responsible for the cases of full *phi* agreement described above. On the other hand, when the A-bar-marked element moves to spec, TP, this results in lack of agreement, necessitating the insertion of a default marker. The difference between local and embedded subject extraction is argued to be as a result of the lack of an A-bar projection in the embedded context, presumably to avoid the A-bar element from freezing clause-medially. I also demonstrate that the formal mechanism that derives the agreement effects in resumption constructions is also able to account for what looks like default agreement in non-A-bar constructions, a phenomenon whose data has largely gone unnoticed in previous work.

Regarding clausal determiners, the analysis proposed in chapter 4 suggests that the Gã data provide overt evidence for the claim in the literature that all CPs are dominated by a nominal projection. In this respect, the clausal determiner heads the nominal projection. Therefore, the analysis concludes that when a CP occurs without a clausal determiner, it must have been deleted in the course of the derivation. Thus, a chunk of the chapter is devoted to showing how all the contexts in which the clausal determiner escapes the deletion mechanism converge, based on syntactic structure.

Chapter 5 summarises the major results from the earlier sections.

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It's been a really humbling learning experience for me, having to write this dissertation. But I'm particularly excited about it because of the kind of environment in which I found myself and the kind of people I've met and interacted with in the course of this work, needless to say that this has greatly impacted different spheres of both my academic and personal life.

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Also, in the course of doing this work, I've had the chance of talking to several other people

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List of abbreviations

1,2,3	first, second, third person
CD	clausal determiner
COMP	complementiser
CONJ	conjunction
EMPH	emphatic particle
DEF	definite
DEM	demonstrative determiner
FOC	focus
FUT	future
IMPERF	imperfective
INDEF	indefinite
INTSF	intensifier
NEG	negative
NML	nominaliser
PERF	perfective
PL	plural
PROG	progressive
PST	past
PRT	particle
Q.PRT	question particle
REL	relativiser
SBJV	subjunctive
SG	singular

To Princess and Kuukua

Chapter 1

Introduction

1.1 Overview of the main issues

In this dissertation, I will be concerned with the distribution of object pronouns, subject and object resumptive pronouns, and the so-called 'clausal determiners' in Kwa languages (Niger-Congo) (Williamson & Blench 2000), with particular focus on Gã and Akan (spoken in Ghana). As an over-arching goal, for each phenomenon, I try to establish natural classes for the distributional similarities between these elements and other (seemingly unrelated) morpho-syntactic elements in these languages. The central claim is that such natural classes emerge because the relevant morpho-syntactic elements share or avoid a common structural configuration. An overview of the empirical scope of the issues discussed is given below.

First, in several Kwa languages, some object pronouns are always realised as overt, while others are always realised as null. For instance, in Gã, an object pronoun in a context like (1) must be overt. However, in a similar context, an object pronoun must be realised as null if it has an inanimate nominal antecedent, as in (2).

(1)   a.   Taki na [**gbékɛ́ lɛ́**]$_1$.
              T   see child DEF
              'Taki saw the child.

        b.   Taki na *(**lɛ**$_1$).
              T   see 3SG
              'Taki saw him/her.

(2)   a.   Taki na [**tsɔné lɛ́**]$_1$.
              T   see vehicle DEF
              'Taki saw the vehicle.

        b.   Taki na (***lɛ**$_1$).
              T   see 3SG
               'Taki saw it.

The contexts above, at first sight, suggest that the difference in the realisation of the pronouns is a function of the animacy property of the nominal element invovled. However, I will present data to illustrate that a pronoun with an inanimate antecedent may also obligatorily be overt in several other contexts, including (a) when it precedes an adverbial, (b) when it is the object of a change of state predicate, and (c) when it is the argument of a depictive (secondary) predicate. Therefore, the goal in discussing this problem in this dissertation is to develop an analysis that is able to treat the occurrence of the pronoun in (1) and all other contexts where object pronouns must be overt as a natural class, to the exclusion of the pronoun in a context like (2). This matter is addressed based on Gã data in chapter 2.

In chapter 2 , I argue that object pronouns that are always overtly realised occupy the spec(ifier) position of some XP. For the pronoun in (1a), it is a spec, *v*P, for pronouns preceding adverbs, it is a spec, F(unctional)P, for object pronouns of change of state predicates, it is a spec, VP, and for pronominal arguments of depictive predicates, it is spec, S(mall)C(lause). Assuming Kayne (1994)'s LCA as the means of linearisation, I argue that instances of null object realisation involve some kind of PF deletion of the object pronoun in its base position, i.e., as the complement of V.

Second, although it is generally assumed that Akan has resumptive pronouns for both extracted subjects and objects in various A-bar constructions (focusing, relativisation, *ex situ* questions), upon a closer examination, it can be realised that the language actually has overt resumptive pronouns in only object positions. According to the analysis proposed in this work, what seems to behave like a marker for a subject resumptive, such as we find in (3), is actually agreement that is inflected on the verb. Therefore, I suggest that in constructions like (3), the subject resumptive pronoun is, in fact, realised as a null element.

(3)   **Hwán**$_1$ na   **ɛ/ɔ**$_1$-hú-u   Kofi?
        who   FOC 3/3SG-see-PST K
        'Who saw Kofi?'

It will become apparent that this way of looking at the the data in (3) enables us to model other instances of agreement in A-bar constructions in the language. For instance, we are also able to account for cases of optional default agreement (marked as *ɛ*- in (3)) for extracted local subjects, a pattern that has barely been previously discussed, as well as the occurrence of *ɛ*- in non-A-bar constructions. The resumption issues are discussed in chapter 3.

In chapter 3, I defend the thesis that Akan does not have an overt subject resumptive pronoun. The agreement-based approach to explaining the prefix on the verb in constructions like (3) is further argued to derive the differences between extraction from local subject positions versus long distance extraction (from embedded subject positions). The analysis shows that in the case of the latter, the configuration for deriving default agreement is blocked in Akan, for principled reasons. This therefore accounts for why only full *phi* agreement is permitted

for non-local subject extraction. I show how this analysis extends to the non-A-bar cases.

Third, in Gã (and several other Kwa languages), a determiner-like element, the so-called 'clausal determiner' (CD), obligatorily appears at the end of a complement clause (a CP) from which A-bar extraction has taken place, as illustrated in (4a), when compared with (4b).

(4) a. Mɛ́ni₁ ni Taki le   ákɛ́   mí-sumɔ́-ɔ   t₁ *(**lɛ́**)?
         what FOC T   know COMP 1SG-like-HAB   CD
         'WHAT does Taki know that I like.'

     b. Taki le   ákɛ́   mí-sumɔ-ɔ   mɛ́ní (***lɛ́**)?
         T   know COMP 1SG-like-HAB what   CD
         'What does Taki know that I like?'

Interestingly, a morphologically-similar functional element is found in relative clauses and subject CPs, as well as adverbial clauses equivalent to *if*, *when* and *while* clauses that occur to the left of a matrix clause. In this dissertation, I present a new proposal detailing how the different syntactic contexts in which the CD emerges can be treated as a natural class. This then makes it possible to develop a unified analysis for the presence (or absence) of the CD in a given structure. This matter is taken up in chapter 4.

In chapter 4, I pursue an idea which suggests that the CD is the head of a DP shell in which all complement clauses in Gã occur, (as proposed by, for instance, Kiparsky & Kiparsky (1970)). I present independent arguments to support the presence of such a structure for all the contexts in which the CD occurs. The proposed analysis suggests that in contexts where a CP occurs without a CD, the DP shell would have been removed in the course of the derivation. I model this mechanism after Müller (2017)'s 'structure removal' theory.

1.2 A note on the data

As indicated earlier, much of the core data presented in this dissertation come from Gã and Akan (Kwa, Niger-Congo), both spoken in Ghana. Both languages are tonal, but in this work, only high tones will be marked, as in *á*, for an *a* with a high tone. In terms of the basic morpho-syntax, both languages are SVO in terms of clausal structure, and case positions and grammatical relations are primarily determined based on the word order; there are no case markings on verb stems. Other relevant aspects of the morpho-syntax of each language will be pointed out in the course of the discussions.

1.3 Theoretical framework

The broader analytical framework of this dissertation will be The Minimalist Program (Chomsky 1995) and later versions (e.g. Chomsky 2000, 2001). In this approach to grammar, two main operations are relied upon to build syntactic structure. These are **Merge** and **Agree**. I will say a few things about these operations and related notions that will become useful later on in the course of the discussions.

Merge is simply an operation that puts two items together to create a new item. For instance, it can put a verb (V) and a noun (DP) together to create a verb phrase (VP). However, Merge is feature-driven, i.e., V and DP must have some feature that allows them to be 'merged'. For instance, we can assume that V in the context of (5) has a feature [•D•], which enables it to be merged with another element, e.g., DP, with a feature [∗D∗].

(5) *Merge (V, DP)*

     VP

    V DP

(6) *Internal Merge*

    *v*P

  DP *v*′

     v VP
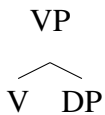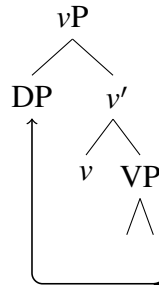
Traditionally, movement of a syntactic material from one part of a given structure to another is also considered a Merge operation, i.e., 'Internal Merge', as in (6), as opposed to 'External Merge' (5). Note that both operations create a new syntactic item - VP in (5) and *v*P in (6). An important thing to note about the movement operation in (6) is that it is also feature-driven (after all it is a Merge operation). So, for instance, *v* could have a movement-triggering feature [EPP], which will cause a DP in its c-command domain to move to spec, *v*P. As the above trees suggest, structure-building in Minimalism is assumed to be bottom-up.

The operation **Agree** basically causes two elements in a structure to exchange features. In such configurations, the relationship between a 'G(oal)' and a 'P(robe)', as for instance, is formulated in (7) is important (see Georgi 2014:107). We can represent the Agree relation described in (7) as in (8), for Downward Agree and (9), for Upward Agree.

(7)   Agree between a probe P and a goal G applies if

    a.   P and G are in an asymmetric c-command relation,

    b.   P has an unvalued feature [F:□] and G has a matching valued feature [F],

    c.   G is the closest matching goal for P.

    d.   Result: G values P.

(8)   *Downward Agree*
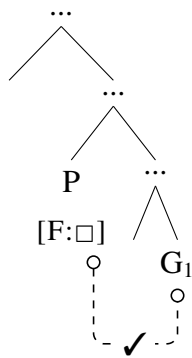
(9)   *Upward Agree*
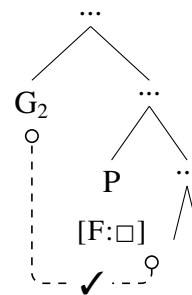
I will assume in this dissertation that Agree may be upward or downward (e.g. Baker 2008). However, this process, just like other morpho-syntactic operations, is generally constrained by the Strict Cyclic Condition (SCC) (Chomsky 1973:243), as given in (10).

(10)   *Strict Cycle Condition*:
       If α is the root of the current phrase marker, then no operation can take place exclusively within γ, where γ is properly dominated by β.

Given the SCC, therefore, suppose the P in (9) is the same P that is in (8), then after the Agree operation in (9), the operation in (8) cannot take place.

Granted notions like Merge and Agree, I assume, following, among others, Collins (2002); Heck & Müller (2007); Georgi (2014); Müller (2014), that syntactic features on a given head may be ordered. This basically means that either Agree and syntactic movement could apply in a particular order, e.g., movement can take place before Agree, and vice versa.

Finally, another crucial notion that will be useful in the course of the discussions in this work is the Phase Impenetrability Condition (PIC) Chomsky (2000), as stated in (11).

(11)   *Phase Impenetrability Condition*:
       A goal in the complement domain of a phase α is not accessible to a probe outside of β. Only β's edge domain is accessible.

1.4   Organisation of chapters

This dissertation comprises five chapters. Chapter 2 discusses the problem of overt versus null object pronouns, chapter 3 deals with the subject and object resumption issues in Akan, chapter 4 talks about the distribution of clausal determiners in Gã, and chapter 5 presents a summary of the main results of this work. Details of each chapter will be outlined locally.

Chapter 2

Overt versus null object pronouns

2.1 Introduction

In this chapter, I discuss the distribution of overt and null object pronouns in Kwa languages, focusing on Gã. The primary goal is to provide a unified account for the observed patterns.

2.1.1 Overview of the problem

There is a well-known pattern in several Kwa languages whereby an object pronoun that has an inanimate antecedent in a context equivalent to (1) is obligatorily not pronounced.

(1) a. John saw [**the car**]$_1$.
  b. John saw *(**it**$_1$).

A context like (1) can be exemplified in Gã with (2) where unlike (1), it is illicit to pronounce the object pronoun *lɛ* whose antecedent is *tsɔné lɛ́* 'the car'. Here, a null pronoun is required.

(2) *Where null object must occur*

  a. Taki na [**tsɔné lɛ́**]$_1$.
    T   see vehicle DEF
    'Taki saw the vehicle.'
  b. Taki na (***lɛ**$_1$).
    T   see 3SG
    'Taki saw it.'

However, a null object pronoun such as expected in (2b) is typically impossible if

(3) a. the antecedent of the pronoun is animate (4a).
  b. there is an adverbial following the pronoun (4b).
  c. the pronoun is the object of a change of state predicate (4c).

      d.   the pronoun is an argument of a depictive secondary predicate (4d).

As the notation *(*lɛ*) indicates, only overt object pronouns are permitted in all such contexts.

(4)   *Where null object pronouns cannot not occur*

     a.   Taki na *(**lɛ**).
           T   see   3SG
           'Taki saw **him/her**.'

     b.   Taki na *(**lɛ**) **oyá**.
           T   see   3SG quickly
           'Taki saw it quickly.'

     c.   Taki ku   *(**lɛ**).
           T   break 3SG
           'Taki broke it.'

     d.   Taki hɔɔ́ *(**lɛ**) ŋmɔ́ŋ.
           T   sell   3SG fresh
           'Taki sold it fresh.'

While the patterns in (3) and (4) appear to be pervasive in Kwa, they have been extensively investigated for major languages like Akan (see, e.g., Stewart 1963; Boadi 1976; Saah 1992, 1994; Osam 1996) and Baule (see Larson 2002, 2005, 2010) only, although similar patterns have been reported for sister languages like Nzema (see Chinebuah 1976). As the examples above indicate, Gã is one such language. But the present discussion goes beyond the cross-Kwa distribution of null versus overt object pronouns; the intention here is develop a formal mechanism by which the observed pattens can be accounted for in a more principled way.

2.1.2 Overview of the analysis

For contexts where the pronoun is not overtly realised, there is evidence to suggest that it is present in the syntax. This further suggests that the unpronounced pronouns are somehow deleted in the course of the derivation, precisely at the phonology (PF) interface, I will claim. Unlike previous authors, I will assume that instances of the null object pronoun are rather the exception. When we compare the distribution of null and overt object pronouns in various Kwa languages, as in (3b) versus (4), it is obvious that there are more contexts where the pronoun is overt than there are for when it is null.

Therefore, the main challenge will be to demonstrate how configurations in which the object pronouns are overt form a natural class, to the exclusion of the configuration under which the object pronoun is null. This would be an alternative to accounting for the conditions under which object pronouns, which are expected to be null (assuming that instances of null object pronouns are rather the default situation), offend the *status quo* and, thus, are never null.

It will be argued that what I consider to be the default situation, i.e., the overt contexts,

involve configurations in which the object pronoun is in or ends up in a specifier position. It will be demonstrated that these are the exact configurations in which we find object pronouns preceding adverbials, object pronouns acting as arguments of depictive secondary predicates, and object pronominal arguments of change of state predicates. The main task, therefore, will be to account for the spellout differences between the object pronouns in (2b) and (4a), which on the surface appear to be in similar configurations.

Presumably, the difference lies in the animacy property of the pronouns (or their antecedents); inanimate pronouns must be null (2b), animate pronouns must be overt (4a). Therefore, one leg of the task to accomplish in this dissertation will be to synchronise the distribution of animate pronouns, i.e., in terms of their realisation, with that of other configurations in which object pronouns, be they animate or inanimate, are only overtly realised. Crucially, this should be a configuration that excludes the inanimate object pronoun in (2b). We arrive at a similar solution if we found a configuration that admits the inanimate object pronoun in (2b) but systematically rules out the animate one in (4a) as well as all other contexts in which overt pronouns occur. In what follows, I provide a summary of the account that differentiates animate pronouns from their inanimate counterparts, according to the analysis in this thesis. The two sets of pronouns, i.e., animate pronouns and inanimate pronouns, form two natural classes in terms of the animacy scale (see, e.g., Silverstein 1976), where members of the former are higher on the scale and those of the latter are lower. Following a proposal by Richards (2015), among others, I interpret all animate pronouns as bearing a person feature in syntax. But all inanimate pronouns lack this person feature.

Given that all syntactic operations are feature-driven (Chomsky 1995 et seq.), and assuming that *v* heads in Kwa languages bear a person probe feature with a concomitant EPP feature, it follows then that whenever there is a matching pronominal goal with a person feature, that pronoun will move to spec, *v*P, as sketched in (5). On the contrary, inanimate pronouns will remain *in situ*, because they lack the feature required in order to be attracted to spec, *v*P.

(5)   *overt pronoun*
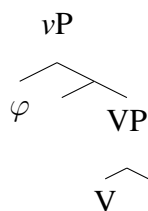
(6)   *null pronoun*
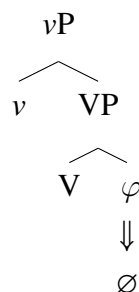
Now, suppose that linearisation of terminal nodes is only possible when there is an asymmetrical c-command relationship between the nodes involved, a configuration along the lines of Kayne (1994), overt pronouns could result from the independent movement operation described above, thereby providing the structural asymmetry needed for linearisation. Here,

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it must be emphasised that the movement does not take place because of the need to create structural asymmetry; the asymmetry outcome after the person-feature-triggered movement of animate pronouns has taken place is only a coincidence, I will argue.

Null pronouns on the other hand would result from deleting inanimate object pronouns *in situ*, as sketched in (6). There will be a symmetrical c-command relationship between V and φ; they cannot be linearised with respect to each other. But since the VP needs to be spelled out, the pronoun is deleted. Therefore, crucially, the deletion happens at at the point of linearising the terminal nodes in the VP. The analysis, therefore, will assume cyclic spellout of syntactic structure, i.e., once the head of a given phase is merged, its complement needs to be spelled out. This is what forces the need to linearise the nodes in the VP.

This proposal makes the prediction that all other contexts where an inanimate object pronoun is overtly realised involves a configuration in which the pronoun is not *in situ*, or at least, is in the specifier position of some (higher) XP, because that is the configuration that ensures that there is no symmetrical c-command relationship between the object pronoun and the verb.[1] It turns out that similar configurations obtain for all other cases of overt pronoun realisation. Therefore, this will be the structural property that groups constructions with animate pronouns together with all other contexts where only overt object pronouns are permitted.

I will illustrate how the proposed analysis can be extended to other Kwa languages, e.g., Ewe and Tawuli, for which only overt pronouns are permitted in contexts where languages like Gã (and Akan) would permit only null pronouns. For these languages, I will argue that they perhaps behave this way because they have independent syntactic properties and processes that create a configuration like (5), one way or another. Also, the analysis seems to make the right prediction about a less related language like Dagaare (Gur, Niger-Congo). In addition to the above claims, I will argue that we can model the realisation of pronominal complements of post-positions in Gã in a way similar to object pronouns of verbs.

The remainder of the chapter is structured as follows. In §2.2, I present the core data, giving the main (distributional) contexts which I consider relevant for the distribution of overt and null pronouns in Kwa languages, i.e., animacy, nature of predicate, and the surface position of the pronoun. §2.3 presents an overview of previous analyses, both for Kwa languages and elsewhere. The details of the main analysis are presented in §2.4. Here, I outline the necessary theoretical assumptions, including how linearisation works, as far as the proposal pursued is this chapter is concerned. The details of the analysis of each set of data are presented in §2.5. In §2.6, I suggest how the proposal may be extended to other contexts where the distribution of object pronouns may be of both theoretical and empirical relevance. In §2.7, I look at possible alternative approaches. I conclude with §2.8.

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[1]In principle, we can also achieve such structural asymmetry by moving the verb. But while there may be an independent verb movement process in the language (see §2.5.1.1), I will assume that it is a post-VP linearisation process.

2.2 The data

The phenomenon under investigation obtains in several Kwa languages. Therefore, although most of the data presented here come from Gã, they are largely representative of what happens in, or in some cases, have been reported for sister languages including, at least, Akan, Baule, Nkami, and Nzema. In the following sections, I present and discuss the patterns of overt and null object pronoun distribution in Gã. But given the anaphoric nature of pronouns in general, I first briefly talk about the relationship between pronouns and their antecedents in §2.2.1. The relevant notion here will be definiteness. I then proceed to discuss the various conditions under which object pronouns in Gã may be realised as null or overt: animacy (§2.2.2), the kind of predicate, e.g., change of state predicates (§2.2.3) and secondary predicates (§2.2.4), and the position of the pronoun with respect to an adverb(ial) (§2.2.5). In §2.2.6, I illustrate that null pronouns are syntactically active, justifying why their phonetically emptiness needs to be accounted for. In §2.2.7, I present sample data from Kwa languages which generally do not allow null object pronouns.

The kind of data that I will be concerned with come from a variety of constructions which force the use of object pronouns, such as the following.

(7) *the second clause of coordinated clauses*
     John cooked [the food]$_1$ but/before Mary ate **it**$_1$.

(8) *an answer to an alternative question*

     a. Question: Have you eaten [the food]$_1$ or not?
     b. Answer: I have eaten **it**$_1$.

(9) *answers to content questions*

     a. What did you do with [the food]$_1$?
     b. I ate **it**$_1$.

(10) *commands*

     a. Eat [**the food**]$_1$!
     b. Eat **it**$_1$!

2.2.1 Definiteness, referentiality and pronoun use

The use of personal pronouns in any context typically implies 'uniqueness and familiarity' (see, e.g., Roberts 2003; Hawkins 1978; Ariel 1988; Heim 1988). For instance, in (11), the indefinite DP *a car*, cannot be the antecedent of the pronoun *it* (in the sense of Russell 1905).

(11)   Hans saw [the car]$_i$/ [a car]$_j$ before John saw it$_{i/*j}$.

Here, *a car* does not really pick out any particular individual in the universe of discourse, making it comparable to *every car*, and this is precisely what *it* cannot take as an antecedent, because it has a particular referent.

In the following, I present data that suggest that in Gã also, indefinite DPs tend not to satisfy this requirement of 'uniqueness and familiarity'; there is evidence that they can be used in contexts where uniqueness is not implied. On the contrary, definite DPs always refer to a unique individual and therefore can necessarily serve as the referents for pronouns.

Gã makes a distinction between definite DPs, which are marked with the determiner *lɛ́* (12a), and indefinite DPs, which either show up with the determiner *ko* (12b), or occur as bare nouns (12c) (see also Renans 2016b).

(12)   *Distribution of definiteness*

  a. *tsó lɛ́* 'the tree'
  b. *tso ko* 'a (certain) tree'
  c. *tso* 'a tree'

Crucially, like many of its neighbours, e.g., Akan and Ewe, there is a finer distinction which groups indefinite and definite marked nominal elements together as specific, to the exclusion of bare nouns, which are always non-specific. However, this does not blur the anaphoric distinction between definite and indefinite DPs, which we are interested in this chapter; only the former can typically bind a pronoun. For instance, following Matthewson (1999), Renans (2015, 2016a, to appear) argues that unlike definite DPs, bare nouns and indefinite DPs can occur with the question word in sluicing constructions, such as (13).

(13)   *Sluicing with (in)definites*

  a. Taki é-kpeé [**yoo** **ko**]$_1$ shi mí-lé-éé **mɔ**$_1$ ní e-jí.
    T PERF-marry woman INDEF but 1SG-know-NEG person REL 3SG-be
    'Taki has married a woman but I don't know who.'
  b. #Taki é-kpeé [**yoó** **lɛ́**]$_1$ shi mí-lé-éé **mɔ**$_1$ ní e-jí.
    T PERF-marry woman DEF but 1SG-know-NEG person REL 3SG-be
    '#Taki has married the woman but I don't know who.'

The important point in (13) is that *yoo ko* 'a woman' binds the generic meaning noun *mɔ* 'person' (13a), but a similar binding relationship with *yoó lɛ́* 'the woman' (13b) is pragmatically odd, as indicated by the # notation in front of the construction. This suggests that *ko*-marked DPs, like bare nouns, are true indefinites. Renans argues, furthermore, that such nominals can be used in contexts in which the discourse referent is not unique (14).

(14) *Indefinites as non-unique*

Context: There is a tree outside the window. There are three birds on the tree.

Gbekέ-bíí hií   lέ   fέέ na **loófɔlɔ́ (ko)**/***lɛ**.
child-PL male.PL DEF all see bird   INDEF/DEF
'All the boys saw a bird./ # All the boys saw the bird.'

Having made the above point, it is important to point out that there are certain contexts where indefinite DPs do serve as the antecedent of a pronoun. We see an example in (15).

(15) *Indefinites as antecedents*

Taki na [**awulá ko**]₁   shi Osa ni   tsɛ **lɛ**₁.
T   see lady   INDEF but O   FOC call 3SG
'Taki saw a lady but it is Osa who called her.'

Although a definite DP antecedent is preferable in a context like (15), the indefinite DP there is equally fine. The principled explanation for data like (15), as well as the pragmatics involving in the pronoun-antecedent relations is beyond the scope of the present study.

2.2.2 Animacy

It turns out that in Gã, even when a definite DP antecedent is identified for a pronoun, its phonetic realisation is fundamentally a function of the animacy properties of the antecedent. By animacy, reference is made to a two-way distinction made between entities that can assert volitionality versus those that cannot. Let us designate pronouns which have animate antecedents as 'animate pronouns' - these can for instance, initiate an action. Let us also designate pronouns that have inanimate antecedents as 'inanimate pronouns' - these cannot initiate an action.[2] As indicated in previous examples, animates are always overt; inanimates may be null. This predicts that all local, i.e., first and second, person pronouns are always overt, since such nominal elements are always animate and do participate in whatever a given predicate expresses. These are exemplified in (16a-b).

(16) *1st and 2nd person pronouns*

a. Taki na *(**mi/wɔ**).
    T   see 1SG/1PL
    'Taki saw me/us.'

---

[2]As Larson (2005) also notes for Baule, the distinction that I have made here is overly simplified. For instance, the anthropomorphic Agent argument in (i), i.e., *The flood*, will be construed as animate.

(i)   The floods swept away three penthouses.

However, contexts like (i), i.e., where the non-animate Agent is construed as animate, is common with subject arguments. I suppose their object argument analogs are affected objects, whose pronominal forms are always overt (see §2.2.3). I do not intend to account for the nuances involved in this dissertation.

b. Taki na *(**bo/nyɛ**).
   T   see 2SG/2PL
   'Taki saw you.'

The interesting observation is found in the distribution of third person pronouns. This is where the animacy distinction is much relevant. Pronouns that refer to humans and animals are always overt. Human antecedents may be DPs, as in *awulá lɛ́* (17a), or proper names, like *Momo* (17b).

(17)   *Singular human antecedent*

a. Taki na [**awulá lɛ́**]₁ shi Osa ni   tsɛ́ *(**lɛ₁**).
    T   see lady   DEF but O   FOC call 3SG
    'Taki saw the lady but it is Osa who called her.'

b. Taki na **Momo**₁ shi Osa ni   tsɛ́ *(**lɛ₁**).
    T   see M   but O   FOC call 3SG
    'Taki saw Momo but it is Osa who called her.'

As may be obvious from earlier illustrations, because of the anaphoric relationship between the pronoun and its antecedent, they must match in terms of number and person. Thus when the antecedent is plural, the pronoun is also plural, as in (18).

(18)   *Plural human antecedent*

Taki na [**Momo kɛ**   **Bortey**]₁ shi Osa ni   tsɛ́ *(**amɛ₁**).
T   see M   CONJ B   but O   FOC call 3PL
'Taki saw Momo and Bortey but it is Osa who called them.

Gã makes no distinction between pronouns that refer to humans and those which refer to animals. From (19), we see that object pronouns that refer to animals must also be overt.

(19)   *Animal antecedent*

Taki na [**wuɔ́ lɛ**]₁ shi Osa ni   mɔ́   *(**lɛ₁**).
T   see fowl DEF but O   FOC catch 3SG
'Taki saw the fowl but it is Osa who caught it.

Furthermore, we notice that it is infelicitous for personal pronouns to have a bare nominal as antecedent (20a), although an indefinite DP may be allowed as an antecedent (20b).

(20)   a. ??Taki na **wuɔ́**₁ shi Osa ni   mɔ́   **lɛ₁**.
          T   see fowl but O   FOC catch 3SG

b. Taki na [**wuɔ́ kó**]₁ shi Osa ni   tsɛ́ **lɛ₁**.
    T   see fowl INDEF but O   FOC catch 3SG
    'Taki saw a fowl but it is Osa who caught it.'

Regarding inanimate pronouns, they are usually phonetically null, whether the antecedent is singular (21a), or plural (21b). (Here, I have designated them as *pro*.)

(21)   *Inanimate antecedent*

      a.   Taki na [**woló lέ**]$_1$ shi Osa ni   kάné ***pro***$_1$.
           T   see book DEF but O   FOC read
           'Taki saw the book but it is Osa who read it.'

      b.   Taki na [**wojí**   **lέ**]$_1$ shi Osa ni   kάné ***pro***$_1$.
           T   see book.PL DEF but O   FOC read
           'Taki saw the books but it is Osa who read them.'

An interesting observation is that, typically, *pro* in such constructions cannot be bound by an indefinite DP. For instance, for (22), Gã speakers do not construe the indefinite DP *wolo ko* as the antecedent of *pro*. As the co-indexation in (22) suggests , the pronoun must typically refer to a definite entity, different from the indefinite DP in the 'antecedent clause'.

(22)   Taki na [**wolo ko**]$_1$ dάní   Momo kάné ***pro***$_{??1/j}$.
        T   see book INDEF before M   read
        'Taki saw a book before Momo read it.'

The generalisation so far is that animate pronouns must be overt, and inanimate pronouns are usually null.[3] In the following examples, we see that the distribution of null object pronouns in Gã is comparable to what obtains in closely-related Kwa languages. Here, the object DPs in the (a) examples are the antecedents of *pro* in the (b) examples.[4]

(23)   *Akan*

      a.   Kofi bɔ-tɔn   [**dua no**]$_1$.
           K   FUT-sell   tree DET
           'Kofi will sell the tree.'

---

[3]Note that despite configurations like (21b), a null object pronoun is usually interpreted as referring to a third person singular antecedent. A possible analysis of this is beyond the scope of this dissertation.

[4]As a further remark on the nature of the Gã examples presented so far, and as may be apparent in the Akan, Baule, Nzema, and Nkami examples, the constructions in which the pronoun and its antecedent occur need not be structurally complex ones, unlike what has been reported for a dialect of Norwegian, where null object pronouns are only permitted in the second conjunct of conjoined phrases, as shown (ia-b).

(i)   *Norwegian*

      a.   Han skrev   et brev og sendte   *pro* til England.
           he   write.PST a letter and send.PST   to England
           'He wrote a letter and sent (it) to England.'

      b.   *Han sendte   *pro* til England
           he   send.PST   to England
           'He wrote a letter and sent (it) to England.'   (Larson 2005:13)

b. Kofi bɔ-tɔn **pro**₁.
K FUT-sell 3SG
'Kofi will sell (it).' (Osam 1996:160)

(24) *Baule*

a. A-n klèli **fluwa'n**₁?
you write.PST letter.DEF
'Did you write the letter?.'

b. Een, n klèli **pro**₁.
Yes, I write.PST
'Yes I wrote it.' (Larson 2002:ex. 1)

(25) *Nzema*

a. Kofi e-lie [**ezukoa ne**]₁.
Kofi PERF-receive money DEF
'Kofi has received the money.'

b. Kofi e-lie **pro**₁.
Kofi PRF-received
'Kofi has received it.' (Chinebuah 1976:57)

(26) *Nkami*

a. Kofi bɛ-sɔ [**ɔfɔʒdi amʊ'**]₁.
K FUT-buy broom DEF
'Kofi will buy the broom.'

b. Kofi bɛ-sɔ **pro**₁.
K FUT-buy 3SG
'Kofi will buy it.' (Asante & Akanlig-Pare 2015:73)

It is obvious from the examples that we have seen so far that only inanimate pronouns can be null. This raises one major issue; since both animate and inanimate pronouns can occur in the same structural contexts, e.g., (27a-b), it would be reasonable to assumed that the two groups of constructions have a similar basic syntactic structure. However, what shows that in contexts like (27b) (where it is null) the object pronoun actually exists in the syntax?

(27) a. Taki na **Momo**₁ shi ni Osa tsɛ́ *(**lɛ**)₁.
T see M but FOC O call 3SG
'Taki saw Momo but it is Osa who called her.

b. Taki na [**woló lɛ́**]₁ shi Osa ni káné **pro**₁.
T see book DEF but O FOC read
'Taki saw the book but it is Osa who read it.'

In §2.2.5, I will present arguments to suggest that the object pronoun is, in fact, present in the syntax. If such evidence is anything to go by, then we could arrive at a preliminary

conclusion that the null realisation of the pronoun in cases like (27b) is due to some deletion mechanism in the course of the derivation.

Furthermore, as was indicated earlier, there exist contexts where inanimate pronouns must be overt. This suggests that there are contexts in which the animacy constraint (= Saah (1994)'s 'animacy criterion' for Akan), which is generally assumed in aspects of the Kwa literature to account for the distribution of null pronouns versus overt object pronouns is overruled by other factors (see, e.g., Chinebuah 1976). One of such factors is the kind of predicate with which the pronoun occurs, e.g., when the pronoun occurs as the object of a change of state verb, or as the argument of a secondary predicate, it cannot be null. We consider these next.

2.2.3 Arguments of change of state predicates

In Gã, when the object of any of the verbs listed in (28) is a pronoun, it must be overt.[5]

(28)   *Change of state verbs*
   i. *bóńdá* 'to make a dent'   ix. *jajé* 'straighten'
   ii. *dɔ* 'bend'   x. *jwa* 'burst'
   iii. *fíté* 'destroy'   xi. *ku* 'break'
   iv. *fɔ* 'wet'   xii. *laájé* 'lose'
   v. *gbá* 'split'   xiii. *múá* 'crumple'
   vi. *gbɛ* 'scatter'   xiv. shã 'burn'
   vii. *gbu* 'make hole (inside)'   xv. *saá* 'repair'
   xiii. *sele* 'melt'   xvi. *tsé* 'tear'

As (29) may suggest, the object argument of such verbs is typically inanimate. Therefore, the overtness of the object pronoun could possibly not be due to the 'animacy constraint'.

(29)   a.   Osa jajé   [**sɛí lɛ́**]₁ dání   Taki ku   *(**lɛ**₁).
              O   straighten   chair DEF before T   break   3SG
              'Osa straightened the chair before Taki broke it.'

        b.   Osa fɔ   [**woló lɛ́**]₁ dání   Taki múa   *(**lɛ**₁).
              O   wet   book DEF before T   crumple   3SG
              'Osa wet the book before Taki crumpled it.'

---

[5]Two things to note here. First, I will use the terms 'verb' and 'predicate' interchangeably in this section. Second, the list presented in (28) follows the one provided by Chinebuah (1976) for Nzema. I note a few exceptions. For instance, although verbs like *gbélé* 'open', *fɛ́né* 'untie' and *fo* 'cut' are change of state in nature, they do allow null pronouns. However, Gã is not alone in having exceptions in this class of verbs; in several of the Kwa languages under consideration, i.e., those that exhibit the overt versus null object pronoun patterns, there is a slight variation in the semantic class of verbs which allow or do not allow *pro*. For instance, unlike Gã, the equivalent of 'untie, loosen', which is *tulu* in Nzema, allows *pro* (see Chinebuah 1976:61). While I do not intend to provide an analysis for such observations in this dissertation, an idea worth considering for a possible explanation may be Goldberg (2001)'s claim that in some languages, including English, in certain information structure contexts, such verbs may allow their object argument to be omitted.

The list in (28) is by no means exhaustive, but crucially, the class of verbs seems to correspond to verbs which denote a change of state. This property can be demonstrated in a number of ways. A few are illustrated below.

Following Dobler (2008), we can suppose that *ku* 'break' in (29a) is a change of state predicate, because the construction suggests (a), a causing event (30a), and (b), the result of that event (30b). Thus, the affected argument, i.e., *sɛí lɛ́* 'the chair', changes from a state of being unbroken to a state of being broken.

(30)　a.　Event: Osa did something to the chair.
　　　b.　Result: The chair became broken.

Furthermore, we can apply some of the standard tests that establish a predicate as belonging to the class of change of state verbs to establish the status of a verb like *ku* in (29). For instance, when it combines with *again* (in terms of von Stechow 1996), as in (31a), it can have both repetitive, and restitutive readings (32). Also, it can be modified by a kind of 'in-some-time' adverbial, as in (31b), where the breaking event lasted for one minute.

(31)　*Tests for change of state-hood*

　　　a.　Osa *ku*　**sɛí　lɛ́**　ékóŋ́ŋ́. (*again* modification)
　　　　　O　broke chair DEF again
　　　　　'Osa tore the again.'

　　　b.　Osa kɛ　híŋmɛ́tswaa komé *ku*　**sɛí　lɛ́**. (*in-some-time* adverbial)
　　　　　O　take minutes　　one　break chair DEF
　　　　　'Osa broke the chair in one minute.'

(32)　*Readings with 'again' in (31a)*

　　　a.　Repetitive: Osa has broke the chair before.
　　　b.　Restitutive: Osa caused the chair to be in a state of being broken again.

To augment the set of arguments in support of the fact that the list in (28) comprises typical change of state verbs, I adduce further evidence from their ability to undergo causative(-inchoative) alternation, i.e., they can be used both transitively and intransitively.[6]

(33)　a.　**Sɛí lɛ́** é-ku.
　　　　　chair DEF PERF-break
　　　　　'The chair is broken.'

　　　b.　**Woló lɛ́**　é-múá.
　　　　　book　DEF PERF-crumple
　　　　　'The book has crumpled.'

---

[6]See Schäfer (2009) and references therein for an overview of the literature on this claim.

The examples in (33) illustrate that *ku* and *múá* 'crumple' in (28) can be used intransitively.[7] The above tests illustrating evidence in support of the change of statehood (CoS-hood) of the verbs apply to all the verbs listed in (28). A summary of the results is presented in (34), where CA refers to 'causative alternation'.

(34)   *Evidence for CoS-hood in relation to CA*

	VERB	event→*result*	*in some time*	restitutive *again*	CA
a.	*bóńdá* 'to make a dent'	✓	✓	✓	✓
b.	*dɔ* 'bend'	✓	✓	✓	✓
c.	*fíté* 'destroy'	✓	✓	✓	✓
d.	*fɔ* 'wet'	✓	✓	✓	✓
e.	*gbá* 'split'	✓	✓	✓	✗
f.	*gbɛ* 'scatter'	✓	✓	✓	✓
g.	*gbu* 'make hole (inside)'	✓	✓	✓	✓
h.	*jajé* 'straighten'	✓	✓	✓	✓
i.	*jwa* 'burst'	✓	✓	✓	✓
j.	*ku* 'break'	✓	✓	✓	✓
k.	*laájé* 'lose'	✓	✓	✓	✓
l.	*múá* 'crumple'	✓	✓	✓	✓
m.	*saá* 'repair'	✓	✓	✓	✗
n.	*sele* 'melt'	✓	✓	✓	✓
o.	*tsé* 'tear'	✓	✓	✓	✓
p.	*shã* 'burn'	✓	✓	✓	✓

We notice in (34) that verbs such as *gbá* 'split' (34e) and *saá* 'repair' (34m) do not undergo the causative alternation. For instance, unlike the example in (33), while they can be used transitively, as in (35a) and (36a), they cannot be used intransitively, as in (35b) and (36b).

(35)   a.   Kwei **gbá laí   lɛ́**.
              K   split firewood DEF
              'Kwei split the firewood.'

        b.   ***Laí   lɛ́   gbá** .
              firewood DEF split
              Intended meaning: 'The firewood split.

---

[7]I acknowledge that this is a general property of such verbs, even beyond the Kwa data of interest here. There are a few exceptions to this transitivity property , e.g., *cut* in (ib), when compared with *break* in (iib).

(i)   a.   John cut the bread.   (ii)   a.   John broke the chair.
       b.   ??The bread cut.   b.   The chair broke.

Therefore, it appears being a change-of-state verb is a necessary but not sufficient condition for allowing causative alternation use.

(36)   a.   Kwei **saá**   **tsɔné**   **lɛ**.
             K   repair vehicle DEF
             'Kwei repaired/corrected the vehicle.'

         b.   ***Tsɔne lɛ́**   **saá**.
             vehicle DEF repair
             Intended meaning: 'The vehicle repaired.

Notwithstanding data like (36) and (35) however, the verbs pattern like all others in (34) in terms of the distribution of object pronouns, i.e., they do not allow null pronouns, as exemplified in (37). In the context of this thesis, I take the property of not allowing null object pronouns to be the property that puts all the verbs in (34) in natural class.

(37)   a.   Kwei **gbá** *(**lɛ**).
             K   split 3SG
             'Kwei split it.'

         b.   Kwei **saá**   *(**lɛ**).
             K   repair 3SG
             'Kwei repaired it.'

We see in the following examples that the above patterns also obtain in related Kwa languages; change of state verbs in Baule, Nzema and Akan also do not permit null object pronouns.

(38)   *Baule*

         a.   A   **yra**-li   fluwa-'n$_1$?
             2SG burn-PST letter-DEF
             'Did you burn the letter.'

         b.   Een, n   yra-li   *(**i**$_1$).
             yes   1SG burn-PST 3SG
             'Yes, I burned it.'   (Larson 2005:117)

(39)   *Nzema*

         a.   Kofi ɛ-**zɛke**   [ɛkponle ne]$_1$.
             K   PERF-spoil table   DEF
             'Kofi has spoiled the table.'

         b.   Kofi ɛ-zɛke   *(**ye**$_1$).
             K   PERF-spoil 3SG
             'Kofi has spoiled it.'   (Chinebuah 1976:60)

(40)   *Akan*

         a.   Kofi bɛ-**hyew**   [edziban no]$_1$.
             K   FUT-burn food   DEF
             'Kofi will burn the food.'

b. Kofi bɛ-hyew *(**no**₁).
K   FUT-burn 3SG
'Kofi will burn it.'   (Osam 1996:162)

In addition to the above, the examples in (41) and (42) suggest that (at least) Akan exhibits a similar pattern as Gã in terms of the exceptions to causative alternation property.

(41)   *Akan* (Twi)

a. Kofi á-**síésie**   **pónó nó**.
K   PERF-repair   table DEF
'Kwei has repaired/corrected the vehicle.'

b. ***Pónó nó**   á-**síésie**.
table DEF PERF-repair
Intended meaning: 'The table is repaired.'

c. Kofi á-síésie   *(**no**).
K   PERF-repair   3SG
'Kofi has repaired it.'

(42)   *Akan* (Fante)

a. Kojo a-**sew**   **afoá-ń**.
K   PERF-sharpen machete-DEF
'Kojo has sharpened the machete.'

b. ***Afoá-ń**   a-**sew**.
machete-DEF PERF-sharpen
Intended meaning: 'The machete is sharpened.'

c. Kojo a-**sew***(-**n**).
K   PERF-sharpen-3SG
'Kojo has sharpened it.'

To conclude this section, since the object pronouns involved in constructions with change of state predicates have a similar animacy profile as those which ordinarily permit only null pronouns, as described in the previous section, the differences in the realisation of the object pronoun may be attributed to some non-animacy-related idiosyncratic properties of the predicates/verbs involved. This is the assumption that I will make in §2.5.3, where I present a proposal to explain why the object pronoun in a construction like (43) is always overt and thus patterning like animate pronouns in general.

(43)   Taki **ku** *(**lɛ**).
T break   3SG
'Taki broke it.'

2.2.4 Pronominal arguments of depictive secondary predicates

Another context where only overt pronouns are permitted is one where such pronouns occur as the argument of secondary predicates, such as the argument *lɛ* of *éhee* in (44). Before illustrating the Gã patterns, I provide a few remarks about secondary predication in general.

(44)   Taki hé *(**lɛ**) **é-hee**.
        T   buy 3SG NML-new
        'Taki bought it new.'

In a secondary predication construction, a single clause comprises two predicates - a primary one and a secondary one. In (45), *left*, *ate*, and *hammered* are the primary predicates, and their secondary counterparts are *angry*, *raw*, and *flat* respectively. The latter essentially modify arguments of the primary predicates, or what is expressed in the primary predication as a whole. For instance, in (45b), *raw* modifies *the meat*, as indicated by the co-indexation.

(45)   *Secondary predication*

   a.   George$_1$ left the party **angry**$_1$ (Schultze-Berndt & Himmelmann 2004:60)
   b.   John ate [the meat]$_1$ **raw**$_1$. (Verkerk 2009:116)
   c.   John hammered [the metal]$_1$ **flat**$_1$. (Asada 2012:53)

The primary predicate tends to be an action or an event while the secondary one is usually a state or a property hence normally adjectival in nature (see, e.g., Schultze-Berndt & Himmelmann 2004; Himmelmann & Schultze-Berndt 2005). The argument which the secondary predicate modifies, also referred to as the 'controller' by some authors, e.g., (Verkerk 2009:116), may formally be the subject, or the object of the primary predicate. Thus, secondary predication may be subject-oriented, as in (45a), or object-oriented (45b-c).

Constructions for which the secondary predicate is the outcome of the primary one are referred to as 'resultatives'. An example is (45c), where *flat* is the consequence of John's hammering the metal. Others like (45a-b), where the state expressed by the secondary predicate and the action expressed by the primary predicate are essentially coterminous are referred to as 'depictives'. As Pylkkänen (2008:22) puts it: "A depictive secondary predicate describes a state that one of the arguments of the verb is in during the event described by the verb." In (45b) for instance, *raw* tells the state of *the meat* during the event of eating. There are subject-oriented as well as object-oriented depictives. But we will focus on object-oriented depictives in this work. This is the type that we find in Gã, as exemplified in (46a-e).[8]

---

[8]As far as I can tell, the closest approximation to subject-oriented depictive constructions in Gã is like (ia), which is descriptively akin to a kind of serial verb construction. For instance, the secondary predicate may be introduced by a 'take'-like verb (ib). I do not intend to discuss such constructions any further in this dissertation.

(46)   *Depictive predicate constructions*

    a.   Taki ja   **níyéníí lɛ́**   **ohóó**.
           T   share food   DEF hot
           'Taki shared the food hot.'

    b.   Taki hɔɔ́ **loó lɛ́**   é-**ŋmɔ́ŋ**.
           T   sell fish DEF NML-fresh
           'Taki sold the fish fresh.'

    c.   Taki kpé **máŋó lɛ́**   é-**ŋmílíkítí**.
           T   chew mango DEF NML-unriped
           'Taki ate the mango unriped.'

    d.   Taki he **sɛi lɛ́**   é-**hee**.
           T   buy chair DEF NML-new
           'Taki bought the chair new.'

    e.   Taki ná **aspáatré lɛ́**   **ofóó**.
           T   get sandals   DEF cheap
           'Taki got the pair of sandals cheap.'

In (46a), the secondary predicate *ohóó* 'hot' conveys a meaning of the state of 'the food' while it is being 'shared' by *Taki*. Note however that the depictive predicates in (46b-d), although adjectival in terms of interpretation, are morphologically nominal in nature. This is indicated by prefix *é-* on the adjectives.[9] In this respect, the examples in (46) are comparable to a construction like (47), although the latter is considered a resultative construction.[10] But as it turns out, the existence of such special non-adjectival morphology on secondary predicates obtains in other languages as well. This has been, for instance, reported for Finnish (Pylkkänen 2008:23) and Russian (Citko 2011:753).[11]

(47)   We elected John president.   (Rothstein 1983:148)

Another crucial observation is that it seems the object of the primary predicate in such constructions must necessarily be inanimate, as in *níyéníí lɛ́* 'the food' in (46a). This suggests

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(i)   a.   Taki$_i$ bóté shíá lɛ́   mli   kɛ   yaafo$_i$.
           T   enter room DEF inside with crying
           'Taki entered the house (while) crying.'

    b.   Taki kɛ   yaafo bóté shíá lɛ́   mli.
           T   take crying enter room DEF inside
           'Taki entered the house (while) crying.' Lit: 'Taki take crying entered the room.'

[9]I refer to it as a nominal prefix because of its morphological similarity to the nominalising prefix *é-* in (i).

(i)   *Adjective → Nouns*

    a.   kpákpá 'good' → é-kpákpá 'good one'
    b.   mómó 'old' → é-mómó 'old one'

[10]But see den Dikken (2006) for a uniform analysis for both kinds of constructions.
[11]See (159) in §2.5.3.2 for an illustration of the Finnish case.

that such object arguments are perfect candidates for null pronoun realisation. However, this is not possible in any of the contexts in (46), as the following corresponding data show.[12]

(48)   *Object pronouns and depictives*

    a.   Taki ja   *(**lɛ**) **ohóó**.
          T   share 3SG hot
          'Taki shared it hot.'

    b.   Taki hɔɔ́ *(**lɛ**) (é-)**ŋmɔ́ŋ**.
          T   sell 3SG NML-fresh
          'Taki sold it fresh.'

    c.   Taki kpé *(**lɛ**) (e-)**ŋmílíkítí**.
          T   chew 3SG NML-unriped
          'Taki ate it unriped.'

    d.   Taki he *(**lɛ**) é-**hee**.
          T   buy 3SG NML-new
          'Taki bought it new.'

    e.   Taki ná *(**lɛ**) **ofóó**.
          T   get 3SG cheap
          'Taki got it cheap.'

However, note that contrary to the realisations of the pronominal arguments of the secondary predicates in (48), such pronouns may be realised as null in contexts outside of secondary predication constructions. We see this when we compare the pronouns in (49a) and (49b).

(49)   a.   Taki ja   [**níyeníí lɛ́**]₁ kóní Osa á-yé   (***lɛ́**₁).
           T   share food   DEF so.that O SBJN-eat 3SG
           'Taki shared the food so that Osa would eat it.'

    b.   Taki ja   [**níyeníí lɛ́**]₁ kóní Osa á-ye   *(**lɛ**₁) **ohóó**.
           T   share food   DEF so.that O SBJN-eat 3SG hot
           'Taki shared the food so that Osa would eat it hot.'

When *níyéníí lɛ́* 'the food' is pronominalised in (49a), where there is no secondary predi-

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[12]A construction like (i) might be cited as a counter-example to (48d).

(i)   Taki he ___ é-hee.
        T buy   NOM-new
        'Taki bought a new one.'

However, it is worthy of note that the interpretation of such constructions suggests that the ___ corresponds to an indefinite bare noun, such as *sɛi* in (ii). Thus, given the assumptions held about null objects in this work, the unpronounced argument of the verb in (i) might not be *pro* after all. I will not discuss this matter any further.

(ii)   Taki hé sɛ́í hee.
        T buy chair new
        'Taki bought a new chair.'

cate, it yields a null pronoun. However, when there is a secondary predicate following the pronoun, the null pronoun is not possible; only a overt object pronoun is allowed in this case (49b). Data like (49) suggest that whether we realise the pronoun as null or overt may not at all be about the interaction between the primary predicate *ja* 'share' and its internal argument *níyeníí lɛ́* 'the food'. But rather, it is about the presence of the secondary predicate and the position of its sole argument.[13] Although the secondary predication facts about the distribution of overt and null pronouns in Kwa languages have not been mentioned in the literature at all, the following examples point to similar facts in Akan.

(50)　　*Akan*

    a.　Kuukua té　　[**nhyírén nó**]₁ **mónó**.
        K　　　pluck　flower　DEF　fresh
        'Kuukua plucks the flower fresh.'

    b.　Kuukua té　　*(**nó**₁) **mónó**.
        K　　　pluck　3SG　fresh
        'Kuukua plucks it fresh.'

Given the foregoing discussion, the descriptive generalisation is that object pronouns whose antecedents are the controllers of secondary predicates cannot be null. Put differently, when an object pronoun is the argument of a secondary predicate, it must be overt. Thus, it appears that what sanctions the differences in the realisation of such pronouns has something to do with the nature of the configurations involving both the pronoun and the secondary predicate. Again, the question that needs to be addressed is: How is this comparable to contexts in which animate object pronouns occur, such that both types of pronouns are always overt? In §2.5.2, I will argue that such configurations are comparable to the structure which yields the derived position of animate object pronouns. This would account for why both pronouns are always overt.

2.2.5　Pronouns preceding adverbials

One other context which has been widely reported to typically resist the occurrence of null object pronouns is the position immediately before an adverbial. Here, only overt pronouns are permitted. Crucially, this adverb-overt pronoun distribution is relevant only when the adverb occurs at (what appears to be) the right edge of the clause. As we will see, some adverbs may also occur on the left edge of the clause, but this does not lead to a similar effect with the pronoun realisation. Let us consider a few illustrations, taking (51) as our base example.

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[13]Note that the antecedent of *lɛ* in (48b), i.e., *loó lɛ́* 'the fish' in (46b) is understood to be a lifeless fish, and therefore it is inanimate.

(51)   a.   Momo **shá** [**mfonírí lɛ́**]₁.
            M   snap photo   DEF
            'Momo snapped the photo.'

       b.   Momo **shá** (*lɛ₁).
            M   snap 3SG
            'Momo snapped it.'

Note that the object DP in (51a) is inanimate, and the predicate involved is a non-change-of-state one. This would then justify why an overt pronoun cannot occur in (51b). However, when *mfonírí lɛ́* 'the photo' is pronominalised just before an adverb, a null pronoun is no longer possible. This is illustrated in (52a-c), for adverbs of manner, place and time.

(52)   *Pre-adverb pronoun*

       a.   Momo shá *(**lɛ**) **oyá**.   (Manner)
            M   snap 3SG quickly
            'Momo snapped it quickly.'

       b.   Momo shá *(**lɛ**) **yɛ La**. (Place)
            M   snap 3SG at L
            'Momo snapped it at La.'

       c.   Momo shá *(**lɛ**) **leébí**   **nɛ́ɛ́**. (Time)
            M   snap 3SG morning DEM
            'Momo snapped it this morning.'

Similar facts have been reported for Akan (53), and Nzema (54).

(53)   *Akan*

       a.   Kofi bɔ-tɔn **dua no ɔkyena**.
            K   FUT-sell tree DEF tomorrow
            'Kofi will sell the tree tomorrow.'

       b.   Kofi bɔ-tɔn   *(**no**) **ɔkyena**.
            K   FUT-sell 3SG   tomorrow
            'Kofi will sell it tomorrow.'   (Osam 1996:161)

(54)   *Nzema*

       a.   Kofi kpomgba **tɛladeɛ ne   kɛnlɛma**.
            K   PERF.sew dress   DEF nicely
            'Kofi has sewn the dress nicely.'

       b.   Kofi kpomgba *(**ye**) **kɛnlɛma**.
            K   PERF.sew 3SG nicely
            'Kofi has sewn it nicely.'   (Chinebuah 1976:60)

Also, *in situ* interrogative adverbs with a similar distribution as the above-mentioned contexts also yield identical patterns with regard to the object pronoun realisation. For instance, in

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(55) and (56), only overt pronouns are permitted before 'how' and 'when' respectively.

(55)   Adesá lɛ́,   **té**   o-na   *(**lɛ**) **tɛ́ɛ́ŋ**?
         story   DEF Q.PRT 2SG-see   3SG Q.PRT
         'The story, how did you find it?'

(56)   *Akan*

         Wó-hu-u *(**no**) **bre bɛn**?
         2SG-see   3SG time Q.PRT
         'When did you see it.' (where *it* refers to *the key*)   (Saah 1994:125-126)

As in Akan (see Saah 2004), temporal adverbs (but not adverbs of manner and place) in Gã may also occur on the left edge of the clause. When this is the case in a given construction, then a null pronoun may occur in the object position of the verb. This is also what obtains when sentence-level or speaker-oriented adverbs, e.g., *anɔkwálé* 'truly' (57b), which are only permitted on the left edge of the clause occur in a construction with an object pronoun.

(57)   *Adverbs on the left edge*

         a.   **Leébí**   **nɛ́ɛ́**   Momo shá   (*****lɛ**).
             morning DEM M   snap   3SG
             'This morning Momo snapped it.'

         b.   **Anɔkwálé**, Momo shá   (*****lɛ**) (??anɔkwálé). (Epistemic adverb)
             truly   M   snap   3SG   truly
             'Truly, Momo snapped it.'

Given the distribution of overt pronouns in the context of what appear to be clause-final adverbial elements, the impression that seems to be created is that whenever the pronoun is non-clause-final, it must be overt. This suggests a possibility of there being a prosodic constraint, such as (58), barring an overt pronoun from being the last phonological material in a string of phonological segments.[14]

(58)   *Hypothetical phonological rule*

         a.   Pronoun   →   Null/ __#
         b.   Pronoun   →   Overt/elsewhere

Assuming the hypothesis in (58) were correct, any phonological segment that occurs after the pronoun should be able to prevent the null pronoun from occurring. (In fact, one might want to extend a similar argument to the depictive secondary predicates cases that were discussed in the previous section.) However, there is empirical basis to jettison such a hypothesis. For

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[14]See also Chinebuah (1976:56), Saah (1992:221-222), and Larson (2005:66) for a related discussion with regard to Nzema, Akan and Baule respectively.

instance, based on (58), we predict that configurations like (59b), where an overt object pronoun is not allowed, should be illicit, because there is a phonological material immediately after the pronoun.

(59)   a.   Momo, shá [**mfonírí lέ**]₁ **mmɔ́**!
            M   snap photo   DEF PRT
            'Momo, then snap the photo!'

       b.   Momo, shá (*****lε₁) **mmɔ́**!
            M   snap 3SG PRT
            'Momo, then snap it!'

As it turns out, not all utterance final phonological units force the overt realisation of the object pronouns. We notice that the presence of the imperative particle *mmɔ́* does not license an overt pronoun. Put differently, the occurrence of *mmɔ́* does not prevent the null realisation of the pronoun in (59b).[15] Here, we need to stress the point that if what regulates the pronoun realisation were purely phonological in nature, the kind of hierarchical relationship that obtains between the pronoun and whatever follows it should not matter. However, we know that the null/overt pronoun distribution is tied to the local relationship between the pronoun and the adverb in particular. This is because when both the particle and the adverb occur after the pronoun, it is only when the latter is local to the pronoun that the construction is licit. Compare the examples in (60a) and (60b).[16]

(60)   a.   Momo, shá **lε** **oyá**   **mmɔ́**!
            M   snap 3SG quickly PRT

       b.   *Momo, shá **lε**   **mmɔ́ oyá**!
            M   snap 3SG PRT   quickly
            'Momo, then snap it quickly!'

Given the evidence above, In §2.5.1, I will submit that the licensing of overt pronouns in these adverbial contexts results form the structural relationship between the adverb and the

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[15]Furthermore, we have already seen the cases of obligatory object pronoun realisation with the cases involving change of state verbs. Indeed, in such cases, the object pronoun may occur clause-finally (at least on the surface), yet null pronouns are not permitted whatsoever. Another piece of evidence that suggests that the overtness of the object pronoun is not as a result of the phonological rule in (58) is seen in contexts where an inanimate object pronoun is followed by a clausal determiner. Consider (i), a modified version of (17c) in chapter 4.

(i)   [**Tsɔné lέ**]₁ ni   Osa le   ákέ   Taki hé (*****lέ)₁ lέ.
         vehicle DEF FOC O   know COMP T   buy 3SG CD
         'Osa know that Taki bought THE CAR.'

Again, we see that the occurrence of the CD, i.e., *lέ*, after the object (resumptive) pronoun does not prevent the occurrence of the a null pronoun, as symbolised by (**lέ*).

[16]Here, we may also attribute the ungrammaticality of (60b) to the relative order of the particle and the adverb.

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object pronoun. I will propose that the head that introduces the adverb has a feature that attracts the pronoun to a high specifier position. The configuration that is created after the movement looks like the one in which animate pronouns (in non-adverbial contexts) occur.[17]

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[17]There are two outstanding issues that I would like to touch on with regard to the adverb-pronoun data. First, there are data such as (i), which appear to be a counter-example to the patterns observed above.

(i) *Akan*
Ɔsrám$_1$ á-yérá,   me-n-hú   *pro*$_1$ bíó.
moon PERF-be.lost 1SG-NEG-see   again
'The moon has vanished, I see it no more.'   (adapted from Riis 1854:85)

The problem specifically is that there is an adverb, i.e., *bio* 'again' occurring after a pronoun, i.e., *pro*, whose antecedent can be argued to be specific (since there is only one moon), and arguably definite. This is, for instance, comparable to the referentiality of proper names. I think a potential explanation for such data may be that it is either because the antecedent of *pro* is not formally marked as definite (assuming that only true definite DPs can be antecedents of a pronoun), or the adverb *bio* is right-adjoined to *v*P or CP.

Second, the discussion of the interaction between object pronouns and adverbs could be a source of empirical insight into issues relating to the distribution of inanimate plural object pronouns in Kwa languages. For Akan, at least, citations from Osam (1994:149) and Saah (1994:89) suggest that the language makes no distinction between plural and singular third person object pronouns. According to them, the *no* (typically=3SG.ACC) form is used in either case. Indeed, we see this when the object pronoun is in a context where it can be dropped, as in (ii).

(ii) *Akan*

    a.   Amma hohóro-o n-taadé   nó.
           A   wash-PST PL-dress DEF
           'Amma washed the dresses.'
    b.   Amma hohóro-oe *pro*.
           A   wash-PST
           'Ama washed them.'   (Saah 1992:223)

However, when a plural pronoun that has a plural inanimate antecedent precedes an adverbial, in which case it is forced to be overt, the use of the (otherwise) singular form is as bad as the plural form. As far as I can tell, this seems to be the case for both Akan (iii), and Gã (iv). This may be investigated further in the future.

(iii) *Akan*
Kuukua gyé-e   [n-taadéɛ́ nó]$_1$ nnéra   nańsó ɔ-a-n-hyɛ́   ʔno$_1$/ʔwɔn$_1$ ntɛ́m.
K   collect-PST PL-dress DEF yesterday but   3SG-SBJN-NEG-wear 3SG/3PL   quickly
'Kuukua collected the dresses yesterday but she didn't wear them quickly.'

(iv) *Gã*

    a.   *Taki hé [wojí   lɛ́]$_1$ shi e-káné-éé *pro*$_1$ mɾã.
           T   buy book.PL DEF but 3SG-read   early
    b.   Taki hé [wojí   lɛ́]$_1$ shi e-káné-éé ʔamɛ$_1$/??lɛ$_1$ mɾã.
           T   buy book.PL DEF but 3SG-read 3PL/3SG   early
           'Taki bought the books but he didn't read them early.'

2.2.6 The kind of null object at hand

I will argue here that the null object of Gã verbs like *ye* in (61) is different from the unpronounced argument of an otherwise transitive verb like *eat* in (62a).

(61) Taki ye *pro*.
      T   eat
      'Taki ate it.'

(62) a. John ate.
      b. John dined.

In the case of (62a), notice that the object of the verb is non-specific (and, thus, not anaphoric). As Authier (1988:22ff) explains, the fact that the construction is equivalent in meaning to (62b) suggests that the verb may not assign an internal Theta role, which would mean that its object may not be projected at all in the syntax. I claim that in the Gã case (61), the internal argument, i.e., an object pronoun, is projected in the syntax except that it is not phonologised. In Gã, there is evidence, based on the binding relations established between *pro* and other (overt) nominal elements to suggest that *pro* is active in the syntax of constructions in which it occurs. I will administer two tests proposed by Massam & Roberge (1989:137) to illustrate this. The tests ultimately show that the null object can control an embedded subject, and also bind a possessive pronoun.[18] Let us start by considering the constructions in (63).

(63) *Control of embedded subjects*

      a. Taki kwɛ́ [**woló lɛ́**]$_1$ ni   **e**$_1$-fɔ.
          T   watch book DEF COMP 3SG-wet
          'Taki watched on for the book to get wet.'

          Lit: 'Taki watched the book for the book to wet.'

      b. Taki kwɛ́ *pro*$_1$ ni   **e**$_1$-fɔ.
          T   watch   COMP 3SG-wet
          'Taki watched on for it to get wet.'

      c. Taki kwɛ́ [**woji   lɛ́**]$_1$ ni   **amɛ**$_1$-fɔ.
          T   watch book.PL DEF COMP 3PL-wet
          'Taki watched on for the books to get wet.'

In (63b), *pro* binds the subject prefix of the embedded clause, just as its antecedent, i.e., *woló lɛ́*, does in (63a). It is important to note that the distribution of *pro* with respect to *e-* is comparable to the binding relations between *wojí lɛ́* and *amɛ* in (63c). Based on this, we can conclude that *pro* must be present in the syntax in contexts like (63b). Let us consider the possessive binding context, as in (64).

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[18]Note that Larson (2005:28ff) used similar tests to establish similar facts for Baule (and Norwegian).

(64) *Possessive binding*

    a.   Taki kɛ   [**shiká lɛ́**]$_1$ wo **e**$_1$-susú-(a)déká   lɛ́   mli.
        T   take   money DEF put 3SG.POSS-savings-box DEF in(side)
        'Taki put the money in its savings box.'

    b.   Taki kɛ   ***pro***$_1$ wo **e**$_1$-susú   adeká lɛ   mli.
        T   take   put 3SG.POSS-savings box   DEF in(side)
        'Taki put it in its savings box.'

In (64a), the object of *kɛ*, i.e., *shiká lɛ́* 'the money', binds the possessive pronominal prefix of *susú (a)déká lɛ́* 'the savings box'. Crucially, even when the direct object is replaced by *pro*, as in (64b), the binding relation holds. Based on this, we can assume that *pro* in (64b) is merged in the same position as *shiká lɛ́* in (64a), which allows it to bind the possessive pronoun. By extension, if *pro* was never merged in the syntax, but instead a featurally empty element was merged, we would expect the resultant derivation to crash, since otherwise the possessive prefix *e-* on *adéká lɛ́* cannot be interpreted in the given context. But since (64b) is perfectly fine, I conclude that *pro* is in the syntax.

In §2.5.4.4, I will argue that the realisation of *pro* in Gã, and several other Kwa languages, is as a result of a deletion operation which occurs at the PF interface. Therefore, the use of the terminolgy *pro* (and the notation t$_{1,2...}$) in reference to null object pronouns in this dissertation specifically refers to this kind of empty category.

2.2.7   Overt pronouns in other Kwa languages

As I indicated ealier, the null-overt object pronoun distinction under discussion does not obtain in all Kwa languages. While languages like Akan, Gã, Nzema, Baule, Nkami, etc. make this distinction, others like the Gbe group of languages, e.g., Ewe(gbe) (65) and Gungbe (66), Logba (67), and Tawuli (68) do not. Note that the relevant object pronouns are inanimate.[19]

(65)   *Ewe*

    Vi-nye-wó   mi-ga-**ŋlɔ-e**$_1$ bɛ́ o...
    child-1SG-PL 2PL-REP-forget-3SG VS NEG
    'My children, do not forget...'   (Ameka 2008:151)

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[19] Chinebuah (1976:70) presents the following data to suggest that Dangme, the closest language to Gã (in terms of mutual intelligibility) also requires overt inanimate object pronouns in a way that is similar to what we observe in Ewe. However, the data have been disputed by almost every native speaker that I have personally consulted. (See footnote 60 in §2.6.1 for further discussions.)

(i)   a.   Kofi **dzu** [**sika a**]$_1$.
           K   steal money DEF
           'Kofi stole the money.'

    b.   Kofi **dzu lɛ**$_1$.
           K   steal 3SG
           'Kofi stole it.'

(66) *Gungbe*

Yé **xɔ**   **e**₁.
3PL buy.PERF 3SG
'They bought it.'   (Aboh 2004b:130)

(67) *Logba*

Xé i-na   i-nyɔ éke-é,   i-na   i-nyɔ
COND CM-person AM-two SM-PL-set.trap-CFM CM-person AM-two
é-dze=**é**.
SM-PL-see=3SG.OBJ
'If two people set a trap, two people watch it.   (Dorvlo 2008:186)

(68) *Tawuli*

ɛ-**bɔɛ**   **foi**.
3SG-take 3SG
'He should take it.'   (Harley 2008:301)

Thus, commenting on the distribution of *yi* (the equivalent of the object pronoun suffix *-e* in (65), in another Gbe language, i.e., Kpelegbe) Collins for instance, says that:

> When *yi* appears as an object pronoun it is obligatory [...] except in the case where there is a linguistically present non-specific DP that can serve as an antecedent. In this case, it is optional. (Collins 1993:21 fn. 3)

For Kpelegbe in particular, data from Collins (1997a:437), i.e., (69) seem to suggest that a null object pronoun may be possible in cases where the antecedent is indefinite. For instance, in (69), *nu* has a generic (non-specific) meaning. Given the definiteness restrictions on the antecedent of personal pronouns, as was discussed in, for instance, §2.2.1, it is possible that in cases like (69), there is no pronoun at all in the slot marked as ___. (But see Collins (1997a) for an alternative analysis.)

(69) *Ewe* (Kpelegbe)

Me ɖa nu   ɖu ___.
I   cook thing eat
'I cooked something and ate it.'

In §2.6.1, I will argue that the Kwa languages that do not allow null pronouns have in common an independent syntactic property, i.e., 'object shift', which arguably enables them to create configurations that render the deletion of object pronouns impossible. This would then explain why the object pronoun in such languages are generally always overtly realised.

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2.2.8   Section summary and matters arising

The foregoing sections have presented data to show that for several Kwa languages, the following descriptive generalisations hold.

(70)   a.   Only a definite DP can typically be the antecedent of an object pronoun.
       b.   Every first person, second person, and third person animate object pronoun is obligatorily pronounced in all contexts.
       c.   A third person inanimate object pronoun is obligatorily not pronounced, unless any of the following conditions holds.
            (i)   It is the object of a change of state verb.
            (ii)   It is the argument of a depictive secondary predicate.
            (iii) It is followed by an adverbial in clause-final position.

A summary of the distribution of null object pronouns can be given as in (71).

(71)   *Distribution of null object pronouns*

CONDITION	+ANIM	-ANIM
a. Clause-final	✗	✓
b. Before adverbials	✗	✗
c. Argument of a change of state predicate	✗	✗
d. Argument of a depictive predicate	✗	✗

I also presented evidence to suggest that the null object in question is active in the syntax, because it is able to bind other nominal elements in a given structure. Furthermore, I argued that the null pronoun is a *pro*, but in the specific sense of an object pronoun that has been deleted in the phonology, not in the syntax. Meanwhile, object pronouns in sister languages such as Ewe, Logba, and Tawuli do not allow null object pronouns in similar syntactic contexts.

In light of the data we have seen so far, the fact that inanimate object pronouns in some Kwa languages are never overtly realised albeit in a specific context seems unexpected, at least on the surface. Alternatively put, instead of the distribution in (71), which focuses on the null object, I suggest that the focus should rather be on the distribution of overt pronouns, as in (72).

(72)   *Distribution of overt object pronouns*

CONDITION	+ANIM	-ANIM
a. Clause-final	✓	✗
b. Before adverbials	✓	✓
c. Argument of a change of state predicate	✓	✓
d. Argument of a depictive predicate	✓	✓

From the perspective in (72), we can think of the occurrence of null object pronouns in Kwa as the exception rather than the norm. Therefore, the central issue that the present chapter will try to address is: What formal mechanism(s) account(s) for the spellout differences between overt and null object pronouns in Kwa, given that both are merged in a similar position?

In answering this question, I will present arguments to suggest that third person inanimate pronouns in (72a), unlike all other personal pronouns, are deleted at the point during the derivation when the VP complement of *v* needs to be linearised. I will show how the assumptions about the configurations in which animate versus inanimate pronouns are derived might be a justification for the overt versus null realisation of object pronouns elsewhere, i.e., (72b-d).

2.3   Previous accounts

Although authors likes of Riis (1854); Christaller (1964[1875]); Brown (1913); Stewart (1963); Boadi (1976); Chinebuah (1976) had alluded to the existence of null objects in Kwa (especially Akan), the publication of Chomsky (1981, 1982) which postulated more 'empty categories', e.g., *pro* versus PRO in syntax, stimulated a lot of interest among theoretical linguists to investigate the phenomenon across several languages. I will refer to the latter case as 'standard null objects'. In the ensuing decade, the following authors had one thing or another to say about how to account for the crosslinguistic status and availability of null objects: Jaeggli (1982); Huang (1984, 1987); Rizzi (1986); Raposo (1986); Huang (1987); Cole (1987); Authier (1988); Massam & Roberge (1989); Rögnvaldsson (1990); Farrell (1990); Roberge (1991); Massam (1992); Saah (1992). I will devote this section to give a brief overview of some of the central issues that were raised during this period. Subsequently, I will review the accounts of Chinebuah (1976), Saah (1992), Osam (1996) and Larson (2002, 2005), which have a more direct bearing on the typology of null objects that we find in Kwa. Therefore, I will divide the section into two; §2.3.1 will talk about standard null objects, and §2.3.2 will look at the Kwa accounts.

2.3.1   Approaches to standard null objects

The following questions were among the topical issues that dominated investigations into the phenomenon of null objects from the early 1980s to the early 1990s.

(73)   a.   Is the null object a trace or a (little) *pro*? (Chomsky 1981, 1982)[20]
       b.   Is the null object an instantiation of the 'Identification Hypothesis'?

In one of the earliest discussions of the phenomenon, Jaeggli (1982) proposed that Romance languages, such as Italian (74a) (see also Rizzi 1982, 1986), French (74b), and Spanish (74c), allow null objects because in such languages, there is usually some morphological evidence on the verb stems based on which the lack of overt object argument in the canonical position can readily be recovered. The idea, which became known as the 'Identification Hypothesis', implied that languages that permitted null objects would necessarily have forms comparable to the *la*-clitics on the Romance verb stems in (74), or the *-mu* suffix in KiNande, as in (75). The question that arises is: How do issues like Case and the Theta role of the object arguments get resolved in the configurations in (74)?

(74)   *Romance*
       a.   Italian: Io la_1-vedo pro_1
       b.   French: Je la_1-vois pro_1
       c.   Spanish: Yo la_1-veo pro_1
                'I saw her.'   (adapted from Roberge 1991:299)

(75)   *KiNande*
       Na-ibiri-mu_1 anza pro_1.
       SM-TNS-him/her love
       'I have come to love her/him.'   (Authier 1988:21)

One response to the above question is provided by Roberge (1991) who, following Jaeggli (1982), argues that the internal argument, i.e., *pro* in (74), receives Theta role from its governing verb, but it is not assigned Case. For this reason, "it cannot be lexicalized at PF" (Roberge 1991:302). Furthermore, he argues that the object clitics are to be treated as Case absorbers. Roberge (1991) concludes that the availability of morphological reflexes of *pro* in the languages in (74) accounts for the differences between such languages, which have null objects, and languages which do not permit null objects, such as English.[21]

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[20]Note that contrary to its use in this dissertation, the use *pro* in (73a) essentially refers to an empty element in the Lexicon.

[21]But see Cummins & Roberge (2004). They treat constructions like (i) as cases of null objects in English.

(i)   a.   This bread cuts ___ easily.
      b.   This bread is easy to cut ___.

Subsequently, several researchers on the topic of null objects have long presented evidence to argue that the Identification Hypothesis does not hold across languages. For instance, the following so-called 'radical *pro*-drop' languages do not mark any object pronominal morphology on their verbs.

(76) *Mandarin Chinese*

Zhangsan$_1$, shuo Lisi bu renshi ___$_1$.
Zhangsan say Lisi not know
'Zhangsan, said that Lisi does not know [him].' (Huang 1984:537)

(77) *Brazillian Portuguese*

Eu conheci *pro* numa festa.
I met in.a party
'I met him in a party.' (Farrell 1990:328)

(78) *Imbabura Quechua*

Juzi *pro* rikurka.
Jose saw
'Jose saw him/her/it.' (Cole 1987:597)

(79) *Korean*

Chelswu$_1$-ka Yenghi-ka *pro*$_1$ hyeppakha-ess-ta-ko cwucangha-ess-ta.
Chelswu-NOM Yenghi-NOM threaten-PST-DECL-COMP claim-PST-DECL
'Chelswu$_1$ claims that Yenghi threatend him$_1$.' (Cole 1987:602)

Based on data like (76), Huang (1984) analysed null objects in Mandarin Chinese as A-bar-bound variables, i.e., a kind of 'trace'. A similar view was held by Raposo (1986) for European Portuguese, and by Authier (1988) for KiNande. Huang (1984) in particular claimed that languages that lack a morphological identifier cannot have *pro*, hence his 'trace' proposal. However, Cole (1987) and Farrell (1990), for instance, pointed to empirical evidence in Korean (79) and Brazilian Portuguese (77) respectively, which contradicted Huang (1984)'s claim. Their evidence suggested that although such languages do not have the expected morphology, they allow null objects that are *pro*-like.

Another proposal that needs to be mentioned as far as approaches to standard null objects is concerned comes from Neeleman & Szendrői (2007). They argue in support of (80):

(80) *Radical-pro-drop Generalization* (Neeleman & Szendrői 2007:673)
Radical pro drop requires agglutinating morphology on pronouns.

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c. Take bread. Cut ___ carefully (and arrange ___ nicely).
(Massam 1992:115)

The above generalisation was aimed at addressing the problems associated with the earlier proposals. Thus, it was to accommodate both languages that conform to the Identification Hypothesis, i.e., Romance, and radical *pro*-drop languages, e.g., Mandarin Chinese. Furthermore, it was to account for why it is typically impossible for languages like English to drop pronouns. Therefore, by (80), they explain further that "[...] a language may drop pronouns if it has at least some agglutinating pronominal morphology. In the absence of such morphology, pro drop is blocked." (Neeleman & Szendrői 2007:678-9).[22] Their proposal is supported by data from languages like English and Dutch, which have fusional pronominal morphology and therefore do not allow pro-drop. For instance, in the English pronoun *him*, number, i.e., singular, and case, i.e., accusative, are fused together. This is different from its equivalent in languages like Japanese and Chinese, which seem to have separate morphological markings for case and number respectively in constructions where object pronouns are omitted (Neeleman & Szendrői 2007:679).

(81) a. Kare-ga kare-**o** settokusuru. (*Japanese*)
          he-NOM he-ACC persuades
          'He persuades him.'

      b. Ta-**men** kanjian ta le. (*Chinese*)
          he-PL   see   he LE
          'They saw him.'

Neeleman & Szendrői (2007:690) furthermore predict that "[...] the same kind of explanation should hold of other radical-*pro*-drop languages: their pronouns should be accompanied by morphemes expressing case or heads closer to the noun than case, such as number, determiners, and classifiers."

In terms of the null object pronoun issues under consideration in this dissertation, what is clear from the foregoing discussion is that the Identification Hypothesis definitely does not apply in the Kwa case. For instance, none of the Kwa languages being discussed here has the expected morphology. In addition, there is no empirical basis to extend the 'Radical-Pro-Drop Generalisation' to Kwa either; the pronominal paradigms in these languages are extremely fusional, just like in English and Dutch.[23] For instance, *lɛ* in Gã comprises third person, singular number, and accusative case, which can not be morphologically isolated.

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[22]One crucial assumption in the analysis of Neeleman & Szendrői (2007), which is compatible with the approach adopted in this dissertation is that null object pronouns are actually regular pronouns that have been deleted. However, as I will explain in §2.4, while I will assume that such deletion may be evaded by syntactic movement, their approach assumes that cases of overt pronouns are attributable to the nature of the morphological spellout rules that apply (see, e.g., Neeleman & Szendrői 2007:687).

[23]It is important to mention that for some Kwa languages, emphatic pronouns may inflect for number. For instance, the suffixes on the following stems make them plural: *no-mɛi* 'those' (Gã) and *ɛnó-mó* 'those' (Akan). However, commenting on similar facts in Papiamentu, Neeleman & Szendrői (2007:697, fn.17) seem to suggest that such evidence is to be discounted in the context of their theory. If this is correct, we cannot readily extend their analysis to the Kwa cases under discussion.

Yet, unlike English, Gã permits object *pro* drop. Furthermore, as we saw earlier, animacy is crucial in realising null objects in Kwa. However, the animacy factor seems not to work in all cases; sometimes, other factors override it. For instance, we have seen instances where inanimate object pronouns cannot have a null realisation because they precede an adverbial. As far as the cases of standard null objects (as discussed in this section) are concerned, we are yet to come across instances where the occurrence of the null object is made impossible because of factors such as animacy or the presence of a local adverbial element. The 'new' Kwa data presented here, thus, seem to excite a second look at the proposals discussed above.

2.3.2 Accounts of null objects in Kwa

A survey of the literature on object pronouns in Kwa languages suggests that there is consensus regarding the role of animacy in determining the distribution of overt and null pronouns. In addition, some researchers also note the importance of the verbal predicate involved. Both senses are expressed in the following quote from Riis (1854:60), who was commenting on such pronouns in the Akuapem dialect of Akan.

> The personal pronoun, third person, neuter gender, objective case, referring to inanimate things, is only implied, not expressed. Gye 'take' (it); Twirow 'scratch' (it); So hwe 'taste' (it); [...]. When, however, the verb indicates a change in the position or condition of the object, the pronoun is usually expressed, such as Dum 'to extinguish';[...] Tsin 'to straighten'; kyia 'to make crooked'; Sakyir 'to change'; Sekyew or Se 'to spoil'; Huwa 'to whiten'; Biri 'to blacken'; [...].

The idea that animacy implies ability to assert volition is also captured by the following data from Christaller (1964[1875]), where although *náḿ nó* 'the fish' (82a) is biologically animate, it lacks the sense of volition in the context of (82). Here, it is construed as an inanimate object. This would explain why it can be the antecedent of the null object pronoun (82b).

(82)   *Akan*

     a.   Question: Wó-de   [náḿ nó]$_1$ bɛ́-yɛ́   dɛ́n?
                2SG-take   fish DEF FUT-do what
             'What will you do with the fish?'

     b.   Answer: M'ɛ́-noá   *pro*$_1$ m'-ádi   *pro*$_1$.
              1SG-FUT-cook   1SG-SBJN-eat
             'I will cook it and eat it'   (adapted from Christaller 1964[1875]:85)

In the next four sub-sections, I will review how issues relating to the distribution of null (versus overt) pronouns in some Kwa languages have been analysed from various theoretical

perspectives. I will discuss Chinebuah (1976), Saah (1992), Osam (1996) and Larson (2005).

2.3.2.1 Chinebuah (1976)

In his account of the distribution of null objects in Nzema, Chinebuah (1976) also makes reference to similar patterns in languages like Akan and Gã and the lack of same in Ewe and Dangme. The central assumption in his analysis is that verbs in Kwa languages that allow null pronominal objects are lexically specified as plus or minus pronoun, i.e., [± PRONOM], in the lexicon (see Chinebuah 1976:71), where [-PRONOM] verbs allow null object pronouns while [+PRONOM] verbs do not. He proposes the transformational rules in (83) to account for how DPs become pronouns, and how the resultant pronouns may or may not be phonetically realised, i.e., leading to the realisation of null pronouns.

(83)   a.   [Optional rule]: Pronominalisation of third person pronoun for definite noun phrase object
        b.   [Obligatory rule]: Delete the resultant third person pronoun occurring after members of a certain class of verbs.

Crucially, the rules above are ordered; (83a) must necessarily precede (83b), adapted from Chinebuah (1976:58). The rule in (83a) is Chinebuah's way of capturing, first, why pronominalisation is optional in language, and second, why only definite pronouns tend to be pronominalised. With (83b), he is able to explain, for instance, why pronominal objects of change of state predicates tend to be obligatorily overt. But since pronouns in the context of adverbs are also never deleted, although they may be inanimate, he introduces a further restriction on the class of pronouns that can be deleted by proposing a syntactic condition that basically says that (83b) applies only when the pronoun is clause-final.

Although many of the assumptions in Chinebuah (1976)'s approach seem to have been expressed in a rather stipulative way, it is the first major attempt at derivationally treating null objects as deleted pronouns, albeit in an less formal way.[24] In the analysis proposed in this work, it is argued that the deletion follows from an independently-motivated mechanism in the course of the derivation. It is further demonstrated that all other third person pronouns which are otherwise susceptible to deletion but are not deleted, e.g., those in the contexts of change of state verbs, secondary predicates, and clause-final adverbs, are realised in configurations in which the context for deletion is bled by some other syntactic process. This will be a major challenge for Chinebuah's lexical and syntactic restrictions on the distribution of null object pronouns. If the null versus overt pronoun distinction were lexical in nature, we would expect it to hold irrespective of the syntactic context. But the facts suggest otherwise.

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[24]Boadi (1976) also talks of deletion of third person pronouns in Akan. But he addresses this issue from a diachronic perspective.

2.3.2.2 Saah (1992)

Saah (1992) basically focuses on the kind of null element that we find in Akan, with Chomsky (1981, 1982) in mind, and in comparison with what obtains in languages like Italian, Chinese, KiNande and Brazilian Portuguese. He analyses null object pronouns in Akan as either 'resumptive' *pro*s or 'topic' *pro*s. The former is in reference to configurations like (84), as well as relative and focus constructions, where the distribution of *pro*, as in (84b), is parallel to the distribution of the overt pronoun in (84a) (see also Saah 1988).

(84)　a.　Héna₁ na　Amma ré-hwéhwέ　**no₁**.
　　　　　who　FOC　A　　PROG-look.for　3SG
　　　　　'Who is Ama looking for?'

　　　b.　Dέn₁ na　Amma ré-hwéhwέ　***pro₁***.
　　　　　what FOC　A　　PROG-look.for
　　　　　'What is Ama looking for?'　　　　　　　　　　(Saah 1992:229)

Based on the analogy above, Saah argues that either pronominal element should be treated alike syntactically. For non-A-bar constructions like (85) and (86), which permit null objects, he argues that in the cases where there are no lexical topics, as in (85a), *pro* is bound by a null topic operator, as illustrated in (85b). Those with lexical topics like , e.g., (86a) on the other hand, he assumes, are bound by such nominal elements. This is illustrated with (86b).

(85)　a.　ɔ-re-pam　　*pro₁*.
　　　　　3SG-PROG-sew
　　　　　'He is sewing it.'

　　　b.　[IP Top₁ [IP NP V *pro₁*]]　　　　　　　　(Saah 1992:225-6)

(86)　a.　Pɛn no, me-pɛ　*pro₁*.
　　　　　pen DEF 1SG-like
　　　　　'The pen, I like it.'

　　　b.　[IP NP₁ [IP NP V *pro₁*]]　　　　　　　　(Saah 1992:226)

As far as Saah (1992:233) is concerned, the phonetic differences in the realisation of object pronouns are just morphological reflexes of animate versus inanimate pronouns in similar contexts; the former is exponed by an overt pronoun, and the latter is exponed by a null pronoun. He supposes that this might be necessary in Akan, since there is no distinction between animate and inanimate third person object pronouns anyway (see also Osam 1996:160).

The analysis of Saah (1992) nicely captures the similarities in the distribution of object pronouns in both A-bar and non-A-bar context. However, the account does not discuss why null pronouns would fail to show up in contexts involving change of state verbs, secondary predicates, and adverbials, although the antecedent DPs in such contexts are also prototypi-

cally inanimate in Akan. For instance, if we take (85a), the analysis (mis-)predicts that a null pronoun will be produced in place of the third person object pronoun *no* in (87), even when an adverb follows the pronoun, because it is inanimate.[25]

(87)   Ɔ-re-pam   *(no₁) anɔpa   yí.
       3SG-PROG-sew 3SG   morning DEM
       'He is sewing it this morning.'

As indicated earlier, these empirical and theoretical gaps will be filled in the present study.

2.3.2.3   Osam (1996)

In arguing for a functional explanation for the distribution of overt versus null object pronouns in Akan, Osam (1996:161) claims that in Akan grammar, "the covert coding of the object pronoun when its antecedent is inanimate is built into the language to avoid the danger of hearers confusing an inanimate noun with an animate noun", because the language makes no animacy distinction for third person object pronouns. He suggests that this is one way by which the 'Animacy Hierarchy' is actualised in Akan, i.e., the fact that animates, which are higher on the animacy scale (88) are overtly coded, at the expense of inanimates.

(88)   *Animacy Hierarchy*
       Human > Animate > Inanimate

The condition for coding the hierarchy in (88), which leads to the realisation of null pronouns, apparently, excludes cases where there are adverbials or change of state predicates involved. According to the analysis, these latter two conditions are the only instances in which the hierarchy in (88) and subsequent coding of same in Akan may be interfered with. To account for why pre-adverbial pronouns are always overt, Osam (1996) appeals to (89).

(89)   *Topicality Hierarchy*
       Subject > Direct Object > Adverb (Osam 1996:162)

Following the 'Topicality Hierarchy' (89), Osam explains that in contexts where there is an adverb, the null realisation of an object pronoun may lead to the subversion of the structural position of the direct object by the adverb, since the immediately post-verbal position in Akan is a preserve of the direct object. Regarding why object pronouns are never null when they are arguments of change of state predicates, Osam argues that because Theme subject arguments of such verbs may be used intransitively, it is always necessary to overtly realise

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[25]It is worthy of note that while Saah (1992) does not make reference to these other contexts where the occurrence of null object pronouns are illicit, in Saah (1994:129), he alludes to the need for further future research into the adverbial case.

the object pronoun in such contexts, i.e., when it is transitive. This would be a way to avoid speakers mistaking such object arguments for affected Theme arguments in subject position. As a commentary on Osam (1996)'s account, first, it suffers from the usual problems associated with analyses that rely on scales such as those in (88) and (89). As Richards (2015:174) points out, from a formal perspective, it is not clear whether such scales are to be understood as primitives of Universal Grammar, or as the result of such primitives. Second, there is no consensus as to how many of such scales are to be admitted, and how they are to be formally implemented. Third, given Osam's explanation for the pre-adverbial realisation of pronouns, he wrongly predicts that when some other phonological material, i.e., apart from an adverb, occurs after an inanimate object pronoun, the pronoun must be overtly realised. Fourth, Osam (1996:161) states that only two conditions may compromise the distribution of null object pronouns based on the animacy scale, i.e., when they occur with causative alternation verbs, or when they precede an adverbial. But as it turns out, object pronouns are also always overt when they precede depictive secondary predicates also. Finally, it seems that the analysis relies on at least three different explanations for the distribution of overt object pronouns in Akan. These are the animacy hierarchy, topicality hierarchy, and semantics of the predicate involved. However, in the analysis proposed in this work, it will be demonstrated that every instance of overt object pronoun, whether animate or inanimate, is derivable from a single syntactic configuration, i.e., the pronoun is in a specifier position.

2.3.2.4 Larson (2005)

Larson (2005) proposes a Minimalist account for the distribution of null objects in Baule. It is important to mention that accounting for distribution of overt and null object pronouns in Baule was not the main focus of Larson (2005)'s work. She argues, following Rizzi (1986) and Farrell (1990), that the ability to license a null pronoun in a given construction is an intrinsic property of the predicate. She assumes that there are 'object drop' and 'non-object drop' verbs in the language (see Larson 2005:120ff).

Under her approach, null objects are licensed only when the derivation meets two conditions. First, there is a 'Formal Licensing Condition', which requires the checking of certain syntactic features. The relevant formal features are uninterpretable person and number borne by a functional probe head, namely, Tr, which merges with the VP. It is assumed that in the context of null objects, the φ (i.e., number and person) features on Tr are weak, so they are checked at LF. The second condition needed to license a null object in Larson's system is the 'Identification Condition'. This condition is fulfilled by the presence of an abstract independently-motivated noun class feature on verbs which allow null objects. This feature presumably restricts the kind of objects that such verbs may select.[26] Here, only nominal elements which agree with the verb in terms of its noun class feature can be selected. Therefore,

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[26]See also Larson (2002) for a restatement of the 'Identification Condition'.

whenever such verbs are able to select a pronoun, we can as well assume that the Identification Condition is met. We can schematised the above description as (90), where I have represented the relevant syntactic features as PER, NUM, and NC for person, number and noun class respectively.
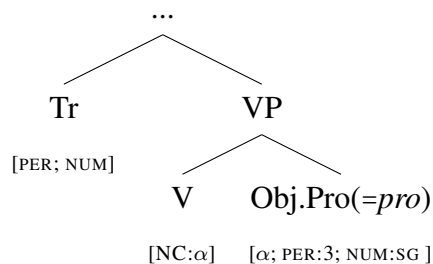
(90) *null pronoun*   (91) *overt pronoun*
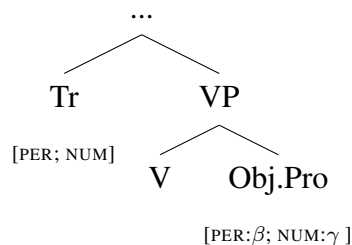
In (90), the checking of the NC feature of the verb, i.e., α, precedes the checking of the formal features on Obj.Pro. The latter happens at LF (recall that they are weak features).

Unlike (90), however, verbs that do not permit null objects lack the NC feature, as schematised in (91). Therefore, only the formal features of the object pronoun require checking. In this case, checking occurs in the syntax. Note that the φ features of the object pronoun in this case are not specified. According to Larson (2005), this accounts for the difference between third person inanimate pronouns, as in (90), and other pronouns. Those in (91) cannot be realised as phonetically null.

Regarding the fact that null objects tend to occur in clause-final position, Larson (2005) explains that this could be explained away if we assume that NC agreement is only possible when there are surface cues, e.g., final tone of verbs that allow null objects give signals that aid processing by a hearer. Apparently, this has been independently reported for Baule.

Given the typological linkage between Baule and other Kwa languages that exhibit the overt-null object phenomenon, one would want to extend Larson (2005)'s analysis to languages such as Gã, Akan, Nzema etc. However, such an attempt is not without conceptual and empirical bottlenecks. I will discuss two of such problems.

First, as Larson (2005:121-122) points out, the idea of there being abstract noun classes in Kwa is plausible, given the evidence in languages like Akan (see Osam 1993, 1994). The expectation, therefore, is that when particular noun classes are selected by a predicate, members of the class would behave uniformly with respect to their object pronominal forms being phonetically unrealised or otherwise. However, it appears that members of the same noun class in Akan, (which Larson based her noun class assumption on), behave differently. For instance, both *abaawá* 'servant (girl)' and *ateré* 'spoon' belong to class two in Osam's classification. But they behave differently when it comes to their ability to be licensed as a null object. In the following Akan examples, *abaawá* cannot be realised as null (92a), and *ateré* cannot be overt in a structurally parallel context (92b) (see Osam 1994:285).

43

(92)   a.   [Abaawá   nó]₁ déέ, Kofi hu-u   *(no₁).
                servant.girl DEF TOP K   see-PST 3SG
                'As for the servant girl, Kofi saw her.'

        b.   [Ateré   nó']₁ déέ, Kofi hu-u   (*no₁).
                servant.girl DEF TOP K   see-PST 3SG
                'As for the spoon, Kofi saw it.'

It is apparent from the illustrations in (92) that the most important factor for the ability to drop a pronoun may not be noun class affiliation but rather animacy. In this regard, it is important to point out one assumption by Larson (2005) that is compatible with the analysis pursued in this work, i.e., animacy is equal to person in syntax.

Second, Larson (2005)'s account is silent about the distribution of overt and null pronouns with respect to adverbial elements and change of state predicates. (But see Larson 2002). Recall that in Gã, only overt pronouns are permitted before adverbials. If the architecture proposed in (90) and (91) were to be extended to such cases, then we might end up with a paradoxical situation whereby the same predicate, e.g., *na* 'see' would have to be assumed to have a noun class feature in a context without an adverbial; here it can license a null object. But at the same time, one would have to assume that in contexts with an adverbial, the same verb lacks those noun class features; here it cannot drop its pronoun. Even granted these assumptions, we still would not be able to explain why the same verb may occur with the antecedent DP of the pronoun; given that the same pronoun can be both null and overt, we cannot maintain the idea that the presence of a noun class feature on the verb suggests that the formal features on Tr are weak, and therefore, they can only be checked at LF, leading to a phonetically null pronoun. Instead, it is possible that the presence of the adverb bleeds the mechanism that would have otherwise led to the null realisation of a given pronoun. This is the kind of idea that I pursue in §2.5.1 of this work.

2.4 Assumptions

2.4.1 The morpho-syntactic status of pronouns

There are several approaches to the structure and syntactic category of pronouns in the literature. For instance, there are more traditional approaches (see, e.g., Postal 1969; Abney 1987), which essentially treat a pronoun as an intransitive D element. There are also approaches that discriminate between pronouns based on their internal complexity (see, e.g., Cardinaletti 1994; Cardinaletti & Starke 1999; Déchaine & Wiltschko 2002), Neeleman & Szendrői (2007), among others, which argue for the need to recognise pronouns as being internally complex.

However, as may be obvious from earlier representations, in this dissertation, I will treat all

pronouns simply as *phi* , i.e., φ, elements. Therefore, depending on the animacy, person and number properties of the DP to which a particular φ refers, its syntactic node will be realised by a morpheme with the appropriate set of features.[27] One major benefit of this view is that we are able to account for the morphological similarities between 'ordinary' anaphoric pronouns, such as the ones being discussed here, and resumptive pronouns found in several Kwa languages. A typical example is the Akan case discussed in chapter 3.

2.4.2   Linearisation

Given the Principles and Parameters framework, and its most current version, the Minimalist Program (Chomsky 1995 et seq.), grammar (from the generativist perspective) is assumed to be modular, comprising (Narrow) syntax, and its interface with LF and PF. In this dissertation, I will assume that the mapping of syntax to PF (where the strings in the terminal nodes of such configurations are pronounced) is regulated by Richard Kayne's Linear Correspondence Axiom (LCA), as stated in (93).[28]

(93)   *The Linear Correspondence Axiom* (Kayne 1994:33)
         Let X, Y be non-terminals and x, y terminals such that X dominates x and Y dominates y. Then if X asymmetrically c-commands Y, x precedes y.

In terms of structural relations, the description in (93) can be represented as in (94).

(94)
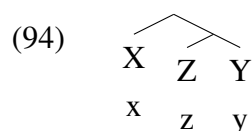
Now, suppose the structure in (94) needs to be linearised, the LCA would generate the linearisation statements (LS) in (95).[29]

(95)   *LS for* (94)

         a.   X>Z → x < z
         b.   X>Y → x < y

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[27]See §3.2.1.2 for a possible way to formally model this. Also, I remain agnostic about the specific formal mechanism that relates a pronoun to its antecedent.

[28]I would like to emphasise the fact that unlike traditional LCA-based approaches, I do not assume that all XPs have a fixed Spec-Head base-structure. Also, I assume that multiple specifier positions are available in a given XP. For instance, I will suppose that DPs in Gã are head-final, and *v*Ps have more than one specifier.

[29]Regarding the linearisation statements above,

         a. $\alpha > \beta$ means α c-commands β
         b. $\alpha < \beta$ means α linearly precedes β

The LCA maps high-to-low in hierarchy to left-to-right in linear strings, no more, no less.[30] Notice that only nodes in asymmetrical syntactic relationship, i.e., X and Z, and X and Y, (and what they dominate) in (94) are captured in the LS in (95). Thus, ideally, linearisation statements such as (96) will not be generated at all, because there exists no asymmetrical c-command relationship between Z and Y in (94). However, *pace* Fox & Pesetsky (2005), I assume that contradictory linearisation statements may be generated, except that problems such as (96) (assuming (96a) and (96b) belong to different phases) are constantly repaired.

(96)   a.   Z>Y → *z < y
        b.   Y>Z → *y < z

Therefore, I will, furthermore,assume that linearisation statements are generated by the LCA for the complement of each phase once the head of the next phase is merged. For instance, the nodes inside a VP will be subjected to linearisation/spellout once *v* is merged. Specifically, I assume that whenever a new phase is built, the LS that is generated is compared with the LS from the previous phase. In cases where they conflict, the LS of the earlier phase is deleted. In other words, only the most recent LS is retained. So, suppose a phase α is built first, and the LS in (97a) is generated by the LCA, followed by the building of a phase β with the LS in (98a),

(97)   *Phase α:*

        a.   A>B
        b.   Implication for spellout: a < b

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[30]One motivation for the LCA is found in the following illustration. Consider (i).

(i)
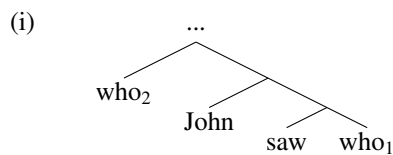
From (i), we observe a situation whereby (in terms of Nunes 2004), the copy of an A-bar moved element, i.e., *who₁* is c-commanded by its sister, i.e., *saw*. At the same time, the *ex situ* copy, i.e., *who₂*, c-commands *saw*. Now, suppose the following LS were generated for (i). Then the problematic LSs will be (iib) and (iid).

(ii)   *LS for* (i)
        a.   who₂ < John
        b.   **who₂ < saw**
        c.   John < saw
        d.   ?**saw < who₁** → saw < ~~who₁~~

Therefore, Nunes (2004) argues that deleting the lower copy, i.e., who₁, as shown in (iid) after the arrow, is one way by which languages remedy such situations.

(98)   *Phase β:*

   a.   B>A

   b.   Implication for spelllout: b ≺ a

then, given (97b) and (98b), which follow from the statements in (97a) and (98a) respectively, the strings **a** and **b** cannot be pronounced. I propose that this situation is corrected because when the LS in β is generated, it is immediately compared with the LS of α. Here, any statement in α that is contrary to a statement in β is deleted, as in (99a). Therefore, the most recent LS, i.e., β, ultimately decides how **a** and **b** are pronounced (99b).

(99)   *α versus β*

   a.   ~~A>B~~, B>A,

   b.   Implication for PF: **b** ≺ **a**

I will argue that a relationship similar to that of **a** and **b** above is what obtains between the verb and its overt pronominal object in Gã. As it turns out, there are instances where both φ>V and V>φ are generated as linearisation statements. I assume that this situation is resolved like (99), i.e., φ>V is deleted, because it is not the more recent statement.

Granted the above assumptions, what can a given grammar do in order to make linearisation of terminal nodes in a given structure possible, especially given a situation where an external merge operation yields a symmetrical c-command relationship? For instance, if we take the relationship between Z and Y in (94) above, a number of options are, in principle, available as a remedy. Any of the following operations can create asymmetry between Z and Y.

(100)   (a)   Move   (b)   Merge ∅   (c)   Delete
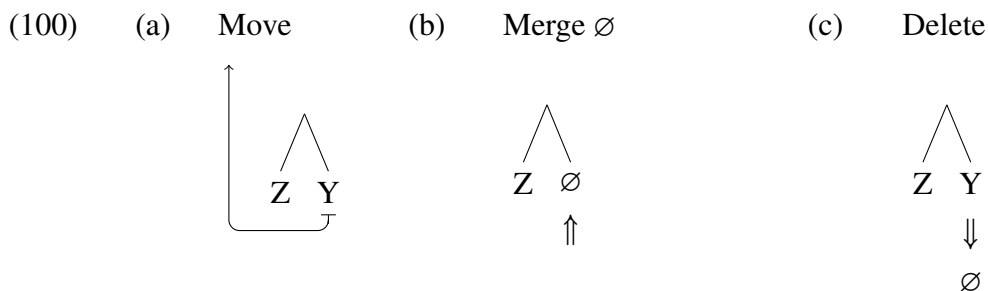
The structure in (100b) suggests that what is merged in place of Y is specified as phonetically empty in the lexicon. This would ultimately bring it at par with (100c), where Y is deleted. Thus, ultimately, for both operations in (100b-c), given that phonetically empty elements are irrelevant for linearisation (see, e.g., Moro 2000), linearisation should be successful. In (100a), a similar (asymmetrical) configuration is created by moving Y. In theory, the same set of operations may be applied to Z in order to achieve a similar result. But, I will argue that only the strategies in (100a&c) are relevant in accounting for the pronoun phenomena under consideration. For instance, in light of the data, there seems to be no genuine *pro*-like

(in terms of Chomsky 1982) empty pronouns in the Kwa lexicon in support of (100b).

2.4.3 Implication for pronoun realisation

Going forward, we can suppose that when φ is merged with a V head, it creates a configuration that is comparable to the symmetrical c-command relationship established between Z and Y in (94), as in (101).[31] The result would be that no linearisation statements can be generated when a structure comprising V and φ are subjected to the LCA. So what happens?

(101)   VP

         V ⌢ φ
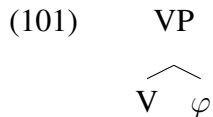
To save the derivation from crashing, we could either move φ higher (102) (see, e.g., Chomsky 1995:335ff), or delete it (103). The outcome will be that (102) yields only overt pronouns while (103) yields only null pronouns. With regard to (103), I would like emphasise that the deletion operation assumed here is not syntactic. I assume that it is an operation that simply makes the phonetic properties of φ uninterpretable at the PF interface. So we can simply say that it is a PF deletion; the structural relations remain.

(102)   Move   (103)   Delete

                 VP   VP

            V φ V φ

                                                              ⇓

                                                              ∅
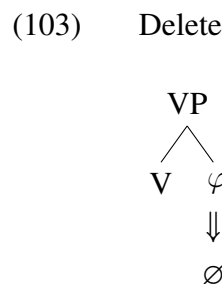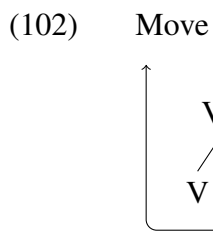
As I indicated earlier, in theory, parallel remedial operations such as (104) and (105), i.e., movement or deletion of the V, should give rise to the same results as (102) and (103).

(104)   Move   (105)   Delete

                 VP   *VP

            V φ V φ

                                                              ⇓

                                                              ∅
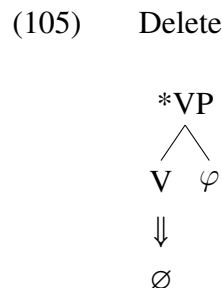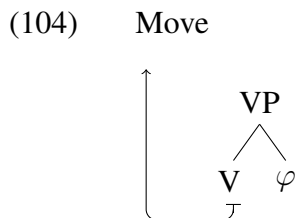
However, I claim that at least (105) is not the right option for breaking the symmetry, given the following facts about Kwa languages like Gã.

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[31] Furthermore, in this specific instance, we can imagine that the head-like nature of pronouns may also lead to headedness problems, possibly along the lines of Chomsky (2013).

First, as I will argue for in §2.5.1.1, tense and aspectual affixes (which are higher in the structure) are hosted by the verb. Therefore deleting the verb would mean leaving such affixes without a host. Since there exist no such constructions in the language, I assume that the verb never gets deleted in its base position. Second, there are cases where the verbs used in the antecedent clause of the pronoun is different from verb that occurs with the pronoun, as in (106) (see §2.7.1). In such cases, deleting the verb will result in recoverability problems.

(106)   Taki **káne** [woló lɛ]$_1$ dáni e-**hé**   *pro*$_1$.
         T   read book   DEF before 3SG-buy
         'Taki read the book before he bought it.'

Third, there are no known grammatical constructions in any of the Kwa languages being discussed here where the verb may be omitted. In general, even in contexts where they have been A-bar moved, they are repeated in their base positions, as in (107) (see, e.g., Aboh & Dyakonova 2009; Hein to appear).

(107)   **Hé**$_1$ ni   Taki *(**hé**$_1$) woló lɛ.
         buy FOC T   buy   book DEF
         'Taki BOUGHT the book.' (As opposed to say, he READ the book.)

Given the above observations, it is unlikely that verbs that are merged with object pronouns would be deleted in the course of the derivation, for the sake of linearisation. Suppose this assumption is correct, i.e., that the deletion strategy in (105) is not available, then that leaves us with the movement strategy in (104). In principle, this should be possible.

Recall that one of the reasons why the verb cannot be deleted is that it hosts tense-aspect affixes in the language. Suppose the verb moves in order to host these affixes. Then we can further assume that the verb movement operation in a language like Gã counter-bleeds the deletion operation that might be necessitated by the need to create structural asymmetry; the deletion operation in (103) occurs before the verb movement operation in (104).

2.4.4   Section summary

We can summarise the main points in this section as follows.

a.   Pronouns are φ elements.
b.   Linearisation is only possible (with the LCA) when the relevant nodes are in an
         asymmetric c-command relationship.
c.   A new linearisation statement that contradicts an earlier one may be generated. If
         this happens, the former is deleted.
d.   Verbs in Gã are not deleted, and if they move, this happens only after the VP has
         been linearised. This means if φ does not move, it is deleted *in situ*. The emphasis

is that this deletion happens at PF, not in syntax.

In the next several sections, I will show how these assumptions derive the differences between overt and null object pronouns in Kwa languages and beyond.

2.5 Deriving the patterns

This section provides the details of the analysis. I will first account for the contexts where the pronoun is always overt. I will argue in §2.5.1 that object pronouns preceding adverbials are spelled out in a specifier position, a derived object position. For pronominal arguments of depictive predicates, I argue in §2.5.2 that they are base-merged in a specifier position, just as object pronominal arguments of change of state predicates, which I discuss in §2.5.3. In §2.5.4, I claim that animate pronouns in clause-final positions are pronounced in a position similar to where inanimate pronouns are overtly realised, i.e., a specfier position. I will present further arguments to illustrate how the differences between animate and inanimate object pronouns in clause-final positions follow from the theoretical assumptions outlined in previous sections. The conclusion will be that inanimate object pronouns in clause-final position are deleted *in situ*.

2.5.1 Pre-adverb pronouns

In this section, I account for the distribution of object pronouns in constructions such as (108), where the pronoun preceding the adverb is obligatorily overt, as was reported in 2.2.5.

(108)   Taki káne *(**lɛ**) **oyá**.
        T   read   3SG quickly
        'Taki read it quickly.'

I argue that although on the surface the pronoun precedes the adverb, the adverb is actually base-generated in a position preceding the VP, inside which the pronoun is a complement of the verb. Therefore, it is only apparent that the pronoun originates in a position preceding the adverb. I present independent empirical evidence to argue that the surface position of the pronoun is a derived one; it moves to a position preceding the adverb in the course of the derivation. Since the relevant structural relations to be discussed here are tied to the syntax of the VP, I begin by considering the structure of the VP in Gã.

2.5.1.1   Structure of the VP

The following claims are made about Gã here. First, except when there is an auxiliary verb in the structure, verbs move to the (T)ense head in the structure. Second, adverbs are base-

merged in the specifier of a functional head, to the left of the VP.

The Kwa languages being investigated here are V(erb) O(bject) languages, generally. For instance, in Gã adjunct elements such as adverbs are typically not permitted to interfere with the local relationship between the verb and its object, as in (109).

(109)   Taki hé (*oyá) adéká lɛ́ (oyá).
         T   buy quickly box   DEF quickly
         'Taki bought the box quickly.'

If the standard piece of empirical evidence in support of the generally-held view that French has 'V-to-T' movement (110a), but English does not (110b), is anything to go by, then (109) may suggest that Gã is like English, i.e., the language might not have 'V-to-T' movement.

(110)   *V-to-T movement in French vs English*

         a.   Jean embrasse (souvent) Marie.
               J   kisses   often   M
               'Jean often kisses Marie.'

         b.   John kisses (*often) Mary.

Note that the assumption in (110a) is that the verb is base-merged in a position after the adverb *souvent*, where it is the head that selects the object *Marie*. However, the verb moves across the adverb to T, hence the surface word order: verb-Adverb-Object. In what follows, I present evidence to suggest that there might be V-to-T movement in Gã as well. First, consider (111), where there are no auxiliaries. Note that the tense and negation affixes are marked on the verb, i.e., with *baá-* (111a) and *-ŋ* (111b).

(111)   a.   Taki **baá-**hé adéká lɛ́.
               T   FUT-buy box   DEF
               'Taki will buy the box.'

         b.   Taki hé-**ŋ**   adéká lɛ́.
               T   buy-NEG.FUT box   DEF
               'Taki won't buy the box.'

Now, compare (111) with the marking of similar verbal inflections when there is an 'auxiliary'-like element *nyɛ*, as in (112). Here, we realise that unlike (111), all such information is marked on the auxiliary.[32]

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[32]Note that the subject marking on the main verb is a common property of multi-verb constructions in such languages. For instance, in Gã the subject is marked on the non-initial verb(s) in some serial verb constructions, as in (i). See Kropp Dakubu (2004); Dakubu et al. (2007); Kropp Dakubu (2008) for further illustrations.

(i)   Akwele₁ hó-ɔ   níyeníí e₁-há-a   amɛ.
       A   cook-HAB food   3SG-give-HAB 3PL
       'Akwele cooks for them.'   (Kropp Dakubu 2004:16)

(112) a. Taki **baá-**nyɛ́ é-hé   adéká lɛ́.
           T   FUT-can 3SG-buy box   DEF
           'Taki will be able to buy the box.'

       b. Taki nyɛ́-**ŋ́**   é-hé   adéká lɛ́.
           T   can-NEG.FUT 3SG-buy box   DEF
           'Taki won't be able to buy the box.'

Suppose the affixal nature of tense and negation markers in the language requires them to be hosted by a morphologically independent segment (e.g., in terms of Pollock 1989), then we can assume that in those Gã constructions where there are no auxiliary verbs, as in (111), the verbs move to host the tense and negation affixes. We can schematise the context without auxiliary, as in (113), and the context with auxiliary verb, as in (114).

(113) *V-to-T movement*
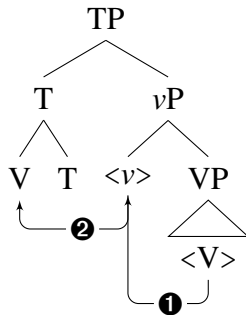
(114) *V-to-T movement blocked*
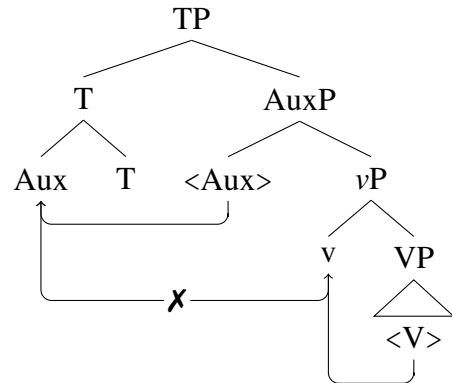
In (113), the verb, e.g., *hé* 'buy' in (111), moves from its base position as the head of the VP, via *v* to head-adjoin to the *tense* head *T*.[33] In (114), I illustrate how V movement may be blocked when there is a closer free-standing head that is capable of hosting the tense affix at T. Here, the host is the *auxiliary* head *Aux*. Thus, in a context like (114), where there is an auxiliary element, the movement of V stops at *v*; there is no further *v*-to-T movement.[34] Granted the evidence above, I will assume throughout this dissertation that in all Gã con-

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[33] I do not intend to discuss the ordering of affixes and the free forms that host them in such constructions.

[34] For Akan, Kandybowicz (2015:249) points to facts such as (i) to suggest that there may be V-to-T movement in the language. He argues that when T is phonetically null, the verb moves to T, as in (ia). But in the presence of a structurally closer head, e.g., Aspect, as in (ib), the V-to-T movement is blocked. According to him, a reflex of the position of the verb is seen in whether it has an extra mora, as in (ia) or without it (ib).

(i)   *Akan, Twi*

       a. Kofi sa**a**   yɛ. (*Kofi sa yɛ)
           K   dance.PST *yɛ*
           'Kofi danced.'
       b. Kofi **re-**sa.   (*Kof re-saa)
           K   PROG-dance
           'Kofi is dancing.'

structions, the verb moves, as in (113) or (114).[35] Specifically, I will assume that the **V movement takes place only after the complement of *v* has undergone cyclic spellout**. For this reason, verb movement will remain inconsequential for the mechanisms that determine whether object pronouns are overtly realised or not, as was discussed in §2.4.3. That is, at the point where linearisation of terminal nodes as determined by the LCA takes place, V would be in its base-merged position, i.e., as the head of the VP.[36]

Let us now turn our attention to other elements that affect interactions within the VP; let us consider the position of VP-oriented adverbs vis-à-vis object arguments. The core data are presented in (115).

(115)   a.   Kwei káne woló lɛ́ **jogbaŋŋ**.
               K   read book DEF thoroughly

          b.   *Kwei káne **jogbaŋŋ** woló lɛ́.
               K   read thoroughly book DEF

          c.   *Kwei **jogbaŋŋ** káne woló lɛ́.
               K   thoroughly read book DEF

          d.   ***Jogbaŋŋ** Kwei káne woló lɛ́.
               thoroughly K   read book DEF
               'Kwei read the book thoroughly.'

The main difference between the ungrammatical examples (115b-d) and (115a) is that in the latter, the adverb *jogbaŋŋ* 'thoroughly' occurs on the right edge of the clause. To demonstrate that we are not dealing with an idiosyncratic property of the adverb in (115), another instance of such adverbs is given in (116), with the adverb *oyá* 'quickly'.

(116)   a.   Kwei kane woló lɛ́ **oyá**.
               K   read book DEF quickly

          b.   *Kwei káne **oyá** woló lɛ́.
               K   read quickly book DEF

          c.   *Kwei **oyá** káne woló lɛ́.
               K   quickly read book DEF

          d.   ***Oyá** Kwei káne woló lɛ́.
               quickly K   read book DEF
               'Kwei read the book quickly.'

Typically, all adverbs that occur in the position where *jogbaŋŋ* and *oyá* do in (115) and (116), including adverbs of manner, place, and time (see §2.2.5) interact in a similar way with other elements within the VP. This suggests that VP-oriented adverbs (in the sense of Jackendoff

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[35]See §2.4.2 for another piece of empirical evidence in support of post-syntactic verb movement.

[36]This view is compatible with strictly PF approaches to head movement (see, among others, Chomsky 1995; Brody 2000; Merchant 2001; Hale & Keyser 2002; Bury 2003; Harley 2004; Zwart 2016; Hein to appear).

1972) are strictly clause-final. However, given that locative phrases (117a), and VP-oriented particles (118) must occur after an adverb in a clause-final position, it must be the case, at least on a descriptive level, that the actual surface requirement on the adverb is for it to be at the immediately post-object D(P) position.

(117) a. Kwei [$_{VP}$ káne woló lɛ́ **jogbaŋŋ** [$_{PP}$ yɛ tsú lɛ́ mli.]]
            K   read book DEF thoroughly   be.at room DEF in(side)

       b. ??Kwei [$_{VP}$ káne woló lɛ́ [$_{PP}$ yɛ tsu lɛ mli] **jogbaŋŋ**.]]
            K   read book DEF   be.at room DEF in(side) thoroughly
            'Kwei read the book thoroughly in the room.'

(118) Kwei káne woló lɛ́ (**jogbaŋŋ**) **tsɔ́** (***jogbaŋŋ**).
       K   read book DEF thoroughly PRT thoroughly
       'Kwei read the book too thoroughly.'

Insights from data like (117a) and (118), therefore, raise an even more fundamental question, i.e., where is the adverb base-generated? I address this issue in the next section.

2.5.1.2 Base position of adverbs

In this section, I provide arguments to demonstrate that low adverbs in Gã are base-merged to the left of the base-merged position of the direct object. This would imply that when we see the object preceding the adverb on the surface, the object must have undergone movement. Recall that the surface position of the adverb seems to interact with how the object pronoun is realised.

Regarding the base position of adverbs, I adopt a more restrictive approach by assuming that adverbs are base-merged in the specifier of a functional head (see, e.g., Jackendoff 1981; Alexiadou 1994; Cinque 1999; Heck 2016). This approach offers two theoretical possibilities: it could be merged on the left (119), or on the right (120).

(119)   *Left-specifier adverb*

                FP
               / \
            Adv   F′
                  / \
                 F   VP
                     / \
                    V   DP
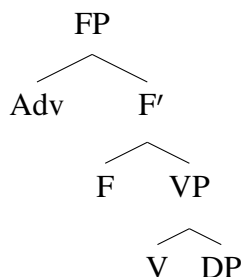
(120)   *Right-specifier adverb*

                FP
               / \
             F′   Adv
            / \
          VP   F
         / \
        V   DP
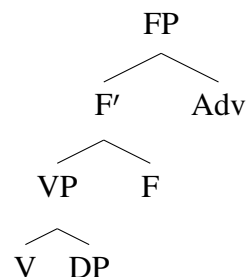
I submit that there are at least two reasons to choose (119) over (120). First, from a conceptual point of view, specifiers are assumed to be exclusively base-generated on the left (see, e.g., Kayne 1994). The configuration in (119) thus conforms to standardly held views about

phrase structure. Second, (119) is also empirically motivated; it supports the strict distribution and scope properties of adverbs crosslinguistically. Cinque (1999) shows that in several languages, whenever there is adverbs stacking, a strict order is adhered to. For instance, in Italian, only the ordering of the adverbs in (121a) is permitted.

(121)   *Ordering of adverbs in Italian* (adapted from Cinque 1999:14).

    a.   Gianni non vince le sue partite già$_1$ > più$_2$ > sempre$_3$ > **bene**$_4$.

    b.   *Gianni non vince le sue partite già$_1$ sempre$_3$ più$_2$ **bene**$_4$.

    c.   *Gianni non vince le sue partite già$_1$ bene$_4$ più$_2$ **sempre**$_3$.

    d.   *Gianni non vince le sue partite sempre$_3$ già$_1$ più$_2$ **bene**$_4$.

    e.   *Gianni non vince le sue partite già$_1$ più$_2$ bene$_4$ **sempre**$_3$.

        'Gianni does not win his matches already any longer always well.'

Granted the hierarchy of adverbs proposed by Cinque, an adaptation of which is given in (122), I present evidence from Gã to argue that a similar hierarchy obtains in the language, as in (123). Here, our focus is on the post-verbal adverbs indexed as 2, 3, and 4.

(122)   *Universal hierarchy of adverbs* (Adapted from Cinque 1999:106)

Mood [evidential]$_1$ >Voice$_2$ >Asp [repetitive]$_3$ >Asp [frequentative]$_4$

(123)   a.   **Asomóáŋ$_1$** Momo káne woló lɛ́   **jogbaŋŋ$_2$** **ékóŋ́ŋ́**$_3$ **shi-i**   **étɛ́**$_4$.

        apparently M   read book DEF thoroughly again   time-PL three

    b.   ?**Asomóáŋ** Momo káne woló lɛ́   **jogbaŋŋ$_2$** **shi-i**   **étɛ́**$_4$ **ékóŋ́ŋ́**$_3$.

        apparently M   read book DEF thoroughly time-PL three again

    c.   ***Asomóáŋ** Momo káne woló lɛ́   **ékóŋ́ŋ́**$_3$ **jogbaŋŋ$_2$** **shi-i**   **étɛ́**$_4$.

        apparently M   read book DEF again   thoroughly time-PL three

    d.   ***Asomóáŋ** Momo káne woló lɛ́   **ékóŋ́ŋ́**$_3$ **shi-i**   **étɛ́**$_4$ **jogbaŋŋ$_2$**.

        apparently M   read book DEF again   time-PL three thoroughly

    e.   ***Asomóáŋ** Momo káne woló lɛ́   **shi-i**   **étɛ́**$_4$ **jogbaŋŋ$_2$** **ékóŋ́ŋ́**$_3$.

        apparently M   read book DEF time-PL three thoroughly again

    f.   ***Asomóáŋ** Momo káne woló lɛ́   **shi-i**   **étɛ́**$_4$ **ékóŋ́ŋ́**$_3$ **jogbaŋŋ$_2$** .

        apparently M   read book DEF time-PL three again   thoroughly

        'Apparently, Momo read the book well again three times.'

Following Cinque (1999), the strict ordering that we observe between the three low adverbs in (123a) presupposes the structure in (119). Particularly, it suggests the following hierarchy:

(124)   Adv$_2$ asymmetrically c-commands Adv$_3$, which asymmetrically c-commands Adv$_4$

If adverbs are base-merged in a specifier, then it must be the case that the adverbs together c-command the VP in (123). For instance, if we translate (123a) into structure, we get (125)

for the leftward specifier in (119), and (126) for the rightward specifier structure in (120).

(125) *Desirable VP-adv structure*

```
                FP
          ┌──────┴──────┐
        Adv₂            F′
      jogbaŋŋ      ┌─────┴─────┐
                 Adv₃          F′
                ékóŋ́ŋ́    ┌──────┴──────┐
                        Adv₄            F′
                       shii étɛ́     ┌────┴────┐
                                    F        VP
                                          ┌───┴───┐
                                          V      DP
```

(126) *Undesirable VP-adv structure*

```
                   *FP
           ┌────────┴────────┐
          F′                 Adv₄
    ┌──────┴──────┐        shii étɛ́
   F′            Adv₃
 ┌──┴──┐        ékóŋ́ŋ́
F′     Adv₂
│    jogbaŋŋ
│
┌──┴──┐
F     VP
   ┌──┴──┐
   V    DP
```
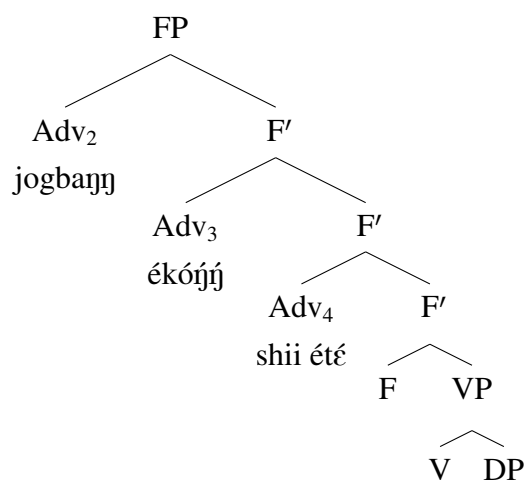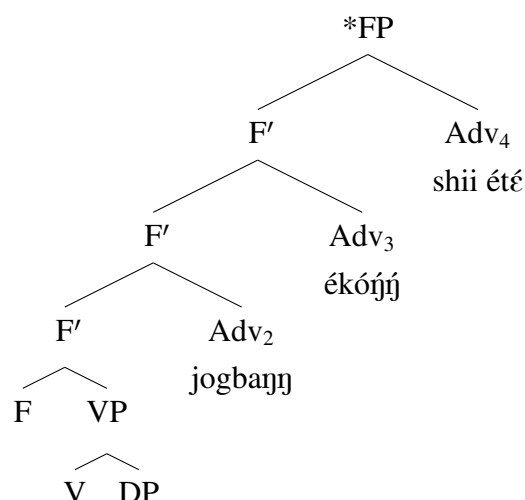
One thing is clear from the structures above, however. That is, (126) makes the wrong prediction about the c-command relations between the adverbs in Gã, as was observed in (123). For instance, it predicts that Adv₄ asymmetrically c-commands Adv₃. But what Cinque (1999)'s hierarchy (adapted for Gã) in (124) presupposes is the opposite, as may be obvious from (126). So, simply put, (125) is compatible with Cinque (1999)'s assumptions but (126) is not. Based on the empirical argument presented above, I conclude that low adverbs in Gã are merged in the specifier of a functional XP that dominates the VP.

2.5.1.3 Object movement and overt pronouns

Now that we have established that adverbs are base-merged in a left specifier position that c-commands the VP, we can assume that instances where low adverbs in Gã appear strictly to the right of the VP involve some kind of displacement operation. Particularly, I claim that the verb and its object argument, which precede low adverbs on the surface must have moved to their surface positions, as in (127).[37]

(127) Taki hé₂ [woló lɛ́]₁ **oyá** [VP t₂ t₁].
 T buy book DEF quickly
 'Taki bought the book quickly.'

However, the question that remains to be answered is: Why does a nominal argument of the verb never occur to the right of an adverb? In other words, we need to motivate why the object moves to a higher specifier position. One possible explanation, I propose, is that the

---

[37]With respect to the surface position of the verb *hé*, we can explain it in terms of verb movement, based on the earlier assumption that Gã has an obligatory post-syntactic verb movement operation. (See §2.5.1.1).

functional head that introduces the adverb in its specifier has a movement-triggering feature, i.e., EPP, as in (128).

(128)

```
              FP
             /  \
          Adv    F′
                /  \
               F    VP
             [EPP]  /  \
                   V    DP
```

(129)

```
                  FP
                /    \
            φ/DP₁     F′
             ↑       /  \
             |     Adv   F'
             |          /  \
             |         F    VP
             |       [EPP]  /  \
             |            <V>   t₁
             └──────────────────┘
```
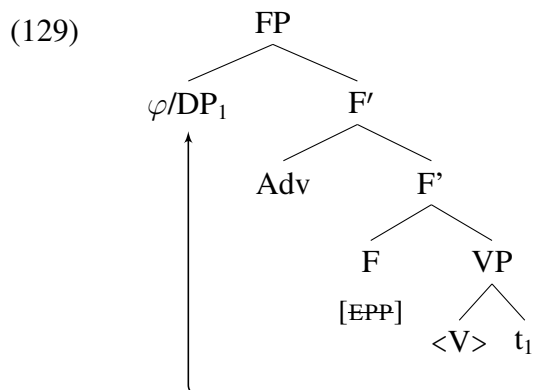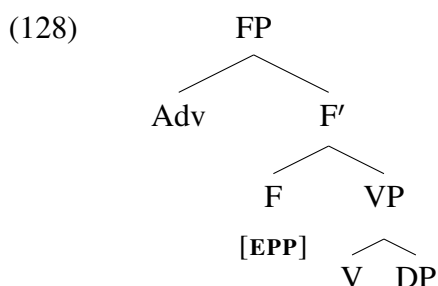
If this assumption is correct, then it is the need to satisfy the EPP feature on F that invariably drives the movement of any D(P) in its c-command domain to an outer specifier of FP (129).[38] In (129), the complement of the verb is moved to a spec, FP in order to check the EPP feature of F. It then follows that when an object pronoun precedes an adverb, it, i.e., the object pronoun, must be in the specifier position of a higher FP. This would be its position when the complement of *v* is submitted for linearisation.

With respect to linearisation, note that the entirety of (129) is within the *v*P phase. I assume that the functional projection above VP in (129) is immediately dominated by the *v*P, as has been independently proposed elsewhere (see, e.g., Collins 2003; Collins & Thráinsson 1996; Lasnik 1995; Koizumi 1995). When *v* is merged, (and after it has satisfied any remaining syntactic requirements), it triggers the spellout of its complement, as in (130). Therefore, FP is subjected to the LCA.

(130)

```
         vP
        / ⌒ ⌒ ⌒
       v   FP
      ⌒   /\
         /__\
          ...
```
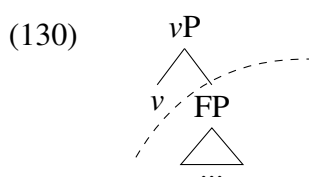
Based on the internal structure of FP (129), the linearisation statements in (131) will be generated for the construction in (127).[39]

---

[38] Furthermore, it is possible that the EPP feature may have grammaticalised in Gã grammar. For instance, suppose low adverbs serve as defective goals (in terms of Chomsky 2000:123) by competing with the nominal object of V, then having the EPP on F forces a movement operation that gets the object much closer to, for instance, the Case assigner, i.e., *v* (see also Richards 2008b; Preminger 2014). The idea that adverbials may compete with nominals with respect to some morpho-syntactic dependency is crosslinguistically supported. See, e.g., discussions about the conjoint-disjoint in some Bantu languages (see Halpert 2016, 2012; Buell 2005), and Alexiadou (1997), for a case in Greek.

[39] I have ignored subject arguments in the linearisation statements outlined here and hereafter.

(131)   *LS for* (127)

	①*v*P phase	②CP phase
a.	φ >Adv	V > φ
b.	~~φ > V~~	V > Adv
c.	~~Adv > V~~	φ > Adv

As the outcome shows, all the terminal nodes in the FP in (129) can be successfully lin-earised, without recourse to deletion. This is because the FP contains no symmetrical c-command relations. For our purposes, we are particularly interested in the statements that concern the object pronoun. Given its position in the structure at the point of linearisation, i.e., spec, FP in (129), it is not deleted. Therefore, I conclude that this accounts for why object pronouns in Gã are always overt when they precede low adverbial elements.

2.5.2   Object pronouns and change of state predicates

We saw in §2.2.3 that pronominal objects of change of state verbs, such as *ku* 'break' in (132), generally cannot be omitted. The interesting observation was that such pronouns are typically inanimate. Also, such data speak against approaches that would rely on prosody to account for the realisation of object pronouns, as, unlike the adverbial and depictive predicate cases, we observe here that no phonetic material typically follows the verb on the surface.

(132)   Taki ku   *(**lɛ**).
          T   break 3SG
          'Taki broke it.'

We concluded in §2.2.3 that whatever causes the overt realisation of such object pronouns in contexts like (132) may be linked to the idiosyncratic properties of the verb. In this section, I follow independent proposals in the literature to support that conclusion.

I will argue that the obligatorily overtness of the pronoun in (132) results from a config-uration like (133), where the internal argument, i.e., the Theme, and the predicate, are in an asymmetric c-command relationship. Thus, the object pronoun that gets merged in the Theme position in (133) is never susceptible to deletion. The details of the analysis will be presented as follows.

(133)   ...

          Theme
                      Predicate

I will first highlight the idea in the literature that change of state predicates are special; they are lexico-semantically complex, and therefore they derive from equally complex syntactic

structures. I will then proceed to suggest how such analyses translate into the syntax of change of state constructions in Gã, and how that bears on the realisation of object pronouns.

2.5.2.1 The complex nature of change of state predicates

There seems to be consensus in the literature that causative alternation verbs form are sub-class of change of state verbs (see, e.g., Levin 1993). If this is correct, then it is probably not surprising that a few verbs among the change of state verbs in Gã do not undergo causative alternation, as we saw in example (34) in §2.2.3. But for those verbs that allow the alternation, as Schäfer (2009) notes, various authors have strived to identify the properties that set the transitive and the intransitive variants apart, leading to research questions like (a) which of the two variants is the base, and which of them is derived from the other, and (b) where in the grammar can the differences be accounted for, is it in the lexicon or in the syntax? For the present purposes, I will focus on the second question.

There are authors, e.g., Jackendoff (1976); Dowty (1979); Hale & Keyser (1986, 1987, 1993, 2002); Levin & Rappaport Hovav (1995); Rappaport Hovav & Levin (1999), among others, who analyse the differences between the two variants of causative alternation verbs from a lexicalist perspective. I will refer to this group of researchers as the 'Lexicalists'. Under this approach, such verbs are generally decomposed into predicates with complex event structure. The intransitive variant is assumed to involve a result STATE predicated of a Theme argument, and a BECOME predicate which takes the result STATE as its argument. The transitive variant has a CAUSE predicate, which introduces the external argument, i.e., the Agent, and takes the BECOME predicate as its argument. The two semantic structures are represented in (134a) and (134b) respectively, where *y* is the Theme and *x* is the Agent.

(134)   a.   [BECOME [y <STATE>]] (Intransitive)

        b.   [x CAUSE [BECOME [y <STATE>]]] (Transitive)

The structures in (134) translate as (135) for the predicate *break*.

(135)   a.   intransitive: [BECOME [y <broken>]]

        b.   transitive: [x CAUSE [BECOME [y <broken>]]]

Unlike the lexicalist approach, however, there are rival approaches, e.g., Embick (2004a,b); Alexiadou et al. (2006); Pylkkänen (2008), among others, which implement the proposal in (134) from a strictly syntax-centric perspective . In what follows, I discuss one such analysis proposed by Embick (2004a), based on which I will account for the occurrence of overt-only object pronouns in transitive change of state constructions in Gã. First, consider (136).

(136)   a.   The metal flatt**en**ed.

      b.   The smith flatt**en**ed the metal.   (Embick 2004b:365)

Embick (2004a) argues that the argument structure of deadjectival predicates like *flattened*, as used in (136a-b), can be represented as (137) and (138).

(137)   *intransitive* (adapted from Embick 2004b:365)

```
                    vP
                   /  \
                  DP    v′
               The metal  / \
                    v_BECOME  √FLAT
                      -en
```

(138)   *transitive* (adapted from Embick 2004b:366)

```
                    vP
                   /  \
                  DP    v′
              The smith  / \
                   v_AGENT   vP
                            /  \
                          DP    v′
                       the metal / \
                           v_BECOME  √FLAT
                             -en
```
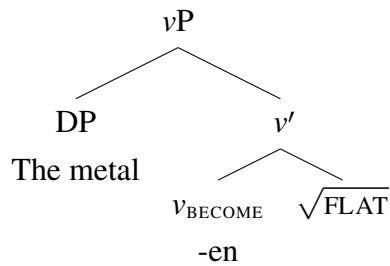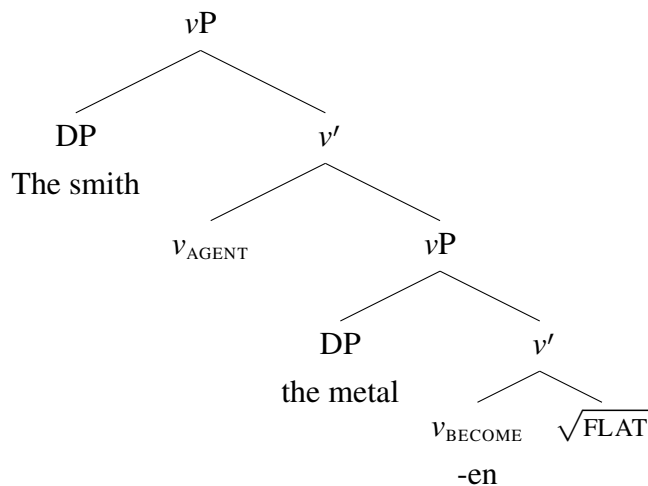
The representations in (137) and (138) are to be understood as follows. In both structures, a category-free root, i.e., $\sqrt{\text{FLAT}}$, merges with a verbalising head, i.e., *-en*, to derive a result state. The resultant structure is then merged with the Theme argument, i.e., *the metal*. The main difference between the two representations is that the intransitive variant lacks an Agent-introducing head, i.e., v_{AGENT}. So, the causer of the event that results in the result state in (137) is only implied; it is not structurally present.

As I indicated earlier, Embick (2004a)'s analysis is insightful for the Gã cases under consideration. Particularly, we can relate the lexical semantics of the de-adjectival predicates that Embick discusses to the Gã change of state verbs cases. For instance, both *flatten* and *break* involve some kind of change of state. Therefore, I will assume similar structures as Embick's for the Gã change of state verbs.

2.5.2.2 Syntactic complexity and object pronoun realisation

As it turns out, predicates that connote change of state in Gã also have a syntactic reflex in terms of the overtness of their object pronouns. This can easily be modeled by extending Embick (2004a)'s proposal to the constructions in which such predicates and their object pronominal arguments occur. In this respect, I claim that the complex semantic structure of change of state constructions in Gã derives directly from a complex syntactic structure. I propose that the verbalising head, i.e., the equivalent of *-en*, the realisation of BECOME in (138), has a null exponent in Gã. (This will be represented as $\varnothing$). Thus, the language makes no morphological distinction between the stative and the result state forms of change of state predicates. For instance, *ku* in (139) connotes both a state and a change of state.

(139)   **Sɛí lɛ́** é-**ku**.
        chair DEF PERF-break
        'The chair is broken.'

We can represent (139) as (140). The Theme argument is merged as the specifier of a VP with a complex V head comprising a category-fee root, i.e., *ku*, and a categorising *v* head. Here, we can already observe that the complex nature of the structure suggests that when the internal argument is a pronoun, it will occupy the specifier of VP.

(140)   VP
          /   \
        DP   V
       sɛí lɛ́   / \
          v_{BECOME} $\sqrt{ku}$
              $\varnothing$

If we merge an Agent-introducing CAUSE head with (140), we get a structure like (142) for the transitive variant of (139) in (141).

(141)   Taki é-**ku**   sɛí lɛ́.
        Taki PERF-break chair DEF
        'Taki broke the chair.'

61

(142)

```
                    vP
              ┌─────┴─────┐
             DP           v′
            Taki      ┌───┴────┐
                   v_CAUSE     VP
                     ∅      ┌───┴───┐
                          DP        V
                        sɛí lɛ́  ┌───┴───┐
                             v_BECOME  √ku
                                ∅
```
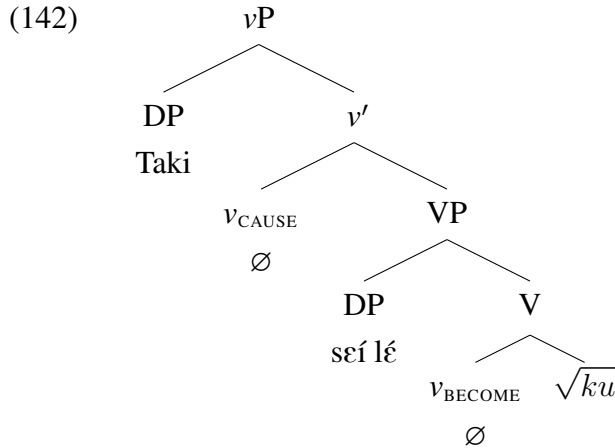
We notice that the word order in (142) is SOV although what is actually pronounced is SVO (141). But, we can assume that the regular verb movement takes place. In fact, given the linearisation algorithm assumed here, such constructions seem to provide another empirical basis to think of verb movement in Gã as an operation that takes place after the VP complement of v_{CAUSE}, in this instance, has been linearised. For example, suppose we replace *sɛí lɛ́* in the specifier of VP with an object pronoun, an interesting situation emerges. On the one hand, if head movement of $\sqrt{ku}$ to BECOME in (142) were to happen in the syntax, i.e., before the VP is subjected to the LCA, V and φ cannot be linearised with respect to each other, because they will mutually c-command each other (143). Note that here, we cannot postulate any deletion operations, because, empirically, neither φ nor V can be null.

(143)

```
           *VP
         ┌──┴──┐
        φ      V
          v_BECOME+√ku
```
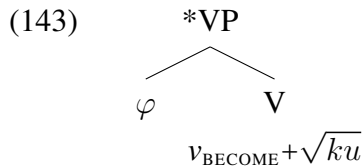
On the other hand, suppose the (undesirable) syntactic movement in (143) is followed by a movement of the complex V to the v_{CAUSE} phase head, we expect that at the point of linearising the terminal nodes in the VP, only the Theme argument in spec, VP would be available. Although this correctly predicts that such pronominal arguments will always be overt, we would have to stipulate this kind of syntactic head movement operation for constructions involving change of state predicates only. This is because in non-change of state constructions, inanimate object pronouns that appear in the same surface position as object pronouns in change of state constructions tend to be deleted. This will be unexpected if the verb always moves in the syntax; presumably, the verb and its pronominal object will always be in an asymmetrical c-command relationship in such configurations also.

If a configuration like (143) in the syntax will lead to ungrammaticality, suggesting that such a derivation would crash, then it suggests that at the point when the LCA generates

the linearisation statement for the VP in (142), both the V and φ are in their base-merged positions. From this, we can conclude that the surface SVO only occurs after the VP has been linearised. The linearisation statements of the VP in (142) and the subsequent linearisation statements, e.g., based on (141), are summarised in (144).

(144)   *LS for* (143) (excluding the subject)

①vP phase	②CP phase
~~φ >BECOME+$\sqrt{ku}$~~	BECOME+$\sqrt{ku}$ > φ

As (144) suggests, after the complement of v, i.e., VP, has been spelled out, there are at least two head movement operations. The first movement proceeds as in (143), followed by a movement of the complex V to the CAUSE head. The final surface word order is represented in (145).

(145)   *Post-syntax*
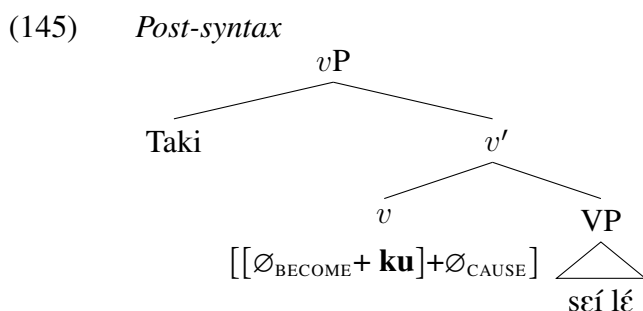
Therefore, the contradictory word order in (144) is as a result of the head movement that takes place across spec, VP, after it has been linearised. Again, what matters to us in the above configuration is that the pronominal Theme argument cannot be deleted, because it is in the specifier position at the point when the VP is linearised. This is why it is always overt. The following extra remarks about the derivation(s) above are in order. Despite there being an independent process that results in the word order in (145), it is significant to also point out that there are data in Kwa that seem to support the word order in structures like (142), i.e., where the lexical verb remains clause-final on the surface, as the following Gã example illustrates.

(146)   Taki **há**   **sɛí**   **lɛ́**   **ku**.
         Taki CAUS chair DEF break
         'The caused the chair to break.'

Note that in a context like (146), speakers of Gã interpret the polysemic *há* as 'cause'.[40]

---

[40]Usually, *há* is interpreted as 'give' (see example (180) in §2.5.4.1). It shares this semantic underspecification with its Akan counterpart *má* (see, e.g., Duah 2013).

Therefore, (146) provides an independent empirical motivation for postulating the projection headed by v_{CAUSE} in change of state predicate constructions in Gã. As we would expect, and as is the case when there is the auxiliary *nyɛ* (see §2.5.1.1), since the v_{CAUSE} is phonetically filled, V movement is blocked, resulting in the object-verb clause-final word order that we find in (146). In terms of the relevance of (146) to the focus of the discussion in this chapter, we see overtly that the Theme argument is indeed in a specifier position.[41]

2.5.3 Arguments of depictives

In §2.2.4, we made the observation that when an object pronoun is the argument of a depictive predicate, it is never realised as null. The representative example is repeated in (147), where it is ungrammatical to omit the pronominal argument of the predicate *éhee* although it is inanimate. The analysis presented in this section will suggest that the object pronoun is overt in such contexts because it is base-merged in a specifier position, as in (148).

(147)   Taki hé   *(**lɛ**) é-hee.
           T   buy 3SG NML-new
           'Taki bought it new.'

(148)   *Base structure - depictive*
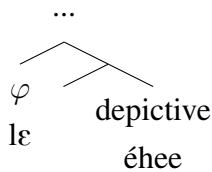
In the configuration in (148), note that the depictive predicate and its pronominal argument already meet the configurational requirement necessary for linearisation, i.e., there is structural asymmetry between *lɛ* and *éhee*. Therefore, the pronoun need not be deleted in order for linearisation of the VP to be made possible.

I will demonstrate that the above claim is supported by independently proposed structures for depictive constructions (as a subset of secondary predication) elsewhere. In the particular case of Gã, there is an empirical basis to adopt the proposal that such predication constructions are projections of a functional head, as in (149), where NP is the argument and XP is

---

[41]Although the idea here is to show the empirical motivation for postulating the v_{CAUSE} head, this specifier position of the Theme argument also guarantees an overt pronoun. However, the morphology seems to be different in such contexts, as in (i). I assume that this might be due to a process as we find with post-positional elements, as discussed in §2.6.3.

(i)   Taki **há**   **é-ku**.
          Taki CAUS 3SG-break
          'The caused it to break.'

the depictive.

(149)   (Bowers 2001:301) (see also Citko 2011:752)

              FP
            ╱   ╲
          NP   F′
                ╱   ╲
               F   XP
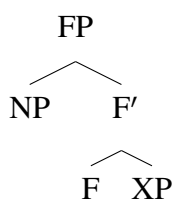
The conclusion, therefore, will be that to a larger extent, irrespective of one's particular assumptions about secondary predication, a structure that is comparable to (148), which rules out the deletion of the object pronoun in Gã, is ultimately arrived at.

2.5.3.1   Depictives and adverbs

It has been suggested that depictives are similar to manner adverbs in some sense (see, e.g., Schultze-Berndt & Himmelmann 2004:60). For instance, it has been observed that both adverbs and depictives involve some kind of simultaneity with regard to the events they modify (see, e.g., Verkerk 2009:117). For example, in (150a), taken from Verkerk (2009:115), the time of the eating event is not different from the time when the meat is raw. Similarly, the manner of walking, i.e., slowly, and the time of walking in (150b) cannot be distinct or separated. Furthermore, both depictives and adverbs attribute a property, except that the former, e.g., *raw* (150a), attribute it to an argument while the latter, e.g., *slowly* (150b), attribute to an event.

(150)   a.   John ate his meat raw. (depictive)
          b.   Jake walked slowly. (manner)

If the above observations are correct, and they translate into structure, then in the case of Gã, it would not be far-fetched to expect that just as (low) manner adverbs are base-generated in a specifier position, as we saw in the previous section, depictive predicates are also base-generated in a similar position. By analogy, therefore, in the context of the proposal we are pursuing in this chapter, this would require that we account for the overt-only realisation of the object pronoun in depictive constructions in terms of movement. For instance, by assuming that the pronoun moves across the depictive to a higher specifier position, just as it happens with object pronouns that follow adverbials in the base structure. This would then be the reason why deletion of the object pronoun will be avoided.

However, unlike low adverbials, we cannot empirically decipher the structural position of depictives in Gã based on c-command relations, as was observed done for adverbs. This is because it is not possible to stack depictive predicates, as the following examples illustrate.

(151)   a. *Taki hé lɛ **é-hee**   **ofóó**.
            T   buy 3SG NML-new cheap
            Intended meaning: 'Taki bought it new, (and it was) cheap.'

        b. *Taki hé lɛ **ofóó é-hee**.
            T   buy 3SG cheap NML-new
            Intended meaning: 'Taki bought it cheap, (and it was) new.'

Furthermore, we will see that a movement operation in order to account for the realisation of object pronouns in such constructions may even not be necessary. It will be demonstrated that the surface position of such pronouns, unlike their counterparts in pre-adverbial positions, is not a derived one.

2.5.3.2   Depictive constructions as small clauses

Proposals about the syntax of depictive constructions are generally subsumed under debates about the syntax (and semantics) of secondary predication as a whole. In this section, I will focus on a subset of the issues discussed in such debates, particularly those that associate depictive constructions with small clauses.[42] The intention here is that, based on the theory of pronoun realisation being pursued here, the structures that are assumed for small clauses readily predict that the sole pronominal argument in such clauses will always be overt.
A depictive construction counts as an instantiation of structures which have been descriptively referred to as small clauses, i.e., clauses that typically lack tense or complementiser (see, e.g., Aarts 1992:21). Here, I follow proposals that construe constructions in which depictive predicates occur as small clauses (see, e.g., Citko 2011 and references cited therein).[43] Among the leading research questions about small clauses, as Citko (2011:749) notes, are: (a) What is its syntactic category? (b) What is its internal structure? By extension, similar issues apply to depictive constructions. In what follows, I present various proposals which in one way or the other address the questions above. The following two representations are commonly assumed for small clauses, see, e.g., Bowers (2001:301) and Citko (2011:752).

(152)   XP   (153)   FP
           ╱ ╲   ╱ ╲
         DP   X′   DP   F′
               ╱╲   ╱╲
               X   F XP

---
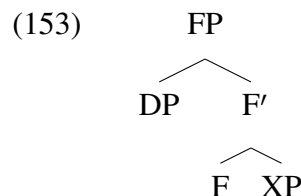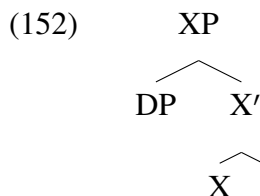
[42] For various arguments and counter-arguments against specific proposals, see among others, Williams (1980); Chomsky (1981); Stowell (1981, 1983); Safir (1983); Rothstein (1983); Roberts (1988); Hoekstra (1988); Aarts (1992); Bowers (1993, 2001); Rothstein (2004); Schultze-Berndt & Himmelmann (2004); Himmelmann & Schultze-Berndt (2005); den Dikken (2006); Pylkkänen (2008); Citko (2011); Asada (2012); Irimia (2012); Bruening (2016).

[43] In any case, for the current purposes, alternative proposals are compatible with our current theory of pronoun realisation, as we will see.

The structure in (152) follows the original proposal by Stowell (1981), and the one in (153) assumes the general architecture for full clauses, where F is the equivalent of, e.g., T in the case of a TP. For a depictive predicate construction, note that the nominal argument, i.e., the N/DP, and the predicate, i.e., X or XP in (152) and (153) respectively, are in an asymmetrical relationship. In fact, the two representations are compatible with the structure that Williams (1980) proposes for the predication relationship between *meat* and *raw* in (154) (see Roberts 1988:704).[44]

(154)   John ate the meat raw.   (Williams 1980:203)

For our purposes, (152) and (153) suggest that pronominal arguments of secondary predicates cannot be null, as the Gã data presented earlier show. But let us consider the components of both structures, and see what they could mean for the details of the analysis here.

In the context of depictives, the adjectival predicate is either merged at X in (152), or XP in (153). This means that the depictive can either be head-like or phrasal. In this regard, like English, e.g., (155), both head-like and phrase-like analyses are possible for the Gã (156).

(155)   I bought the mango [_AP_ (too) fresh].

(156)   Taki hé sɛí lɛ́ [_AP_ é-hee   (tsɔ́)].
         T   buy chair DEF   NML-new   INTSF
         'Taki bought the chair too new.'

The data in (155) and (156) suggest that the XP in (153) could be an AP. We can represent this like (157). Similarly, we can represent a parallel one like (158), for the head-like depictive predicate.

(157)   FP   (158)   AP

         DP   F'   DP   A'

              F   AP   A

---
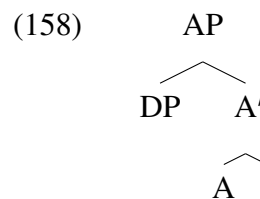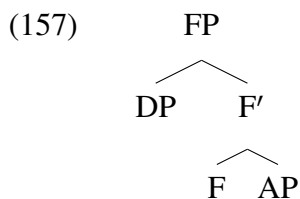
[44]Actually, the idea that the relations should be one of asymmetry can only be deduced from how Williams explains further what he meant: "[...] the NP must c-command and be c-subjacent to the modifying AP" (where 'c-subjacent' is explained as: "B is c-subjacent to A iff A is dominated by at most one branching node which does not dominate B.") (see Williams 1980:204 and fn. 1). Thus, according to him, this relation accounts for the grammaticality difference between (ia), where *the hay* (asymmetrically) c-commands *green* and (ib), where he suggests that *the wagon* does not c-command *full*.

(i)   a.   John loaded [the hay]₁ into the wagon green₁.
        b.   *John loaded [the hay] into [the wagon]₁ full₁.
              (adapted from Williams 1980:204)

The representations in (157) and (158) highlight one of the two main questions that were raised at the beginning of this section, i.e., the categorial status of the small clause. In what follows, I present empirical evidence to the effect that (157) might be the correct structure in the case of Gã. I will subsequently give a conceptual argument against (158).

To begin, I claim that based on crosslinguistic evidence, the structure in (157) is more appropriate for depictive constructions in Gã. Recall from §2.2.4 that depictive heads may have a special morphology. First, consider the following Finnish data.

(159)   *Finnish*

        a.   Sö-i-n   raa'-a-**n** tomaat-in.   (Attributive adjective)
            eat-PST-1SG raw-ACC tomato-ACC
            'I ate a raw tomato.'

        b.   Sö-i-n   tomaat-in   raaka-**na**. (Depictive adjective)
            eat-PST-1SG tomato-ACC raw-ESS
            'I ate the tomato raw.'   (Pylkkänen 2008:23-24)

Note the difference between the attributive and the predicative uses of the adjective; the latter, i.e., the depictive in (159b), bears an 'essive' Case. Similarly, in Gã, we have seen that a depictive adjective typically has a special nominal prefix, e.g., *e-* in (160b), but an attributive adjective lacks same, as exemplified in (160a).

(160)   a.   Taki hé sɛí   (*é-)hee lɛ́. (Attributive adjective)
            T   buy chair NML-new DEF
            'Taki bought the new chair.'

        b.   Taki hé sɛí   lɛ́ *(é-)hee. (Depictive adjective)
            T   buy chair DEF NML-new
            'Taki bought the chair new.'

I follow Pylkkänen's argument that the special morpheme associated with the adjective when it is used predicatively makes sense if we assume that such a morpheme heads a predication phrase. This would further suggest that a small clause that contains a depictive predicate and its argument is actually a projection headed by a functional head. For our purposes, this (morphemic) functional head would head the FP in (157). Thus, on the surface, it would seem that the F in the representation in (157) for Gã is the *é-* morpheme, as represented in (161), for the small clause part of (160b), i.e., *sɛí lɛ́ é-hee* 'the chair new'.

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(161)

```
           FP
          /  \
        DP    F′
       sɛí lɛ́  / \
             F   AP
             é-  hee
```

(162)   I regard Fred as insane.

```
           FP
          /  \
        DP    F′
       Fred   / \
             F  insane
             as
```
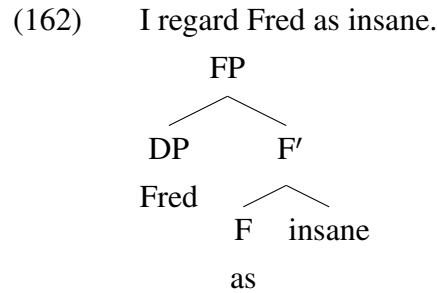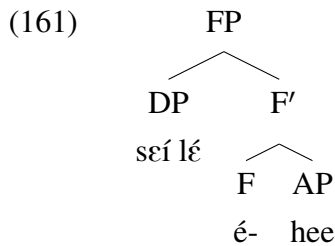
If we suppose this analysis to be correct, then we can construe *e-* as a lexicalisation of F, thereby, making it comparable to *as* in English constructions like (162) (see e.g Bowers 2001:301).[45]

Conversely, it is not so obvious, how the distribution of this special morpheme on depictively-used adjectives will be accounted for if we assume a base structure like (158), which presupposes that the predicative phrase is headed by an adjective. Moreover, there is a conceptual basis to reject (158). In theory, since the adjectival head has no complement, the structure in (158) actually reduces to a configuration like (163). Here, given the assumptions about linearisation in this chapter, there is a symmetrical c-command relationship between the head A and its DP argument. Thus, in the context of object pronoun realisation, (163) leaves us with a configuration like (164), which suggests that such pronouns may be deleted.[46]

(163)

```
      AP
     /  \
   DP    A
```

(164)

```
      AP
     /  \
   φ     A
```
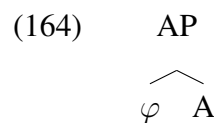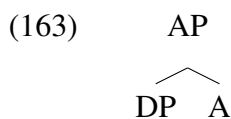
In a bid to extend the analysis to other Kwa languages, we observe in (165) that, unlike Gã, Akan makes no morphological distinction between adjectives which are used descriptively (165a) and those that are used as depictive predicates (165b).[47]

(165)   *Akan*

    a. Kuukua té   nhyérɛn **mónó nó**. (Descriptive)
        K   pluck flower fresh DEF
        'Taki plucks the fresh flower.'

---

[45]The lexicalisation of F is also consistent with standard assumptions that certain functional morphemes, e.g., T, Asp etc., can head their own projections.

[46]Of course the alternative is to assume that the pronoun or the adjective moves higher. But unlike pronouns in the contexts of adverbials, there is no independent motivation for such a movement operation.

[47]Or perhaps, the nominalising prefix *a-* in a depictive like *a-bɔɔdéné* in (i) is an indication of such a functional head in the language.

(i)   *Akan*
       Kuukua tɔ-ɔ   ataadéɛ́ nó **a**-bɔɔ-déné.
       K   buy-PST dress   DEF NML-price-hard
       'Kuukua bought the dress expensive.'

b. Kuukua té   nhyírɛ́n nó   **mónó**. (Predicative)
    K   pluck flower   DEF fresh
    'Taki plucks the flower fresh.'

However, it is conceivable that similar abstract base structures obtain in both languages. So I propose the structure in (166), with a phonetically empty F head for Akan.

(166)   *Structure of small clause in Akan*

```
            FP
           /  \
         DP     F′
      nhyírɛ́n nó   / \
                  F   AP
                  ∅   mónó
```
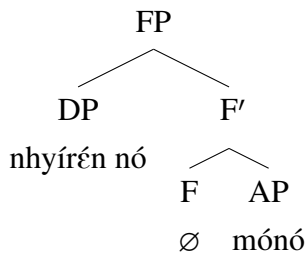
Towards a conclusion, recall that two crucial points have been made in this section. First, there independently exist proposals that say that the depictive and its nominal argument are in a structurally asymmetrical relationship in their base-merged positions. For our purposes, this implies that a pronoun that is merged in the subject position of a depictive predicate will always be overt, and the Gã data confirm this. Second, the small clause in which the secondary predication structure occurs is headed by a functional element. In Gã this is realised by a prefix head on the adjectival depictive. We can therefore take the structure in (168) as a representation of the distribution of the depictive and its pronominal argument in (167).

(167)   Taki hé   [FP **lɛ**   [F' **é-**   hee]].
          T   buy   3SG   NML- new
          'Taki bought it new.'

(168)   *Structure of small clause in Gã*

```
          ...
         /  \
        v    VP
            /  \
           V    FP
           hé  /  \
              D    F′
              lɛ   / \
                  F   A(P)
                  é-  hee
```
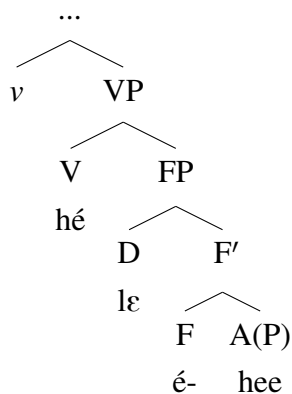
In (168), note that the potentially phrasal nature of the complement of F, as we saw in exam-

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ple (156), where we saw that it can take an adverbial modifier in the case of Gã, would mean that *é* and *hee* are in an asymmetrical c-command relationship, something along the lines of (169).[48]

(169)

```
          AP
         /  \
        A    γP
       hee   / \
            γ   Adv
```
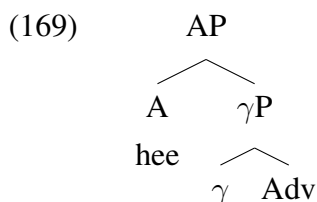
Therefore, based on (169) and (168), we can directly answer the two questions that were raised at the beginning of this section based on the depictive construction facts in Gã as follows. First, a small clause is a projection of some functional head F. FP is merged with the lexical verb of the primary clause, e.g., *hé* 'buy' in (168). Second, in terms of its internal structure, the FP is headed by nominal prefix, which selects an adjective phrase as complement. The only nominal argument of the FP is merged in its specifier.

Finally, based on the internal structure of the VP in (168), when it is submitted as the complement of *v* for linearisation, there will be no need to delete any terminal node. Accordingly, the following linearisation statements will be generated.

(170)   *LS for* (167)

	①*v*P phase	②CP phase
a.	V > φ	V > φ
b.	V > é-	V > é-
c.	V > A	V > A
d.	φ > é-	φ > é-
e.	φ > A	φ > A
f.	é-> A	é-> A

As before, the linearisation statements in (170) do not include the subject argument. But an interesting thing to note is that (170) exemplifies a situation where the statement from the more recent phase, i.e., CP, is compatible with the statement from an earlier phase, i.e., *v*P. Therefore, no statements are deleted. Ideally, we can imagine that there will be the regular verb movement operation, after the complement of *v* has been spelled out. However, since V in (168) would proceed from the left edge of the phasal complement, such a movement would not contradict any existing c-command relation (see, e.g., Fox & Pesetsky 2005).

---

[48]Furthermore, the adjacency between the adjective and the depictive head could be one reason why they seem to form one morphological unit. Alternatively, it is also conceivable that the F affix and its adjective host in (168) are linearised together (see Chomsky 1995). This would also account for their clitisation. I remain agnostic about the details of either analytical option.

2.5.3.3 Alternative proposals

In this section, I briefly discuss a sample of other proposals which are either compatible with the approach adopted here, or may be incompatible for independent reasons.

In the earliest discussions of the phenomenon of small clauses, authors like Williams (1980) and Rothstein (1983) argued that a small clause is an adjunct, i.e., it is not merged as a complement of the primary predicate. A representation of one recent rendition of this approach is given in (171), taken from Asada (2012:59).

(171)   John ate the fish raw.
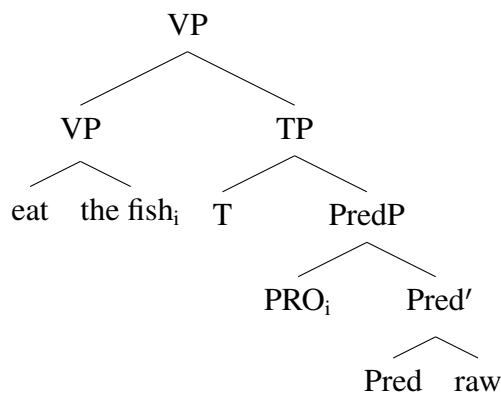
There are three important things to note about (171). First, the small clause is adjoined to the matrix VP, in accordance with its adjunct status. Second, it is a TP, with its own T(emporal) head. This follows arguments by Rothstein (2004) that the two predicates, i.e., primary and secondary, are usually in some kind of temporal dependency. Third, and most important for our purposes, the argument of the depictive is base-merged as the complement of the verb. Clearly, (171) is incompatible with the theory of object pronoun realisation being pursued here; in the complement position of the verb, the representation predicts that such pronouns should be null in languages like Gã. But, as we have seen so far, the facts suggest otherwise. Moving away from authors who assume that small clauses are adjuncts, the main competitors to the small clause approaches to secondary predication are proposals that consider constructions involving secondary predicates as cases of complex predicate formation, as espoused by Cormack & Smith (1999) and Pylkkänen (2008) (see also Irimia 2005). For instance, according to Pylkkänen, the following structure, unlike the small clause proposals, is able to account for the fact that indirect objects cannot be controllers of depictives. She cites (172).

(172)   Sue saw Peter tired. (adapted from Pylkkänen 2008:24)

```
                    voiceP
                   /     \
                 Sue    voice′
                        /    \
                     voice    \
                         Peter  \
                            /   \
                          see   DepP
                                /  \
                             tired  Dep
```
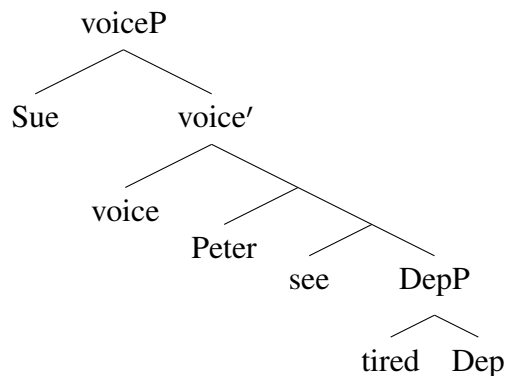
Once again, our focus is on the position of *Peter* and *tired* in the structure. If we replace Peter with an object pronoun in Gã, we predict that it will always be overt. Thus, (172) suggests another instance where an independently proposed structure is compatible with the approach taken here. Without belabouring the point, there are several other proposals about secondary predication constructions that are also compatible with the present theory (see among others, Williams 1980; Bowers 1993; den Dikken 2006; Ramchand 2008).

2.5.4   Clause-final ±animate pronouns

In the preceding sections, we have looked at three, as in (173), out of the four main contexts where the realisation of object pronouns in Gã is conditioned.

(173)   a.   Taki hé [FP **lɛ** oya [F' [VP t$_{hé}$ t$_{lɛ}$]].
             'Taki bought it quickly.'
        b.   Taki hé [FP **lɛ** [F' é-hee]].
             'Taki bought it new.'
        c.   Taki CAUSE ku [VP **lɛ** [BECOME t$_{ku}$]].
             'Taki broke it.'

It has been demonstrated that all object pronouns, be they animate or inanimate, that are overtly realised have one thing in common; they occupy a specifier position in the structure at the point when the VP is linearised in the course of the derivation. However, notice what is common between (173a) and (173b) to the exclusion of (173c); the object pronoun in the case of the latter is clause-final, at least on the surface. The current section focuses on the realisation of the pronominal objects of non-change of state predicates in structural contexts like (173c), i.e., clause-final positions. Recall data such as (174a), where only overt object pronouns are permitted, and (174b), where only null pronouns are permitted.

(174) a. Taki na *(**lɛ**).
           T   see 3SG
           'Taki saw him/her.'

       b. Taki na (*** lɛ**).
           T   see 3SG
           'Taki saw it.'

Here, I will propose an analysis to account for the differences in their distribution, as it correlates with their animacy properties. I will argue that although both pronouns are base-merged in the same position, i.e., as a complement of the verb, animate object pronouns, e.g., (174a), move to a higher specifier position. This is because they bear a person feature, which allows them to be attracted by a *v* with a person plus EPP feature. Inanimate pronouns, e.g., (174b), on the other hand, do not move, because they lack such a feature. Therefore, while animate pronouns are pronounced in an *ex situ* position (175), inanimate pronouns remain *in situ* (176), and are deleted . As we may recall, the deletion of the latter is necessary for linearisation purposes.

(175)   *animate pronoun*   (176)   *inanimate pronoun*
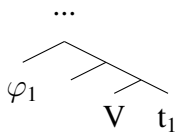
                ...   ...

        φ_1 V φ
              V t_1
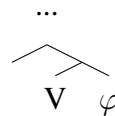
The analysis relies on an idea by Richards (2015), among others, that animacy is the semantic correlate of person in syntax, a situation he argues is responsible for a number of crosslinguistic morphosyntactic reflexes in grammar. The remainder of this section has the following structure. First, I will present Richards's proposal. Next, I will propose how this can be adapted for animate and inanimate object pronouns in Gã. I will then proceed to show how the proposal derives the distribution of overt and null object pronouns in Gã.

2.5.4.1 Animacy as Person

In a recent publication, Richards (2015) writes:[49]

> Our claim is that Person in the syntax *just* is animacy/definiteness at the (semantic) interface. That is, we assume that there is a single, discrete, binary property ([+/−Person]) whose presence vs. absence correlates with high vs. low-prominence interpretations in the semantic component. (Richards 2015:174)

The basis for Richards (2015)'s claim, he argues, is a well-known observation that elements towards opposite ends on different prominence scales, i.e., animacy (177a), definiteness (177b), and person (177c) (see, e.g., Silverstein 1976), tend to pattern together.

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[49]See also Richards (2008a) for an earlier version of this proposal.

(177)   *Prominence scales*

    a.   Animacy scale: human >animate >inanimate

    b.   Definiteness scale: pronoun >proper name >definite >specific >non-specific

    c.   Person scale: 1st/2nd Person >3rd Person

For instance, while local (first/second) persons tend to be animate and high in definiteness (all on the left-most side of the scales in (177)), only third persons can be inanimate and non-specific (on the right side of the scale). Furthermore, such cross-scale implications have been argued to account for certain morphosyntactic phenomena, such as the following.

In Spanish (Romance), the accusative case marker *a* is obligatory for definite animate DPs (178a), but it is optional for their indefinite DP counterparts, as in (178b).

(178)   *Spanish*

    a.   Juan vio **a**/*∅ la chica.   (López 2012:12)
        'Juan saw the girl.'

    b.   Ayer   vi   **a**/∅ un estudiante en la biblioteca. (López 2012:17)
        yesterday saw.1SG a   student   in the library
        'Yesterday I saw a student in the library.'

In KaRimi (Bantu), Woolford (1999) reports that only animate object DPs trigger object agreement on the verb; inanimates do not. This is illustrated in the following examples.

(179)   *KaRimi*

    a.   n-a-**mu**-oon-aa mualimu.
         OAGR
        'I saw the teacher.'

    b.   *n-a-**kI**-on-aa. (Woolford 1999:Ex.17b)
         OAGR
        'I saw the book.'   (Woolford 1999:Ex.16b)

In (179), the marking of object agreement (indicated by the *mu-* affix) is fine when the object is 'the teacher' (179a). However, it is ungrammatical to mark the corresponding form (indicated by the *kI-* affix) when the object is inanimate, i.e., 'the book' (179b).

In Gã, direct objects in double object constructions typically cannot be definite (180a). If definite direct objects are to be used in such contexts, a serial verb construction in which the direct object precedes the indirect on the surface is preferred (180b).[50] (This is parallel to the situation in Akan (see, e.g., Sáàh & Ézè 1997), which Richards refers to.)

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[50]See §2.6.2 for an analysis of this pattern in terms of the object pronoun realisation phenomenon.

(180)   a.   Taki há   Osa **shiká** (??**lɛ́**).
               T   give O money DEF

        b.   Taki kɛ **shiká lɛ́** há Osa.
               T   take money DEF give O
               'Taki gave Osa the money/Take gave the money to Osa.'

In accounting for the formal correlation between the three scales, i.e., (177), Richards appeals to the distributions in (181), which factors out person and yet affirm the similarity between animacy and definiteness. He explains that the distributions suggest that animate and definite nominals must be specified for all levels of person, i.e., first, second and third.

(181)   (Richards 2015:175)

Person-Animacy	ANIM	INANIM
1	✓	✗
2	✓	✗
3	✓	✓

Person-Definiteness	DEF	INDEF
1	✓	✗
2	✓	✗
3	✓	✓

However, inanimate and indefinite nominals may only be third person, a person feature that is generally assumed to be the default. Granted that person specification is not a requirement for all inanimates and indefinites, i.e., we do not need to specify them for first and second person, then their third person property may be an instance of default person marking. This leads to the conclusion that person is a feature of all animate and definite nominals, including third person animates and definites, but not inanimates and indefinites. Therefore, Richards supposes, furthermore, that the idea that third person is the absence of a formal person feature, as espoused by Kayne (2000) and Anagnostopoulou (2005), among others, only applies to inanimate nominals (see also, Kučerová (to appear); Lochbihler et al. (2015)). Consequently, in terms of Chomsky (2001)'s kind of agreement configuration, third person inanimates are 'defective'. This is because their feature profile does not include person; it includes only number (and gender). In a nutshell, this is what Richards's proposal that person is the syntactic correlate of animacy in semantics means.

Two other crucial assumptions make Richards's proposal come in handy for the purposes of the analysis in this chapter. First, the person feature is privative, i.e., a nominal element either has it or does not have it (see also Harley & Ritter 2002). By extension, animate nominals have person features, inanimate nominals do not. Second, only person probes can value person goals (Richards 2015:192). This means that there is a probe head which looks for goals with the syntactic feature person.

As far as I can tell, Richards (2015)'s proposal offers a viable path to formally model the differences in the realisation of overt versus null object pronouns in Kwa languages. Therefore,

I will adopt it for the purposes of the following analysis.

2.5.4.2   Re-interpreting animacy in Kwa

Following Richards (2015), let us suppose that every nominal element (including full DPs and pronouns) is syntactically specified as [PERS] if it is animate (182a). Otherwise, it is not specified as such, i.e., if it is inanimate (182b). Therefore, (182) is to be understood as: animate pronouns have an interpretable person feature, and inanimate pronouns lack a person feature.

(182)   a.   Animate: $\varphi_{[\text{PERS}]}$
        b.   Inanimate: φ

I assume, furthermore, that the possible person feature-bearing nominals in (182) serve as possible goals for a person probe on a *v* head. Therefore, I propose that *v* heads in Kwa languages bear an uninterpretable and unvalued person feature. That *v* heads bear morphosyntactic features is not unusual. For instance, it is generally assumed that *v* heads also bear at least a case feature. Furthermore, it has also been claimed by Chomsky (2000), for instance, that *v* heads possibly bear an EPP feature as well, a property that he argues may be responsible for phenomena like Object Shift in some Scandinavian languages. This assumption is also relevant for our purposes. However, while an EPP feature on *v* may only be postulated if it has a semantic effect, e.g., for the purpose definiteness discrimination, in the original proposal by Chomsky (2000),[51] I assume that the EPP on *v* in Kwa is associated with the person feature. The syntactic feature of *v* (ignoring the Case feature) in the current system therefore looks like (183).

(183)   *syntactic feature of* v

        v: [PERS|EPP:□]

Given (183), once [PERS:□] is valued/checked (via Agree), the corresponding φ (or DP) goal must move to the specifier of *v*. An important assumption here is that it is not possible to circumvent the checking of the person feature to satisfy this EPP. In what follows, I illustrate how these additional assumptions work together with the previous ones to derive the differences between animate and inanimate object pronouns in a clause-final position in Gã.

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[51]Another crosslinguistic evidence in support of Chomsky's claim may be found Woolford (1999)'s argument that animate objects in some Bantu languages tend to move out of the VP.

2.5.4.3 Overt (animate) pronouns

In this section, we will derive the animate object pronoun in (184). As with previous derivations, I will focus on the verb-object relations. The derivation will proceed as follows.

(184)   Taki na *(lɛ).
         'Taki saw him/her.'

First, the VP is created by merging V and φ (185). Here, only the selectional features of V can be checked. This is also the configuration that enables the lexical V to assign Theta role to φ. But this step does not matter for the realisation of the pronoun, because linearisation is only triggered when a phase head is merged and there is the need to spellout its complement.

(185)   Step 1: *building VP*
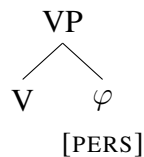
Next, the VP is merged with the phase head *v*. Here, at least two feature-checking operations need to take place before the complement of *v* is subjected to the LCA. These are case on the pronoun, .i.e. φ, and person on *v*. Following standard assumptions, the former is always obligatorily checked, i.e., *v* assigns accusative case to φ. However, case assignment does not alter the structural configuration. Therefore, the V and φ will remain in mutual c-command relationship even after φ has received case. But when the person probe on *v* searches for a matching goal in its c-command domain, it finds a φ that is endowed with an interpretable person feature. Once matching is established, the person probe is checked, as in (186).

(186)   Step 2: *checking person*   (187)   Step 3: *Movement to spec, vP*
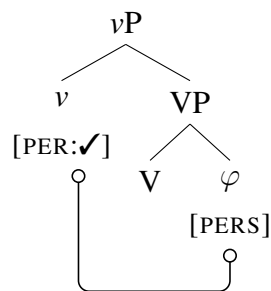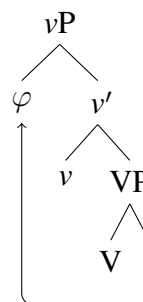
As was suggested earlier, since person on *v* is associated with an EPP feature, the matching operation in (186) triggers the movement of the φ goal to spec, *v*P. This is illustrated in (187). Once all the necessary syntactic dependencies that are relevant for *v* are satisfied, the VP in (187) is submitted for linearisation. Here, when the LCA considers the VP, all it will see is

V. This means that on this occasion, the LCA would practically do nothing. Recall that it is only able to work with terminal nodes in asymmetrical c-command relationships. Here, we can say that the LCA receives V and gives back V. After the VP has been linearised, the derivation proceeds to the next phase. Subsequently, since the V would have to head-move to *v* and then to T, when the complement of C is submitted for linearisation, V will be linearised as preceding φ. The surface relations for both phases are presented in (188). Since there is no contradiction between the two sets of linearisation statements, none needs to be deleted.

(188)   *LS for* (184)

①*v*P phase	②CP phase
V	V > φ

Based on the analysis above, we can conclude that animate pronouns are always overtly realised because they move to a higher specifier position. This is triggered by a kind of agreement relation that is established between its inherent person feature and a person probe on *v*. Given the current theory of pronoun realisation, we predict that such a structural configuration between the verb and the object pronoun should make overt realisation of the latter possible. This is borne out. The analysis also supports the hypothesis that animate pronominal objects of non-change of state verbs, such as the one we have discussed in this section and those of change of state verbs are realised in similar structural positions, i.e., the specifier of some XP.

2.5.4.4   Null (inanimate) pronouns

We know that inanimate object pronouns in a configuration like (189) are never overtly realised. Given the analysis proposed for their animate counterparts, we hypothesise that such pronouns get deleted because they do not move. The following derivational steps illustrate the formal mechanism that may be involved in deriving this surface effect.

(189)   Taki hé   (*lɛ).
          T   buy   3SG
          'Taki bought it.'

The first step is basically the same as what happens with animate pronouns, i.e., the VP is built. Let us take that as granted. The most crucial step is when *v* is merged and it probes for person.[52] Here, unlike the situation with animate pronouns, φ lacks a person feature. So the person probe finds no match. This means that Agree in such contexts fails, as in (190).

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[52]An important thing to note here is that the pronoun is assigned case by *v*, as it is with the case of animate pronouns. Therefore, this situation will serve as a counter-argument against an approach that ties the Kwa object pronoun realisation to case assignment.

(190)   *Agree fails*
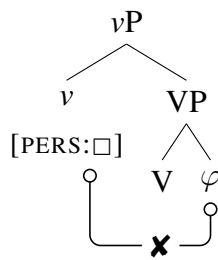
Recall that the precondition for the EPP-like movement of φ to Spec, v is that the person probe on v finds a matching goal. Therefore, the representation in (190) implies that movement cannot take place, as schematised in (191).

(191)   *No movement to spec, v*
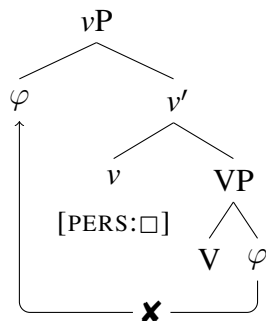
The representation in (191) suggests that φ is left *in situ*. Subsequently, when the VP is submitted for linearisation, V and φ cannot be linearised with respect to each other. This is because they mutually c-command each other, a configuration for which the LCA cannot generate a linearisation statement. The options available for remedying the derivation, as we have noted earlier, are to either delete or move a node. However, there is no independent trigger for movement, since for example, the φ in this case does not have a person feature. Yet, the VP needs to be linearised at all cost. Given this situation, I propose that in order to save the derivation from crashing, the grammar strips φ of its phonologically interpretable features. This is what is interpreted as 'deletion', i.e., something that makes the phonetic correlate of the syntactic node φ inaudible, at spellout. I will use the notation $\varphi_{[\emptyset/\text{PF}]}$ for the pronoun that is to be realised without any phonological features. Therefore, although the LCA is not able to linearise φ with respect to V (= ??V,φ), the entire VP is spelled out as V, as represented (192)①.

(192)   *LS for* (189)

①vP phase	②CP phase
??V,$\varphi_{[\emptyset/\text{PF}]} \Rightarrow$ V	V> $\varphi_{[\emptyset/\text{PF}]} \Rightarrow$V

Therefore, strictly-speaking, the pronoun is not deleted from the structure. Thus, the syntac-

tic relation in (191) remains even after the VP has been spelled out. Furthermore, granted that $\varphi_{[\varnothing/\text{PF}]}$ is still structurally present, then when the verb head-moves higher later, i.e., during the construction of the CP phase, the resultant asymmetrical c-command relation that it will establish with the pronoun will no longer matter in terms of the realisation of the pronoun. That movement operation would occur too late to have prevented the pronoun from being stripped of its interpretable phonetic properties.

The idea that the phonetically null pronoun is present in the structure is also empirically motivated. For instance, it would be one way to explain why null object pronouns are able to bind other anaphoric elements, as we saw in §2.2.6.[53] As for the uninterpretable person feature on *v*, I assume that it is deleted at the PF interface.[54]

2.5.4.5   A note on full DPs

The assumptions relied upon to account for the distribution of overt versus null object pronouns in clause-final positions have implications for full DPs in the language. Particularly, it predicts that animate full DPs will have a person feature, but inanimate full DPs will lack same. Furthermore, since it is this person feature distinction that accounts for their realisation, we need to explain why inanimate full DPs are never deleted.

One possible explanation is that the realisation of a (full) DP does not depend on its animacy property (or person feature status for that matter) *per se*. Recall that all that is needed to prevent the deletion of the phonological features of an X(P) in the proposed system is an asymmetrical c-command relationship with other nodes in the structure. This is what the LCA works with. In the case of overt object pronouns, this asymmetry is achieved whenever such syntactic elements occupy a specifier position. However, how they reach this structural position is of little or no relevance.

In the specific case of a full DP, be it is animate or inanimate, I assume that its spellout depends on its internal syntax, as exemplified in (193).[55]

(193)   *structure of DPs*

```
           DP
          /  \
        nP    D
       /  \
      n    NP
```

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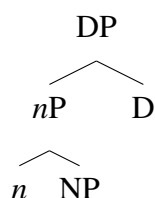
[53]Furthermore, I will argue in §2.6.2 that this must be the only reason why inanimate object pronouns of the functional verb *kɛ* could remain null even though it would have moved higher.

[54]This will be a slight departure from Bošković (2009)'s approach, according to which valuation is required before deletion. An alternative explanation will be that the unchecked person feature receives a default value (in terms of Preminger 2014). In Preminger (2014)'s approach, unchecked probes can receive default value if they do not encounter a goal.

[55]Here, one may argue that we could as well attribute the realisation differences between object pronouns to their internal complexity. However, see §2.7 for a possible counter-argument.

Suppose DPs in Kwa have an internal structure like (193).[56] Then, when it is merged with a verb to create a VP, and subjected to linearisation, there will be the necessary asymmetry to successfully linearise all terminal nodes, without there being the need to resort to the deletion mechanism that has been postulated for *in situ* inanimate object pronouns. This will be independent of its animacy status in the grammar.

2.5.5 Section summary

I have presented the following arguments in the foregoing sections. First, in §2.5.1, following a proposal by Cinque (1999), I presented empirical evidence, i.e., based on adverb stacking, to argue that low adverbs in Gã are actually base-merged in a specifier position preceding the VP, and that when an object nominal element is realised in a position preceding such adverbs, that nominal object must have moved to a higher specifier position. Therefore, we concluded that pronominal objects that precede adverbs on the surface are always overtly realised because they independently move to a higher specifier position in the course of the derivation, making them insusceptible to deletion.

Second, I argued in §2.5.2 that the pronominal Theme argument of the transitive variant of a change of state predicate in Gã is typically overt because it is base-merged in a specifier-like position in a VP headed by a complex predicate. The structure of the VP adopted follows from standard assumptions about the semantic complexity of such predicates. This independently derives the needed asymmetry for object pronouns in such configurations not to be deleted.

Third, I demonstrated in §2.5.3 that the structure assumed for small clauses, including depictive constructions, is sufficient to account for the strictly-overt object pronouns of such constructions in Gã, i.e., the pronominal argument of the depictive predicate is base-merged in a specifier position of the small clause. I further provided empirical evidence to suggest that such clauses in Gã are headed by a functional head, i.e., an affix, and not the adjective.

Finally, I argued in §2.5.4 that although both inanimate and animate object pronouns in clause-final position in Gã are base-merged in a similar position in the structure, only the latter is overtly realised because they have a person feature, (following Richards 2015), which enables them to move to a higher specifier position. Inanimate object pronouns, however, are deleted because they do not move, as they lack a person feature.

From the above analyses, the common property about the configurations in which overt object pronouns occur is that they are in a specifier position, suggesting a consistent asymmetrical relationship with the verb at the point when the VP is linearised. Crucially, this is the only property that the configuration in which an object pronoun is realised as null lacks.

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[56]See, for instance, Aboh (2010a, 2004a) for some discussions with respect to the internal complexity of DPs in Kwa.

2.6 Extending the proposal
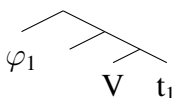
The analysis presented in the previous sections makes one crucial prediction. That is, if a language does not allow null object pronouns, it must have an independent mechanism that ensures that object nominals are realised in a specifier position or at least they avoid complement positions altogether. In the following sections, I point to independent evidence that suggests that this is indeed borne out in several other related and unrelated languages.

2.6.1 Kwa languages that permit no null objects

We indicated in §2.2.7 that not all Kwa languages allow null pronouns in object positions. The example from Ewe ()with the object pronominal clitic/affix *-e*) is repeated in (194).[57]

(194) Vi-nye-wó   mi-ga-ŋlɔ-**e**   bɛ́ o... (*Ewe*)
       child-1SG-PL 2PL-REP-forget-3SG VS NEG
       'My children, do not forget...'

Interestingly, without exception, all the languages listed in §2.2.7, which behave like Ewe in (194) with respect to object pronoun realisation, also exhibit SOV pattern in specific constructions (see, e.g., Aboh 2004b; Ameka & Kropp Dakubu 2008; Dorvlo 2008; Harley 2008), although such languages are assumed to be canonically SVO. I claim that this is not accidental, and that their 'object shift'-like behaviour is likely to be the source of their uniform behaviour with respect to the realisation of object pronouns. Therefore, given the theory of pronoun realisation proposed in this chapter, I claim that for such languages, their pronouns move to a higher specifier position, resulting in a configuration like (195), based on which the prediction is that the pronoun will always be overtly realised.

(195)   ...
          ╱ ╲
       φ₁   ╱ ╲
            V   t₁

As evidence in support of the above claim, let us begin by looking at data from Gungbe and Ewe, which have received much attention in the theoretical linguistics literature (see, e.g., Aboh 2000, 2004b, 2005b) with regard to the structures that we are of concern here.

In a series of publications addressing issues relating to the syntax of the Gbe languages,

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[57] Note that the equivalent of the object pronoun in (194) in a language like Gã is null, as in (i).

(i)   Mí-bí-í,   nyɛ-híɛ́   áká-kpá   (*lɛ) nɔ́!
       1SG.POSS-child-PL 2PL.POSS-face SBJN.NEG-gloss.over 3SG top
       'My children, do not forget...'

especially, Gungbe (which also extends to Fongbe, Gengbe and Ewe), Aboh argues that these lanaguages have an independent 'object shift' operation which moves the nominal complement of the lexical verb to the specifier of a functional head.[58] We see evidence of this when we compare the (a) and the (b) examples in the following constructions.

(196)   *Gungbe*

    a. Kɔ̀jó zán   **àmi lɔ́**.
        Kojo use-PERF oil   Spf$_{[+def]}$
        'Kojo used the specific oil.'

    b. Kɔ̀jó tò   **àmi lɔ́**   zân.
        Kojo IMPERF oil   Spf$_{[+def]}$ use-NR
        'Kojo is using the specific oil.'   (Aboh 2004b:192)

(197)   *Ewe*

    a. Áma dzrá **te**-**a**.
        A   sell yam-DEF
        'Ama sold the yam.'

    b. Áma le   **te**-**a**   dzrá-m.
        A   be.at:PRES yam-DEF sell-PROG
        'Ama is selling sold the yam.'   (Ameka & Kropp Dakubu 2008:218)

The (b) examples are quintessential 'auxiliated object-verb' (OV) structures in Kwa, in terms of Manfredi (1997). These are constructions in which the regular verb-object (VO) order is inverted at the instance of an auxiliary-like element, such as the imperfective marker *tò* in (196b) or the *le* auxiliary in (197b). Such constructions differ from their (a) counterparts which maintain the regular VO pattern of the language. Simplifying somewhat the details, Aboh (2000, 2004b, 2005b) argues that the derivation of the OV structures in the Gbe languages involves object shift. By this syntactic operation, the direct object of the verb moves/raises/shifts to a higher specifier position, causing the object to appear to the left of the verb, as sketched in (198) for the object-verb configuration in (196b).

(198)   *OV for*   FP

      àmi lɔ́$_1$
      'the oil'   zân$_2$ *v*P
              'use'
                  t$_1$ *v*   VP
                    t$_2$
                         t$_2$ t$_1$

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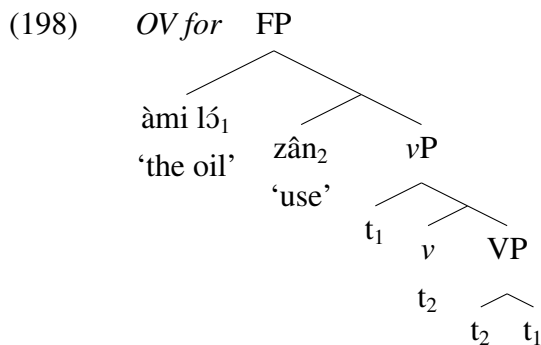
[58]See, for instance, Aboh & Essegbey (2010b:48ff).

In (198), the object *àmi lɔ́* originates in the complement position of the base position of verb *zân*. Inside the VP node in (198), these correspond to t_2, for the verb, and t_1 for the object. For our purposes, the idea that the object argument in the SOV structures above moves to a higher specifier position is strongly indicative of why languages like Gungbe and Ewe do not allow null object pronouns. Indeed, we see in (199) an example from Ewe suggesting that an object pronoun cannot be omitted in a context involving the auxiliary particle *le*.

(199) *Ewe*

Kofi le   *(**e**)-ŋlɔ=bɛ́.
K   PROG   3SG-forget
'Kofi is forgetting it.'   (Elvis Yevudey, p.c.)

Granted that the Ewe case in (199) also involves some kind of object shift, as per Aboh's analysis, for our theory of pronoun realisation, this would not be conclusive if the object shift operation were restricted to just the SOV constructions, given that typically the syntax of such languages shows SVO word order properties, as exemplified in (196a) and (197a). However, the following statement from Aboh suggests that the object shift phenomenon in these languages might be more pervasive. "[...]object shift and verb movement are never optional in Gbe. DP-arguments necessarily move to the relevant licensing position to check their case features or else some strong EPP feature, while the verb moves to check its aspect features." (Aboh 2005b:141).[59] If these claims hold, Aboh's version of the representation in (200) also holds.

(200)   *VO* (196a) (adapted from Aboh 2005b:150)

```
                  FP
              ┌────┴────┐
          zân₂          vP
          'use'      ┌───┴───┐
                 àmi lɔ́₁   ┌──┴──┐
                 'the oil' t₂  ┌─┴─┐
                             t₂   t₁
```
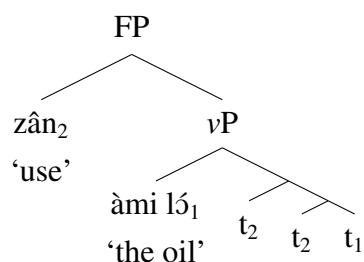
The main difference between (200) and the representation in (198) is that the direct object in the former undergoes an extra movement step higher. Based on the above discussion, we can conclude that (at least) the Gbe languages do not allow null object pronouns because such arguments independently undergo object shift, a configuration which, according to the current theory, predicts that the object pronoun will be in a specifier position and, thus, cannot be deleted.

Interestingly, the correlation between having the SOV property and disallowing null pronouns seems to be stronger than might be obvious. Tawuli, which also does not allow null

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[59] See also (Aboh 2004b:193), and (Aboh 2000:7) for similar claims.

pronouns has the SOV property, as the following data from Harley (2008:306,308) show.

(201)   *Tawuli*

    a.   **É́-ká**   **ávóli**.
        3SG-read book
        'He reads a book.'

    b.   **Ɛ-la-mla**   **ávóli ka-kã̀**.
        3SG-BE-MANNER-with book NOM-reading
        'He is reading a book.'

    c.   **Ɛ-la-mla**   **foe kakã̀**.
        3SG-BE-MANNER-with it NOM-reading
        'He is reading it.'

We observe in (201a) that when the construction is non-imperfective, the object argument, i.e. *ávóli*, follows the verb. However, in the imperfective variant, the object precedes the verb (201b). Furthermore, we observe that when the object DP is replaced by a pronoun, it maintains the same object-verb order (201c).

Given the similarities between the Gbe languages on the one hand, and Tawuli, particularly in terms of allowing SOV structures in parallel constructions, I take it for granted that similar mechanisms are responsible for the realisation of object pronouns in all these Kwa languages. That is, their object pronouns move to a higher specifier position.[60] This means that although such pronouns may be inanimate, the matter of their possible deletion does not arise at all,

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[60]I would like mention one potential exception though, given the inconclusive nature of the evidence presented in Chinebuah (1976), as was mentioned in footnote 21 in §2.2.7. Dangme also exhibits the SOV word order in a manner similar to Ewe, as the following examples from Ameka & Kropp Dakubu (2008:263) show.

(i)   a.   è **bɔ̀lē**   **tso** ɔ he.
           3SG surround tree DEF LOC
           'He went around the tree.'
    b.   è ŋɛ̄   **tso** ɔ he **bɔ̀lē**-ē.
           3SG be.at tree DEF LOC surround-SUFF
           'He is going around the tree.'

If Chinebuah (1976) is right, then (i) predicts that the language would have overt pronouns in SOV structures, as is the case with Tawuli. However, the facts, as (ii) shows, suggest otherwise.

(ii)   a.   Kofi ŋɛ̄   **tso** ɔ ju-e   .
           K   PROG tree DEF steal-SUFF
           'Kofi is stealing the tree.'
    b.   Kofi ŋɛ̄   (***lɛ**) ju-e.
           K   PROG 3SG steal-SUFF
           'Kofi is stealing it.'   (Levi Ofoe, p.c)

Given (ii), the only obvious way to explain Chinebuah (1976)'s data would be to claim that in contexts like (iib), the object movement operation applies too late, such that the phonetic properties of the pronoun is deleted before it moves. As it turns out, it is the same explanation that we would have to give for (iii), where presumably, the pronoun is deleted in its base-position, as is the case in Gã.

accounting for why the object pronoun in overt in (201c). I will argue in §2.6.4 that this conclusion is supported by evidence from languages outside of Kwa, such as Dagaare, and Germanic languages.

2.6.2 Null complements of *kɛ*

In §2.5.4.1, we introduced the Gã data in (202), which suggest that in double object constructions, a definite Theme argument is not permitted in its canonical position, as in (202a). Instead, (202b), in which the definite Theme argument immediately follows the particle *kɛ*, is preferred.

(202) a. Taki há   Osa **shiká**   (??**lɛ́**).
          T   give O   money DEF

       b. Taki kɛ   **shiká lɛ́**   há   Osa.
          T   take money DEF give O
          'Taki gave Osa the money/Taki gave the money to Osa.'

However, if we follow Baker (1988) and Perlmutter & Postal (1984) to assume that since both (202a) and (202b) have literally the same interpretation, they derive from the same base structure, we can suppose, also, that (202b) derives from (202a), as represented in (203).[61]

(203)   Taki kɛ [**shiká lɛ́**]$_1$ há Osa t$_1$.

Another empirical motivation to adopt (203) as the underlying structure is that it is perfectly grammatical for the indefinite and non-specific counterparts of the direct object in (202a) to occur after the indirect object, as illustrated in (204).

(204) a. Taki há   Osa **shiká**.
          T   give O   money
          'Taki gave Osa money.'

       b. Taki há   Osa **shiká kó**.
          T   give O   money INDEF
          'Taki gave Osa some money.'

(iii)   Kofi ju   (*lɛ).
        K   steal 3SG
        'Kofi stole it.'   (Levi Ofoe, p.c)

Note that (iii) would be the desired version of what Chinebuah (1976) relies on, as was reported in §2.2.7.

[61]By Baker (1988), I mean the 'Uniformity of Theta role Assignment Hypothesis'(UTAH), which basically says that when two structures have the same meaning, then they must have similar syntactic representations. The UTAH is similar to Perlmutter & Postal (1984)'s Universal Alignment Hypothesis (UAH).

If we admit the reasons for the representation in (203), then a problem arises, which I would like to address in the remainder of this section. The problem is, while we correctly predict that the pronominal form of *shiká lɛ́* in (202a) should be null, as seen in (205a), where it has presumably not moved, it is not so obvious as to why the pronoun should not be overt in a context like (205b), where it must have moved, based on (203).

(205)   a.   *Taki há   Osa (*lɛ).
            T   give O   3SG

         b.   Taki kɛ   (**lɛ**) há   Osa.
            T   take 3SG   give O
            'Taki gave it to Osa.'

However, I argue that the surface pattern that (205b) represents with respect to the realisation of the object pronoun is opaque; I claim that the object pronoun is linearised in its base position, i.e., inside the VP, before it is subsequently moved higher. Since it is inanimate, and thus, lacks a person feature, it is stripped of its phonetic properties at the point when the complement of *v* needs to be spelled out.

A crucial point that also needs to be taken into account is that a configuration like (205b) is alternatively analysed as a serial verb construction (SVC), where *kɛ* and *há* are the verb series (see, e.g., Adjei 1999; Dakubu et al. 2007). On this view, *kɛ* behaves like a functional verb. For instance, it has been claimed by Aboh (2009:17-18) and Campbell (1996:91ff.) that the equivalent of *kɛ* in Fongbe and Akan respectively, do not assign Theta role. For Gã, consider (206). Here, we notice that although *kɛ* can occur in an SVC-like structure, as in (205b) , it cannot independently occur with the same argument it purports to assign Theta role to in SVC contexts in a non-SVC context.[62]

(206)   *Taki kɛ   **shiká lɛ́**.
         T   take money   DEF

The insight from the above discussion is that in contexts like (202b) and (205b), *kɛ* heads a functional projection that dominates the lexical verb, as in (207) (see Aboh 2009).

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[62] Furthermore, (Campbell 1989:325) points out that such elements do not occur with the inflections that are typically associated with verbs in these languages.

(207) *VP for* (205b)
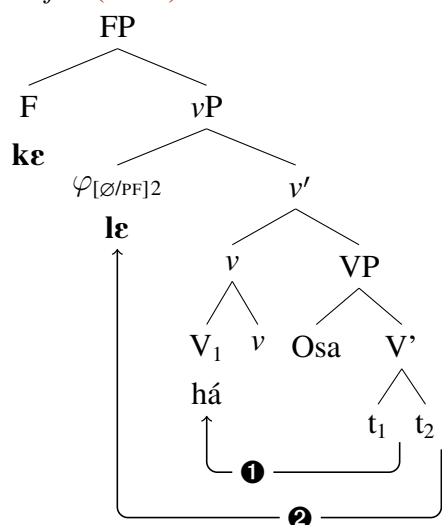
In (207), I assume that both φ and V move only after the VP has been linearised. Therefore, as we saw in the case of inanimate pronouns in clause-final positions in §2.5.4.4, in its *in situ* position, the phonetic features of φ are deleted when the VP is linearised. Subsequently, when the derivation proceeds and it moves to spec, *v*P, it arrives there with the feature that makes it inaudible. This would account for why *lɛ* in (207) is never overtly realised. An empirical support for this analysis may be apparent from the distribution of animate pronouns in contexts like (207), as the examples in (208) show.

(208) a. Taki há   Osa **abifáó** (??**lɛ́**).
           T   give O   baby   DEF

       b. Taki kɛ   *(**lɛ́**) há   Osa.
           T   take 3SG give O
           'Taki gave him/her to Osa.'

We see in (208) that although similar distributional restrictions hold for an animate pronoun in terms of the post-indirect object position, as in (208a), when it moves higher, it is overtly realised. I take this to mean that the person feature of the animate pronoun remains the most crucial thing that helps to discriminate between animate pronouns, which move from their base position, on the one hand, and inanimate pronouns, whose phonetic features are deleted in their base position, on the other hand, in a configuration like (207). The latter is a typical situation where object movement counter-bleeds the deletion or suppression of the phonetic features of the pronoun. Furthermore, this analysis seems to provide a conceptual argument for the claim that the deletion of object pronouns in Gã does not happen in the syntax.

2.6.3 Pro-clitics in post-positional phrases

I hope to demonstrate in this section that the mechanism for deriving overt versus null object pronouns can be extended to the distribution of pronominal complements of post-positions (post-Ps) in Kwa. Specifically, I will suggest that a pronominal complement of a post-P may also either move to a higher position or remain in its base position, depending on its animacy property. Therefore, like complements of verbs, they are either overtly realised *ex situ* or deleted *in situ*. The only difference is that when an overt pronoun is the complement of a post-P, the pronoun is realised as a prefix on the post-P. I will treat this as a cliticisation operation, possibly resulting from post-syntactic incorporation.

2.6.3.1 Structure of post-P phrases

Although it has been argued that some Kwa languages have prepositions,[63] the consensus is that such languages generally have post-Ps. It turns out that this is in consonance with their propensity to be head-final for phrases headed by functional elements, as may be obvious from the structure of the DPs that we have seen so far. Post-Ps may be used as follows.

(209)   *Post-Ps in constructions*

    a.   ɔkŕá nó   dà [àbòfŕá nó **ńkyɛ́ń**]. [*Akan, Twi*] (Osam et al. 2011:111)
        cat DEF lie child DEF side
        'The cat is lying beside the child.'

    b.   Obu   yi   [ɛba amo **lɔ**].
        building stand   fence DET inside
        'There is a building (standing) in the fence.'

        ([*Nkami*] (Asante & Akanlig-Pare 2015:77))

    c.   ńɔ́tɛ̀   bɔ̀ [mí àwíɛ   **só**].   [*Awutu*] (Frajzyngier 1974:61)
        termites are   my house.DEF POST.P
        'There are termites in my house.'

As the following examples show, Gã mirrors the pattern in (209) with post-Ps like *maséi* 'beside', *mli* 'inside', *nɔ* 'on', *híɛ* 'front', *sɛɛ* 'behind', *kóŋ́* 'side', *shishi* 'under' etc., occuring after their nominal complements.

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[63]For example, *sɔ́n* and *wɔ* in (i) have beeh argued to be prepositions. I will not discuss such data any further.

(i)   *Prepositions in Kwa*

    a.   Asíbá tɔ́n **sɔ́n** xɔ   mɛ̀. [*Gungbe*] (Aboh 2005c:629)
        Asiba come outP$_1$ room P$_2$
        'Asiba came out of the room.'

    b.   Me-hyia-a   no   **wɔ** Kumasi. [*Akan*] (Osam 1994:237)
        3SG.NOM-meet 3SG.ACC in K
        'I met him/her in Kumasi.'

(210)   a.   gbékέ lέ   **masɛí**
             child   DEF beside
             'beside the child'

        b.   yálé lέ   **mli**
             fence DEF in
             'in the fence'

While there are other interesting theoretical issues to pursue with respect to Post-Ps in Kwa, I will limit the discussion here to how they behave when they occur with pronominal complements. For starts, I follow Abels (see 2003:277) in assuming that a Post-P phrase is a phase (represented as *p*P), which is headed by a little *p* (comparable to *v* in the *v*P phase), as in (211) (see also Aboh 2005c).

(211)   *Basic structure post-Ps*
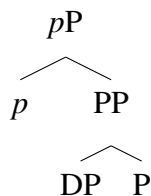
Thus, what is otherwise the post-positional phrase is in itself the complement of a phase head. This would imply that extraction out of such XPs is only possible via a specifier of *p*P. As a parallel to *v*, therefore, I will assume that *p* in (211) also has a person feature that is tied to an EPP feature.

2.6.3.2   Animacy and post-P phrases

The fact that the complement of a post-P may be a definite DP suggests that it may as well be a pronoun. Interestingly, the realisation of such pronouns is sensitive to animacy, as is generally the case with pronominal complements of verbs. In this section, I demonstrate how the mechanism for pronoun realisation can be extended to these cases. First, consider the following data. Note that the marker for 'him' on the post-P in (212b) cannot be omitted.

(212)   a.   Shiká lέ   ká Taki **sɛɛ**.
             money DEF lie T   behind
             'The money is lying behind Taki.'

        b.   Shiká lέ   ká *(**e**)-**sɛɛ**.
             money DEF lie   3SG-behind
             'The money is lying behind him/her.'

There are two further interesting things to point out here. First, the morphology of the pronoun is not what we are used to; the pronoun in (212b) is a bound form *e-* and not the

regular free form *lɛ* that is used as the pronominal complement of a lexical verb. We see this in other Kwa languages, as in Akan (213), where *ne-* instead of *no*, is used.

(213)　　*Akan*

　　　　ɔkɾá nó　da [*(**ne**)-**ńkyɛ́ń**].
　　　　cat　DEF lie　3SG-beside
　　　　'The cat is lying beside him/her.'

The second thing to point out is that, like object pronouns of verbs, animate nominal complements of Post-Ps must be overt, e.g., (212) and (213). Inanimate nominal complements on the other hand must be null, as shown in (214b).

(214)　　a.　Shiká lɛ́　ká **sɛí　lɛ́　sɛɛ**.
　　　　　　money DEF lie chair DEF behind
　　　　　　'The money is lying behind the chair.'

　　　　b.　Shiká lɛ́　ká (*e-)**sɛɛ**.
　　　　　　money DEF lie 3SG-behind
　　　　　　'The money is lying behind it'

Ideally, we would want the same mechanism(s) in the grammar to be responsible for the realisation of the pronominal complements in both the *v*P and the *p*P phases. However, we can straightforwardly rule out a situation where the person probe on *v* is responsible for both contexts, i.e., with lexical verbs, and with Post-Ps, with respect to the realisation of pronominal complement; the *v* head will not be able to access the complement of *p*, as schematised in (215). This would then be one reason why the grammar would place a person probe on the *p* head in the context of post-positional phrases.

(215)　　*v cannot access complement of p*
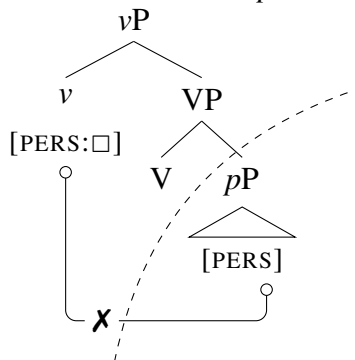
Granted the possible explanation for the situation in (215), when a pronoun is merged as the complement of the P head, syntactic and post-syntactic operations similar to what obtains in the *v*P phase will take place. For instance, an animate pronominal complement of P will be derived via the steps in (216) and (217).

(216) 1. *Person Agree*

pP
- p [PER:□]
- PP
  - φ [PERS]
  - P

✓
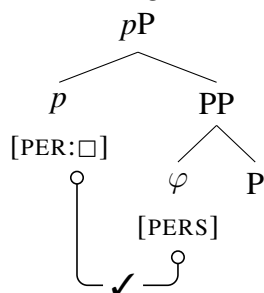
(217) 2. *Pronoun movement*

pP
- φ₁
- p'
  - p [PERS:□]
  - PP
    - t₁
    - P

✓
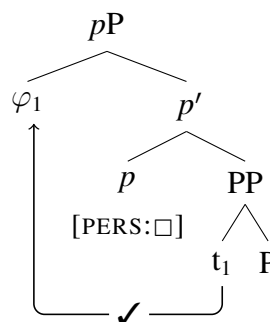
In (217), the complement of *p* is first linearised. φ will not be subjected to a possible deletion, because it will be in spec, *p*. Therefore, the LCA will be presented with only P for linearisation. As before, inanimate pronominal complements of *p* will not move to spec, *p*, because they lack person. This will ultimately account for why they are realised as null.

With regard to the morphology of the overt pronoun derived through a representation like (217), I propose that P raises to *p* in the *p*P phase after the PP has been linearised, just as V raises to *v* in the *v*P phase after the VP has been linearised. This results in a configuration like (219) for (218).

(218)   **e-sɛɛ**
3SG-behind
'behind him/her.'

(219)

pP
- φ **e-**
- p'
  - p
    - P **sɛɛ**
    - p
    - t_φ
  - PP
    - t_P
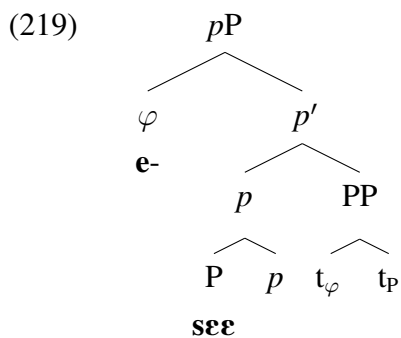
In (219), we observe that the P head and φ are structurally adjacent. This is a configuration that makes it possible for their exponents, i.e., *e-* and *sɛɛ* to cliticise or incorporate.[64]

2.6.4 Objects pronouns beyond Kwa

As stated previously, from the perspective of the theory of object pronoun realisation being pursued in this dissertation, the fact that some languages do not allow null object pronouns

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[64]I will not concern myself with the details of the technical implementation of this process. But there are several adaptable proposals in the literature (see, e.g., Baier to appear; Kramer 2014; Matushansky 2006; Ejike 1995; Diesing & Jelinek 1995; Kayne 1975).

gives us reason to suspect that there might independently exist either a mechanism that is comparable to object shift or a verb movement operation in the syntax of such languages. We can imagine that either of these operations will create the necessary asymmetry between the verb and its pronominal complement to ensure that at least the object is not deleted. In this section, I try to adduce further empirical evidence in support of the claim that there is a correlation between allowing OV word order of any sort in the course of a derivation and not permitting null object pronouns, as was demonstrated for some Kwa languages in §2.6.1. Here, I point to data from one non-Kwa Niger-Congo language, i.e., Dagaare, and Germanic languages like Icelandic, Danish, English and German in this respect. Again, the point will be that such object pronouns are pronounced in a specifier position, or if they are pronounced in their base-merged position, then it is possible that the verb must have moved out of the VP early enough to make this possible.

2.6.4.1 Dagaare

I argue here that Dagaare (Gur, Niger-Congo) allows only overt object pronouns, possibly because it has an independent object shift operation, which raises such pronouns to a higher specifier position in the structure.

According to Bodomo (1997b,a) , the basic word order of the language is SVO, as in (220). Note the position of the (focus) particle *lá* with respect to the object; the object follows *lá*.

(220) ǹ   ngmɛ́ lá **Dàkóráá**.
       1SG hit   F D
       'I hit Dakuraa.'   Hiraiwa & Bodomo (2008:826)

Interestingly, when the object is pronominalised, it must precede the focus particle. This is illustrated in (221a), when compared with (221b).

(221) a. ǹ   ngmɛ́ **ó**   lá.
           1SG hit   3SG F

       b. *ǹ   ngmɛ́ lá **ó**.
           1SG hit   F 3SG
           'I hit him.'   Hiraiwa & Bodomo (2008:826)

For our purposes, the overt realisation of the animate object pronouns in (221) is unsurprising, because they would have a person feature anyway. But it turns out that when the object pronoun is inanimate, a similar pattern of pronoun realisation is achieved (222b).

(222) a. Bàyúó dà dá lá **à   lɔ́ɔrè**.
           B   PST buy F DEF car
           'Bayuo bought a car.'

    b.   Bàyúó dà dá **ó**   lá.
          B   PST buy 3SG F
          'Bayuo bought it.'

    c.   *Bàyúó dà dá lá **ó**.
          B   PST buy F 3SG
          'Bayuo bought it.'   (Adam Bodomo, p.c.)

Our current theory predicts that the *in situ* object pronoun in (222c) will be deleted. But it appears the grammar of Dagaare avoids this situation by the object shift mechanism in (222b). This operation, i.e., the pronominal clitic movement, is independently acknowledged by Hiraiwa & Bodomo (2008).

2.6.4.2 Scandinavian

Among Germanic languages, the Scandinavian languages, i.e., Danish, Icelandic, Norwegian, and Swedish are well-known for their 'Object Shift' properties (see, e.g., Holmberg 1986; Collins & Thráinsson 1996; Richards 2004; Vikner 2006). It is uncontroversial that these languages permit only overt object pronouns in contexts that Kwa languages like Gã would realise the pronoun as null. The following are examples.

(223)   *Icelandic*

    a.   *Af hverju las$_v$ Pétur aldrei [$_{VP}$ t$_v$ **hana**]?
          why   read Peter never   it

    b.   Af hverju las$_v$ Pétur **hana**$_i$ aldrei [$_{VP}$ t$_v$ **t**$_i$]?
          why   read Peter it   never
          'Why did Peter never read it?'   (Vikner 2006:294)

(224)   *Danish*

    a.   *Hvorfor lastæ$_v$ Petur aldrig [$_{VP}$ t$_v$ **den**]?
          why   read Peter never   it

    b.   Hvorfor lastæ$_v$ Petur **den**$_i$ aldrig [$_{VP}$ t$_v$ **t**$_i$]?
          why   read Peter it   never
          'Why did Peter never read it?'   (Vikner 2006:294)

As Vikner's representations above suggest, the object pronouns, i.e., *hana* (223b) and *den* (224b) need to move to their surface positions. This accounts for the ungrammaticality of (223a) and (224a), as the object pronouns in those constructions are in *in situ*. These empirical observations point to the reason why only overt object pronouns might be permitted in these languages.

2.6.4.3 German

German also allows only overt object pronouns in contexts for which Gã would realise only null pronouns (225). The following examples are typical scrambling construction in German.

(225)   a.   dass [$_{IP}$ die Frau   dem Mann [**das Buch**]$_1$ gegeben hat]
            that   the woman the man   the book   given   has

          b.   dass [$_{IP}$ [**das Buch**]$_1$ die Frau   dem Mann **t**$_1$ gegeben hat]
            that   the book   the woman the man   given   has
            'that the woman gave the man the book'   (Müller 2003:949)

According to Müller (2003), (225a) is the base structure for (225b). Notice that *das Buch* in (225b) has moved to a higher position in the structure. The point here is that the language independently allows object arguments to move to a higher specifier position.

Related to the above observation is the claim by Diesing (1992) and Diesing & Jelinek (1995) that definite DPs (in English and German) have certain semantic properties which does not permit them to remain inside the VP. In the specific case of object pronouns, they say that: "Since pronouns are definite, it is expected that pronouns in German are unable to remain within VP, [...] This is in fact the case." (Diesing & Jelinek 1995:131).[65] Conversely indefinite DPs may not move.

For our purposes, recall that the realisation of pronouns in Kwa may also discriminate between definite and indefinite DPs, with the former being the default source of antecedents for both overt and null pronouns. While there may be an additional independent motivation i.e animacy, for the realisation of overt object pronouns in the Kwa case, if Diesing (1992) and others are correct in assuming that definite DPs move higher, then this may be one reason why only overt object pronouns are typically permitted in German (and possibly, English as well, as I discuss in the next section).

2.6.4.4 English

Finally, let us look at English. While the analysis of Diesing (1992); Diesing & Jelinek (1995) may be extended to English as well, there may be other reasons why English has only overt object pronouns. For instance, according to Johnson (1991)'s analysis, an example like (226b) is ungrammatical because object shift of *it* has failed to take place.

(226)   a.   Mikey looked **it** up.

          b.   *Mikey looked up **it**.   (Johnson 1991:594)

Accounting for problems like (226), among others, one way the grammar of English arrives

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[65] According to them, the movement happens in order for the definite expression to get out of the scope of an existential closure.

at the right configuration is that the V head of a VP always moves out of its projection, to adjoin to some functional head (see Johnson 1991:584). This forces its nominal complement to move to the specifier of the VP. If such an analysis is on the right track, this, according to the current proposal about pronoun realisation, may account for why English has only overt object pronouns.

2.6.5 Section summary

In this section, I have presented independent empirical evidence from various language families, and arguments in the literature in support of the main claim of this chapter, i.e., whenever object pronouns are overtly realised, they are in some specifier position. First, I illustrated in §2.6.1 that Kwa languages, e.g., Ewe and Tawuli, which permit only overt object pronouns have an independent object shift operation. Similar arguments were advanced for the overt-only object pronouns found in Dagaare, Scandinavian languages, German and English, in §2.6.4. In §2.6.2, I argued that although the position of the inanimate pronominal object of *kɛ* 'take' in Gã may be a derived one, it is nonetheless realised as null because its phonetic properties are deleted before it presumably moves to its surface position. In §2.6.3, I argued that pronominal complements of post-positions in Kwa languages behave like pronominal arguments of lexical verbs possibly because they are subject to the same derivational mechanism, i.e., there is a phase head equivalent to the *v* in the VP domain, in the Post-P domain, which is able to attract animate complements to a higher specifier position, after a successful person Agree operation.

2.7 Alternative approaches

As things stand, one of the main goals of this chapter has been to explain why certain object pronouns are not pronounced in a specific context although they are obligatorily pronounced in other contexts. In this section, I will sketch two potential alternative approaches that may be adopted to account for the same set of empirical facts, and why they might not be as adequate as the present proposal.

2.7.1 Null objects as verb stranding verb phrase ellipsis

I have maintained throughout the assumptions and analysis sections of this chapter that there is an independent verb movement process in Gã. I have argued in previous sections that this does not take place until at least after the VP has been linearised. As may be obvious from how the argumentation has gone so far, beyond the language-internal functional motivations outlined in §2.5.1.1, a major conceptual reason for this assumption is that if verb movement were to take place first, the problem of a mutual c-command relationship between the verb

and its pronominal complement, which hinders linearisation, and makes deletion of the pronoun necessary, would never arise. This means that in principle, it is possible for the verb to move first. In fact, such a situation must obtain if we adopted the idea that what we see on the surface as null object is actually a kind of verb phrase deletion that is preceded by verb movement, a phenomenon popularly known in the literature as 'verb stranding verb phrase ellipsis' (VVPE), see among others, Gribanova (2013); Ngonyani & Githinji (2006); Goldberg (2005), and also Ma (2017), for an overview of the literature. The notion of VVPE presupposes the existence of verb phrase ellipsis (VPE), as exemplified with the deleted second VP in (227) (see, e.g., Stainton 2006; Merchant 2001).

(227)   John can [$_{VP}$ **drive this car**] but Hans can't **t**$_{[VP\ \text{drive this car}]}$.

Although there is some version of VPE in a language like Gã, there are data that suggest that cases of unpronounced object are not cases of VVPE. The following data suggest a semblance of VPE in Gã. Here, we observe that the verb phrase of the second clause can go unpronounced.

(228)   Taki nyɛ́ [e-**hé**   **woló lɛ́**]   shi Momo nyɛ́-ɛ́ɛ́   t$_{[VP\ \text{é-hé woló lé}]}$.
          T   can 3SG.SUBJ-buy book DEF but M   can-NEG
          'Taki could buy the book but Momo couldn't.'

One way of accounting for patterns like (228) has been to say that there is an *E*(lide)-feature bearing functional head which takes the VP as a complement (see, e.g., Merchant 2001). The *E* feature licenses the deletion of an identical antecedent material in the VP complement, as schematised in (229), where <VP> indicates an elided VP.

(229)   *VP deletion for* (227)

Thus, in (229), the deletion is effected under identity, because the targeted material can be recovered. For instance, in (228), what is not pronounced can be syntactically and semantically recovered from the first clause.

Unlike the VPE cases above, however, VVPE typically involves constructions in which the V head of the VP survives the deletion of the VP. In the following Kikuyu and Irish data, for

instance, the second conjuncts seem to have retained the verbs of the elided VPs.

(230)   *Kikuyu*

Juma nĩ-ara-**gũ**-ra **nyumba**   ona Amina nĩ-ara-**gũ**-ra.
J   FOC-1SM-PRG-buy-FV 9house and A   FOC-1SM-PRG-buy-FV
'Juma is buying a house and Amina is too.'   ([Ngonyani & Githinji 2006](#):39)

(231)   *Irish*

Dúirt mé go   **gceannóinn**   é agus **cheannaigh**.
said I   COMP buy [Cond: S2] it and   bought
'I said that I would buy it and I did.'   ([McCloskey 1991](#):273)

The analysis of data like (230) and (231), as proposed in work by [Ngonyani & Githinji](#) ([2006](#))
can be represented as (232). Here, the verb moves out of VP before the VP is deleted. There-
fore, only the DP complement of the verb is analysed to have undergone deletion. Following
this kind of analysis, this would account for cases of null objects in such languages.[66]

(232)   *VVPE configuration*

We may want to extend the analysis in (232) to cases where object pronouns in Gã are elided,
i.e., in constructions like (233).

(233)   Taki **na** [**woló lέ**] dání   Momo na   t~woló lέ~.
        T   see book DEF before M   see
        'T saw the book before Momo did.'

To account for the Gã data above, we could place the *E* feature on *v*, as illustrated in (234).

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[66]See also, [Gribanova](#) ([2013](#)) for a similar approach to the phenomenon in Russian.

(234)   *Hypothetical VVPE configuration for Gã*
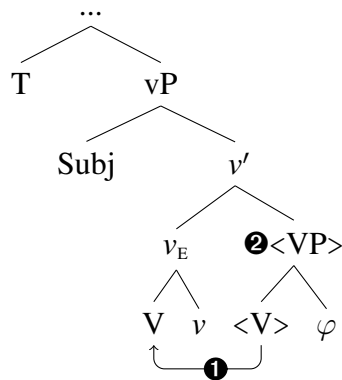
If the derivational steps in (234) are correct, then for an animate pronominal complement of V in Gã, we could assume that it avoids deletion in one of two possible ways; either (a) it is able to deactivate the *E* feature by establishing a parallel dependency, e.g., Agree, with *v*, or (b) it engages in an EPP-triggering person Agree operation, as previously assumed. Presumably, these are not operations that inanimate pronominal complements can trigger.

However, it has been observed that VVPE is only possible for a given construction only if the language independently permits VPE. What is most crucial, however, is that VPE is in itself possible only when there is identity between the elided VP and its antecedent.[67] For instance, Goldberg (2005)'s comprehensive study of VVPE showed that crosslinguistically, VVPE also requires semantic and or morphological identity between the surviving verbs, i.e., the verb of the undeleted VP and that of the deleted VP (see also Gribanova 2013:119). The relevant logic is summarised in (235).

(235)   a.   **VVPE ⇒ VPE** (If a language allows VVPE, then it has VPE)

      b.   **VPE ⇒ V$_{id}$** (If a language allows VPE, then the elided VP is identical to the antecent)

      c.   Therefore: VVPE ⇒ V$_{id}$ (If a language allows VVPE, then the elided VP is identical to the antecedent)

Given (235c), it appears that a VVPE account for overt and null object pronouns in Gã faces an empirical challenge. Consider the data in (236).

(236)   Taki ni   [$_{VP}$ **na** [**woló lέ**]] shi Momo ni   [$_{VP}$ **káné** t$_{woló lέ}$].
      T   FOC   see book DEF but M   FOC   read
      'TAKI saw the book but MOMO read it'.'

The only difference between (236) and (233) is that in the former, the heads of the VPs of the two conjuncts are not identical, contrary to (235c).

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[67]See Collins (2015) for a similar requirement, i.e., syntactic identity, on relative clause deletion.

Towards a conclusion for this section, considering the conditions outlined in (235) and the counter-evidence provided in (236), we have reason to, in the first place, doubt whether a construction like (236) actually involves VPE before we even consider it as a case of VVPE.

2.7.2 Structural complexity of pronoun

Yet another way that we may want to account for the data under investigation is to appeal to the complex nature of the structures in which object pronouns occur. In such an approach, as proposed by, for example, Déchaine & Wiltschko (2002), we could suppose that it is the featural complexity of the pronouns that determines whether they move or do not. This would translate into structures that allow the φ goal to be deleted or otherwise. Specifically, we can construe inanimate pronouns as comprising only φ, just as we have assumed so far. Animate pronouns, on the other hand, have a person projection dominating φ, as in (238).[68]

(237) *Inanimate*
      VP
      /\
    V φ

(238) *Animate*
      VP
      /\
    V PersP
          /\
      Pers φ
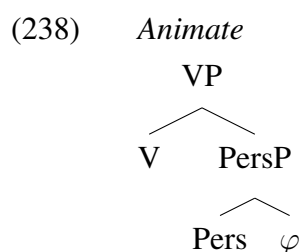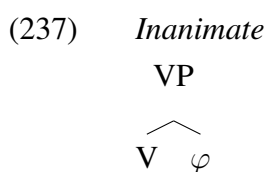
Now, suppose we attribute the possible non-overt realisation of φ in (237) to deletion, because it is not complex enough, then we could say that φ in the instance of (238) escapes deletion because it is embedded in a much complex structure.[69]

However, a potential challenge for this approach will be how to account for cases in other Kwa languages, where inanimate object pronouns that are comparable to (237), see, e.g., §2.2.6, are always overtly realised. Furthermore, it is not obvious, how object pronouns of change of state predicates and object pronouns that precede low adverbs straightforwardly follow from the pronominal complexity structures suggested above. But as we have demonstrated so far, an approach that attributes the overt realisation of these object pronouns to their position in the structure consistently accounts for all the relevant patterns.

2.8 Summary and conclusion

The goal of this chapter was to formally account for the distribution of object pronouns in Kwa languages. At first sight, the empirical generalisation seemed to be that animate object

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[68]These representations are also consistent with the commonly-held assumption that third person is the absence of person in syntax, (e.g., Preminger 2014), except that third person animate nominals are exempt because they also have person features (Richards 2015).

[69]Note that the same results can be achieved under the current proposal, e.g., V and PersP in (238) can successfully be linearised, because the LCA will find an asymmetric c-command relationship between them.

pronouns are overtly realised while inanimate are obligatorily not overtly realised. However, the analysis proposed in this chapter shows that the distribution of such pronouns is not really about animacy, but rather, the syntactic configuration in which such they occur.

The empirical evidence available leads to the conclusion that object pronouns are generally overt. This is the case when they occur in a specifier position in a given structure, such as when they (a) have an animate antecedent, (b) precede low adverbials, (c) are arguments of depictive predicates, and (d) are object arguments of change of state predicates, for independent reasons. The exceptional case is when they are inanimate and occur as the complement of a non-change of state verb. In such cases, they are deleted *in situ*.

The analysis was extended to other languages, especially, those that do not seem to permit null pronominal objects at all, such as Ewe, Dagaare, Tawuli, Scandinavian languages, English and German. Evidence was adduced to argue that such languages have independent syntactic mechanisms that ensure that object pronouns are always in some specifier position at the point when the VP is spelled out.

The analysis also shows that the distribution of object complements of post-positions follows the same mechanism that is used in deriving object pronouns that are complements of lexical verbs. Furthermore, it was also argued that inanimate pronominal objects of the functional verb *kɛ* is never overt because its phonological features are deleted in the *v*P before it moves to its surface position.

In all, the analysis proposed here offers a new way of modelling the crosslinguistic distribution of null and overt pronouns.

Chapter 3

Back to resumption in Akan

3.1 Introduction

The terminology 'resumption' is used to characterise a configuration in syntax whereby the displacement of a nominal element in order to form focus, topic, relative, or question constructions (referred to as 'A-bar constructions' in formal syntax circles) results in filling its original position with a pronoun that refers to the displaced nominal (see, among others, Doron 1982; Rouveret 2002; McCloskey 2006; Salzmann 2006). As a preliminary illustration, consider first, the following English constructions.

(1)   a.   John saw the driver.
        b.   [**Who**$_1$ [**t**$_1$ saw the driver]]?
        c.   [**Who** did [John see **t**$_1$]]?

In (1) the original position of the question word is phonetically null (marked here as *t*). Unlike what we find in languages like English, however, languages that have resumption would replace *t* in contexts like (1b-c) with a pronominal element that 'usually' matches the morpho-syntactic properties of the displaced constituent. Akan is one such language (see, e.g., Saah 1994, 2010; McCracken 2013). Thus, in (2), the equivalents of *t* in (1b-c), i.e., ɔ- in (2b) and *nó* in (2c), are typically construed as resumptive pronouns (RP).

(2)   a.   Kofi hu-u   ɔhyɛnkaní nó.
             K   see-PST driver   DEF
             'Kofi saw the driver.'
        b.   **Hwán**$_1$ na   ɔ$_1$-hú-u   ɔhyɛnkaní nó?
             Who   FOC 3SG-see-PST driver   DEF
             'who saw the driver?'
        c.   **Hwán**$_1$ na   Kofi hú-u   **nó**$_1$ nó?
             who   FOC K   see-PST 3SG CD
             'Who did Kofi see?'

3.1.1 The problem

The present chapter takes a second look at the formal mechanism(s) for deriving RPs for both surface displaced subject and object arguments in Akan. In doing so, I will refer to two sets of empirical observations, which allow us to reanalyse the resumption facts in the language from a novel theoretical perspective. First, I take issues with the claim that subject (pronominal) prefixes, such as ɔ- in (2b), which show up on verbs in A-bar constructions are RPs. Conceptually, its bound nature makes it less of a pronoun. Second, I propose a principled way to explain agreement marking in the context of A-bar constructions in the Asante-Twi dialect of Akan in particular, examples of which are illustrated in (3) (see also Korsah 2016).

(3)   a.   **Kofi**₁ na   **ɛ-/ɔ**₁-hú-u   ɔhyɛnkaní nó.
           K   FOC 3-/3SG-see-PST driver   DEF
           'KOFI saw the driver.'

      b.   Me-nim   [_CP sɛ́   **Kofi**₁ na   **ɛ-/ɔ**₁-hú-u   ɔhyɛnkaní nó].
           1SG-know   COMP K   FOC 3-/3SG-see-PST driver   DEF
           'I know that KOFI saw the driver.'

      c.   **Kofi**₁ na   me-ním   [_CP sɛ́   ??**ɛ-/ɔ**₁-hú-u   ɔhyɛnkaní nó].
           K   FOC 1SG-know   COMP 3-/3SG-see-PST driver   DEF
           'I know that KOFI saw the driver.'

In (3), note that the ɛ- morpheme is a kind of default agreement marker (hence glossed as '3'). Therefore, the examples above seem to suggest that full φ (here, = number, person and animacy) agreement is optional when the A-bar position is local to the extraction site (3a-b). Conversely, in long A-bar extraction contexts (3c), this optionality is blocked. This empirical observation is relatively new.

3.1.2 Overview of the analysis

I argue that pronominal prefixes in Akan are better analysed as the spellout of agreement on the T(ense) head, which is realised on the verb on the surface for morpho-syntactic reasons. Therefore, I will claim that although Akan has RPs for both objects and subjects, only object RPs have an overt realisation; subject RPs have a null exponent. This argument, coupled with the idea that all A-bar extractions involve syntactic movement (as argued for by Klein (2016); Sportiche (to appear), and for Akan in particular, by Korsah & Murphy (2016)), will serve as the background for addressing the agreement problem mentioned about the examples in (3). I will model the agreement mismatches in (3a-b) by adopting Klein (2017)'s φ-stranding approach to resumption and Erlewine (2016)'s 'Spec-to-Spec Anti-locality' constraint in conjunction with a specific version of Chomsky (1995)'s notion of 'equidistance'. A combination of these ideas suggest that both the A-bar-marked DP and the φP from which

the DP originates may move to spec, TP. I will argue that full φ agreement in contexts, such as (3), is only possible when a φP moves to spec, TP, from where φ agreement with T is possible. Therefore, in particular contexts like (3c), where default agreement is blocked, movement of φP to spec, TP is, in fact, the only option available in the derivation. Here, the A-bar-bound DP never moves to spec, TP. If it did, the derivation would crash, for principled reasons. I will illustrate how the analysis extends to the fact that A-bar-moved object DPs, and first and second person pronouns never allow default agreement. In terms of the RP realisation, only stranded φ for object arguments may have overt realisation (based on the object pronoun realisation algorithm proposed in chapter 2).

It will also be shown that modelling the putative RPs as agreement markers has desirable consequences beyond A-bar constructions in the language. For instance, it makes it possible to account for the occurrence of the default agreement marker in non-A-bar contexts. Furthermore, this makes it possible to establish a natural class comprising constructions involving short A-bar extraction and ordinary declarative constructions in the language.

The remainder of this chapter is structured as follows. In §3.2, I present an overview of the core data, where I first discuss the pronominal paradigm in Akan, and sketch how instances of syncretism may be analysed. I then outline the various resumption patterns in Akan. The analysis begins from §3.3, where I first discuss some theoretical options available for modelling the patterns observed. Next, I present the key theoretical tools for the analysis proper, which are then used in §3.4 to derive the various resumption patterns. In §3.5, I extend the proposal to topic constructions and the agreement patterns in ordinary declarative structures. In this section, I also comment on the long-observed related resumption facts in Yoruba. §3.6 is the conclusion.

3.2 Background and data

Generally, any DP argument in Akan may be A-bar extracted. However, I will focus on extraction of subject and object DPs in this chapter.[1] Before proceeding to discuss the main patterns of resumption (in §3.2.2.), I will, first, briefly discuss the morpho-syntactic distribution of personal pronouns in Akan in §3.2.1. In §3.2.3, I will present data that suggest that A-bar extractions in certain configurations may allow agreement mismatches. However, we will also see that such mismatches are restricted to only local subject extraction contexts.

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[1]As a remark on the data presented in this chapter, unless otherwise stated, all data are based on the Asante Twi dialect of Akan.

3.2.1 The personal pronouns: Distribution and agreement relations

In this section, I hope to clarify a few preliminary issues, which will have a bearing on aspects of the data and the analysis to be presented later. Specifically, I will suggest that Akan has no subject pronouns (in the true sense of the word); what have been construed as such are, at best, clitics. But, in the context of this work, I think it is even more insightful to analyse them as agreement markers, and so will I treat them. Also, I will suggest a way to deal with the syncretisms that are inherent in the personal pronominal paradigms. A crucial claim that will emerge from the discussion here is that the ε- morpheme is a default agreement marker. With respect to the morphology of the RPs, they look exactly like the personal pronouns in the language, as is often the case in other languages. Therefore, it is important to comment on the personal pronoun system of the language as a whole. The relevant pronouns in Akan are given in (4) and (5), see also (Saah 1994:89) and (Osam 1994:149).

(4) *Subject pronouns*

PER	SG	PL	ANIM
1	me-	yɛ-	+
2	wo-	mo-	+
3	ɔ-	wɔ(n)-	+
3	ɛ-	ɛ-	–

(5) *Object pronouns*

PER	SG	PL	ANIM
1	me	yɛn	+
2	wo	mo	+
3	no	wɔn	+
3	no	no	–

There are at least two crucial things to note about the pronominal paradigms in (4) and (5). First, we see an indication that the subject pronouns are bound forms while the object pronouns are free forms.[2] Second, there are certain forms that cut across categories (shaded gray). I elaborate on these major observations one after the other in the following sections. (The matter concerning the prefix ε- will be subsumed under the latter.)

3.2.1.1 The morpho-syntax of the pronouns

As earlier examples may suggest, subject prefixes are marked on the verb stem (6).

(6)   *subject marking*

    a.   *(**Me-**)**kaé**   Kofi.
       1SG-remember K
       'I remember Kofi.'

    b.   *(**Ɔ-**)**kaé**   Kofi.
       3SG-remember K
       'S/he remembers Kofi.'

Object pronouns on the other hand are generally morphologically free forms (7).

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[2]That the subject and the object forms look alike except for their lexical integrity differences may be due to their diachronic origin. I will not be concerned with this issue in this dissertation.

(7)   *Object pronouns*

    a.   Kofi kaé   **no**.
          K   remembers 3SG
          'Kofi remembers him/her.'

    b.   Kofi kaé **mo**.
          K   kaé 2PL
          'Kofi remembers you.'

I take the above distribution of the pronominal forms to be a *prima facie* evidence for their morpho-syntactic status. That is, only the object forms are true pronouns. As for the subject forms, I suggest that they are better treated as agreement markers on the verb stems. This view seems to be indirectly supported by further phonological and syntactic facts in the language. I briefly discuss two of those next.[3]

It has long been observed that the phonology of the vowel of a subject prefix is typically conditioned by the vowel harmony features of the verb stem to which it is attached, see, e.g., Saah (1994:56.fn.7,90) and Osam (1994:150-151). As it turns out, this is a phonological behaviour that is typically associated with, for instance, tense inflection on verbs. As an illustration, (adopting a less standard orthographic representation), let us consider (8).

(8)   *Subject prefix and ATR harmony*

    a.   **O**-b**é**-h**ú**   no.
          3SG-FUT-see 3SG
          'S/he will see him/her.'

    b.   **Ɔ**-b**ɛ́**-fr**ɛ́**   **no**.
          3SG-FUT-call 3SG
          'S/he will call him/her.'

In (8), the vowel of the future morpheme *bɛ-* is pronounced as [e] when it is attached to the verb *hu* (8a), with a [+ATR] vowel. But, in the context of *frɛ* (8b), which has a [–ATR] vowel, *bɛ-* is pronounced as [ɛ].[4] (8) shows that the ATR feature spreads to the subject prefixes as well, although this does not happen if the subject position is filled by a noun (phrase). Unfortunately, for independent reasons, we cannot say much about how the vowel harmony facts affect object pronouns, because the process seems to be unidirectional. However, irrespective of one's theory of phonological phrasing, there seems to be some kind of evidence that the subject prefixes and other verbal inflections are treated alike phonologically.

In terms of their syntax, it seems that the object pronouns pattern more with full DPs, when compared with subject prefixes. For instance, consider the coordination structures in (9).[5]

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[3]See also, Ejike (1995), who relies on similar evidence to argue for the existence of 'dependent' pronouns in Igbo.

[4]These effects are much more transparent in the standard orthography of the Fante dialect (see Osam 1994).

[5]Here, I note the following data, which Saah (1994) cites as supporting the full pronoun status of ɔ.

(9)   *Coordination*

    a.   Kofi né   **nó** kɔ́.
          K   CONJ 3SG go

    b.   *Kofi né   **ɔ-** kɔ́.
          K   CONJ 3SG go
          'Kofi went with him/her.'

We notice that the subject prefix cannot be conjoined with the DP (9b) although the coordinated structure is structurally in a subject position. Given the above evidence, I propose to treat the subject prefixes in Akan as inflection on the verb. Later on, I will specifically model it as a realisation of φ agreement on the T(ense) head.

3.2.1.2 The syncretisms and the default ɛ-

The next significant thing to discuss about the pronominal paradigms in (5) and (4) is the syncretisms, i.e, situations where morphemes of the same shape occupy different cells in the paradigms. So, our focus here is on the shaded cells. For instance, there is no number distinction between the inanimate pronouns. Thus, for subjects, only the ɛ- pronoun may be used in reference to both singular and plural antecedents. As an illustration, both of the questioned constituents in (10) may be answered with the construction in (11).

(10)   *Question*

    a.   **Ataadéé nó** wɔ   hé?
          dress   DEF be.located where
          'Where is the dress?'

    b.   **N-taadéé nó** wɔ   hé?
          PL-dress DEF be.located where
          'Where are the dresses?'

(11)   *Answer*

    ??**Wɔ-/Ɛ**-wɔ   dán nó mú.
    3PL/3-be.located room DEF inside
    'They/It are/is in the room.'

(i)   **Ɔ** né Kofi kɔ-ɔ   fie.
    3SG CONJ K   go-PST home
    'S/he and Kofi went home.'   (Saah 1994:92)

First, I believe that in the context of (i) also, the subject prefix is actually morphologically realised together with conjunction particle, as in *Ɔ-né*. This is because, for independent reasons, it seems that the left edge of the conjunction particle hosts only a phonologically heavier segment. For instance, even for the object pronoun, which is presumably (more) morphologically independent to occur in the position of ɔ above, it has to be realised as the emphatic form, e.g., *ɔ-nó*. Therefore, it is unlikely that the subject prefix in (i) is independent, and therefore a pronoun. Second, granted that ɔ is of the same morpho-syntactic status as the object pronoun, it is not obvious, why it cannot occur in, for instance, (9b).

We also see that the exponent *no* is used in three different morpho-syntactic contexts: third person singular animate, third person singular inanimate, and third person plural inanimate.

Before proceeding to propose a way of dealing with the syncretism patterns in the pronoun system as a whole, there are other related issues that need to be pointed out, especially with respect to the distribution of *ε-*. I take a slight detour to present data that suggest that *ε-* is a kind of subject-verb agreement marker on the verb stem, and that this is even the case in contexts outside of typical referential contexts. As far as I know, a chunk of these data have not been reported in the literature. Consider the following constructions, which are widely attested in spoken Asante Twi.

(12)   a.   **Duá nó** **(ɛ́-)da** pónó nó só.
             stick DEF 3-lie table DEF top
             'The stick is on the table.'

        b.   **N-Nuá nó** **(ɛ́-)de-da** pónó nó só.
             PL-stick DEF 3-RED-lie table DEF top
             'The sticks are on the table.'

In (12), the verbs are optionally marked with the prefix *ε-* which, as we will see in the next section, is typically and obligatorily marked on verbs of clauses from which a third person inanimate subject DP has been A-bar extracted. We notice, furthermore, that this is irrespective of the number properties of the subject DP involved. However, since *ε-* has the same morphology as the third person inanimate subject pronominal prefix, we might construe its use here as Akan's case of an optional 'clitic doubling', as is the case in some dialects of Spanish (see, e.g., Mayer 2006) and Greek (see, e.g., Anagnostopoulou 1994). However, it turns out that the same morpheme may occur in contexts with animate DP subjects (13).

(13)   a.   **Kofi (ɛ́-)kan-n** kŕataá nó.
             K 3-read-PST book DEF
             'Kofi read the book.'

        b.   **Kofi** né Amma **(ɛ́-)kan-n** kŕataá nó.
             K CONJ A 3-read-PST book DEF
             'Kofi and Ama read the book.'

Given (13), if the marking of *ε-* in (12) is a sort of agreement marking at all, then its use here suggests that it is a more generic marking of third person. That is, it does not discriminate between DPs in terms of animacy and number. I therefore claim that *ε-*, as used above, is a kind of default agreement marker. This would then be the justification for glossing it simply as '3'. There seems to be further empirical support for this claim, as I illustrate below.

First, *ε-* is the only affix permitted as a marking on the verbs in such non-A-bar configurations. Thus, for the animate subject DPs in (13), for instance, it is not possible to use the

corresponding agreeing verbal prefixes, i.e., ɔ- and wɔ-, as illustrated in (14).[6]

(14) a. **Kofi** (*ɔ-)**kan-n** kŕataá nó.
          K   3SG-read-PST book DEF
          'Kofi read the book.'

     b. **Kofi** né   Amma (*wɔ-)**kan-n** kŕataá nó.
          K   CONJ A   3PL-read-PST book DEF
          'Kofi and Ama read the book.'

Second, ɛ- is also used as the equivalent of an expletive pronoun, as in (15). Note that ɛ- here is non-referential.[7]

(15)   **Ɛ**-wɔ sɛ́   nokórɛ́ nó túmí dá adi.
         3SG-be COMP truth   DEF able lie bare
         'It ought to be the case that the truth comes to light.'

A third piece of evidence is found in the marking of ɛ- on negated verbs of imperative constructions. As is the case in many languages, in Akan, when the addressee of a command is singular, his/her name is generally not mentioned. But in (16), unlike the non-negated variant (16a), the marking of ɛ- is obligatory (16b).[8] The point here is that ɛ- must be a dummy morpheme in (16b), for whatever reason.

(16) a. (*ɛ)**-kan** kŕataá nó!
          3-read-PST book DEF
          'Read the book!'

     b. *(**ɛ**)**-n-káń**   kŕataá nó!
          3-NEG-read-PST book DEF
          'Don't read the book!'

Fourth, we see in (17) that ɛ- may optionally be marked on verbs in a serial verb construction. This is in spite of the fact that typically, the language does not allow subject (agreement)

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[6]As we will see in §3.2.4, these forms alternate with the default marker in A-bar contexts, where the subject prefixes are obligatory.

[7]I note the consistent tonal differences between the use of ɛ- in clause-initial position and non-clause-initial positions. I do not have anything insightful to say about it in this work.

[8]Note that here, the addressee is second person singular, i.e., wo, as in (ia). However, as (iib) shows, the relevant pronominal affix cannot replace ɛ-, if the imperative meaning is to be maintained.

(i) a. **Wo-**kan-n   kŕataá nó!
          2SG-readbook DEF
          '(You) read the book.'

     b. ***Wó/Ɛ-n-káń** kŕataá nó!
          2SG/3-NEG-read book DEF
          ' You don't read the book.'
          'Don't read the book!'

marking on the verbs when a full DP subject is present in such constructions.

(17) a. Kofi (**ɛ́/*ɔ́-**)tɔ-ɔ   mpaboá (**ɛ́/*ɔ-**)kyɛ-ɛ   Kwaku.
     K   3-3SG-buy-PST shoe   3/3SG-give.as.gift-PST Kw
     'Kofi bought a pair of shoes for Kwaku as a gift.'

    b. Kofi né   Amma (**ɛ́/*wɔ́-**)tɔ-ɔ   mpaboá (**ɛ́/*wɔ-**)kyɛ-ɛ   Kwaku.
     K   CONJ A   3/3SG-buy-PST shoe   3/3SG-give.as.gift-PST Kw
     'Kofi and Ama bought a pair of shoes for Kwaku as a gift.'

Fifth, the status of ɛ- as an agreement marker may also justify why it cannot co-occur with subject prefixes in the language, as illustrated in (18).

(18)   *(**Ɔ-**)/(***Ɛ-**)**su-ui**.
       3SG-/3-cry-PST
       'S/he cried.'

Suppose the subject prefix is a φ agreement marker, (as I will assume in the analysis to be presented in this chapter, see §3.4.1.1), then we can imagine that both affixes compete for the same morpho-syntactic slot in the grammar.[9]

As a final remark, we can say that the morphological dependency described above is between the verb and its subject. This can be seen in the examples in (19), which suggest that intransitive constructions also permit the ɛ- morphology on the verb. If the ɛ--verb relation was possible with or related to the object DP only, we would expect the constructions in (19) to be ungrammatical or illicit. But this obviously is not the case.

(19) a. Kofi (**ɛ́**)-**su-ui**.
     K   3-cry-PST
     'Kofi cried.'

    b. Duá **nó**   (**ɛ́-**)**wa**.
     stick DEF 3-be.long
     'The stick is long.'

Given the facts above, I propose that ɛ- in the contexts discussed above is a kind of default marker for subject-verb dependency in Akan. I will demonstrate later that this is independently supported by its behaviour in A-bar contexts. We will see that ɛ- is also the pronominal form that is realised on the verb when Agree fails in a given configuration. For now, we can bring to a close the discussion on the distribution of ɛ-.

Now, having pointed out the issues with the syncretisms in the pronoun system, the question that arises then is: Would/Does Akan grammar have three different lexical entries for ɛ-, i.e., two pronouns and the default form, and *no*, three pronouns as well? For the sake

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[9]See §3.5.2 for a possible analysis of why ɛ- would lose out in such a competition.

economy, we can imagine that this would not be the case. One way in which the grammar can accommodate only one lexical entry for all the instances of *ɛ-* and *no*, I propose, is by means of underspecification, as implemented in the theory of Distributed Morphology (Halle & Marantz 1993, 1994). This approach enables us to decompose the features of all the pronouns and other competing morphological forms in the language. I will briefly illustrate how this could be applied to *ɛ-* and *no*.

For *ɛ-*, we concluded from earlier discussions that it is a T(ense) feature (that is realised on the verb). Here, as the elsewhere or default exponent, it is underspecified for number, person, and animacy. The featural decomposition of *ɛ-*, based on its distribution in the table in (4), is given in (20).[10] Basically, (20) means that *ɛ-* or any morpheme with the feature set matching that of T's in (20a-c), can be inserted into the syntactic terminal of T.

(20)   *Realisations of ɛ- on T*:
    a. $T_{[\varphi:\ 3SG]}$ =   [−auth, −part, +sing, −anim, CAT:T]   ⇒   *ɛ-*
    b. $T_{[\varphi:\ 3PL]}$ =   [−auth, −part, −sing, −anim, CAT:T]   ⇒   *ɛ-*
    c. $T_{[\varphi:\ ]}$ =   [CAT:T]   ⇒   *ɛ-*

Similarly, for *no*, instead of three different pronouns, as given in the table in (5), we can assume that there is only one instance, underspecified for animacy and number, and decomposed as in (21). Recall the assumption from chapter 2, that object pronouns are essentially φ features which are morphologically realised where approapriate. In this context, any pronoun with the morphological features that match that of φ in (21a-c) can also be inserted.

(21)   *Realisations of no*:
    a. $\varphi:_{[\ 3SG,PER]}$ =   [−auth, −part, +sing, +anim, CAT:φ, CASE:ACC]   ⇒   *no*
    b. $\varphi:_{[\ 3SG]}$ =   [−auth, −part, +sing, −anim, CAT:φ, CASE:ACC]   ⇒   *no*
    c. $\varphi:_{[\ 3PL]}$ =   [−auth, −part, −sing, −anim, CAT:φ, CASE:ACC]   ⇒   *no*

3.2.1.3 Summary

The section has argued that Akan has true pronouns for only object; what look like subject pronouns can be analysed as inflection on the verb. I have provided at least three empirical and conceptual arguments in support of this claim. First, subject pronouns are bound forms. Second, they pattern with other inflectional elements on the verbs in terms of phonology. Third, syntactically, they cannot be conjoined with full DPs, suggesting that they are not of the same status. We have also seen several pieces of empirical evidence that suggest that the *ɛ-* morpheme is a default (agreement) marker in the language.

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[10] In (20) (and (21)), the middle column shows the morphological features of the exponent, and the left column shows the syntactic terminals and their features.

3.2.2   Subject and object resumption

A-bar extraction of subject and object arguments in Akan obligatorily requires some form of morphology in the extraction site. I discuss both kinds of 'resumptive' marking in turn.

3.2.2.1   Extracted subjects

Consider the (b) examples of the following focus constructions, where the subject arguments have been extracted.

(22) a. **Kofi** kan-n   kŕataá nó.
          K   read-PST book   DEF
          'Kofi read the book.'

      b. **Kofi**$_1$ na   *($\mathupsilon_1$-)káń-n   kŕataá nó.
          K   FOC 3SG-read-PST book   DEF
          'KOFI read the book.'

(23) a. Me-kan-n   kŕataá nó.
          1SG-read-PST book   DEF
          'I read the book.'

      b. **Mé**$_1$ na   *(**me**$_1$-)káń-n kŕataá nó.
          1SG FOC 1SG-read-PST book   DEF
          'I (as opposed to someone else) read the book.'

The extracted constituent in (22b) is a third person while that of (23b) is a first person. Here, we notice that the affixes co-indexed with the extracted constituents are obligatory. We also see that the marking on the verbs match the extracted constituent in terms of number and person. In (24), we observe that the matching requirement also includes animacy.

(24) a. **Krátaá nó**   da pónó nó   só.
          book   DEF lie table DEF top
          'The book is on the table.'

      b. [**Krátaá nó**]$_1$ na   *$\mathupsilon_1$-/ε_1-dá   pónó nó   só.
           book   DEF FOC 3SG-/3-lie table DEF top
          'THE BOOK is on the table.'

In (24), unlike the extracted animate constituent in (22b), only the prefix for inanimate DPs can be marked on the verb. In terms of number, matching is typically required when the extracted DP is animate, as in (25a). Extracted inanimate DPs do not seem to require any matching with their co-referent affix, as seen in (25b). An alternative explanation for (25b), as may be apparent from the vocabulary items in (20) could be that the same morphological form realises both singular and plural inanimate subjects.

(25) a. [**Kofi né   Amma**]₁ na ***ɔ-/wɔ**₁-káń-n   kŕataá nó.
          K   CONJ A   FOC 3SG/3PL-read-PST book DEF
          "KOFI AND AMA read the book.'

      b. [**N-kŕataá nó**]₁ na   *wɔ-/ɛ₁-dá pónó nó   só.
          PL-book DEF FOC 3PL/3-lie   table DEF top
          'THE BOOKS are on the table.'

The data above is representative of the general strategy that the language employs for all A-bar constructions. The following examples show that similar strategies are used in *ex situ* Wh-constructions, and in relative constructions.[11]

(26) *Relativisation- animate*

      a. **Ɔhyɛnkaní nó**   pɛ siká.
          driver   DEF like money.
          'The driver likes money.'

      b. [**Ɔhyɛnkaní** (**nó**)]₁ áa *(ɔ₁-)pɛ́ siká   nó á-ba.
          driver   DEF   REL 3SG-like money CD PRF-come
          'The driver who likes money has arrived.'

(27) *Relativisation - inanimate*

      a. **Krátaá nó**   dá pónó nó   só.
          book   DEF lie table DEF top
          'The book is on the table.'

      b. [**Krátaá** (**nó**)]₁ áa   *(ɛ₁-)dá pónó nó   só nó á-fɔ.
          book   DEF   REL 3-lie   table DEF top CD PRF-be.wet
          'The book which is on the table is wet.'

(28) *Ex situ Wh questions - animate*

      a. [**Ɔhyɛnkaní nó**]₁ pɛ siká.
          driver   DEF like money.
          'The driver likes money.'

      b. **Hwán**₁ na   *(ɔ₁-)pɛ́ siká?
          who   FOC 3SG-like money
          'Who likes money?'

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[11]Regarding Wh-constructions, Akan also has *in situ* Wh-questions, e.g., (i). But since they do not involve any argument displacements (at least on the surface) and hence have no RPs, I will ignore such constructions in the present discussion.

(i) **Déɛ́n** da pónó nó   só?
     what lie table DEF top
     'What is on the table?'

(29)   *Ex situ Wh questions - inanimate*

    a.   [**Krátaá nó**]$_1$ dá pónó nó   só.
          book   DEF lie table DEF top
          'The book is on the table.'

    b.   **Déén**$_1$ na   *(ε_1-)dá pónó nó   só.
          what   FOC 3-lie   table DEF top
          'What is on the table?'

Regarding the status of some of the definite determiner-like elements glossed as CD in the above examples, refer to chapter 4.

3.2.2.2   Extracted objects

When an animate object DP is extracted, an obligatorily overt resumptive pronoun is required at the base position. For focus constructions, we see this pattern in (30b), for singular animate objects, and (31b), for plural animate objects.

(30)   *Focus- Object extraction - singular animate*

    a.   Kofi hu-u   **Amma**.
          K   see-PST A
          'Kofi saw Ama.'

    b.   **Amma**$_1$ na   Kofi hú-u   *(**nó**$_1$).
          A   FOC K   see-PST 3SG
          'Kofi saw AMA.'

(31)   *Focus- Object extraction - plural animate*

    a.   Kofi hu-u   **Amma né   Kwaku**.
          K   see-PST A   CONJ Kw
          'Kofi saw Ama and Kwaku.'

    b.   [**Amma né   Kwaku**]$_1$ na   Kofi hú-u   *(**wɔn**$_1$).
          A   CONJ Kw   FOC K   see-PST 3PL
          'Kofi saw AMA AND KWAKU.'

But for extracted inanimate DPs, the overt realisation of the RP is generally determined by the mechanisms that were discussed in chapter 2. Thus, unlike (30b), a null RP may be permitted at the extraction site when an inanimate object DP is extracted (32b).[12]

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[12]Thus, for instance, when the base position is followed by an adverb, the RP is overtly realised (i).

(i)   [**Krátaá nó**]$_1$ na   Kofi hú-u   *(no)$_1$ ntɛ́m   nó.
        book   DEF FOC K   see-PST 3SG quickly CD
        'Kofi saw THE BOOK early/quickly.'

(32)   *Inanimate object DP extraction*

    a.   Kofi hu-u   **kŕataá nó**.
       K   see-PST book DEF
       'Kofi saw the book.'

    b.   [**Kŕataá nó**]$_1$ na   Kofi hú-ui   ~~no~~$_1$.
       book   DEF FOC K   see-PST 3SG
       'Kofi saw THE BOOK.'

    c.   [**Kŕataá nó**]$_1$ na   Kofi hú-u [sukúuní áa   ɔ-bɛ́-káé   ~~no~~$_1$ nó].
       book   DEF FOC K   see   student REL 3SG-FUT-read 3SG CD
       ' Kofi saw the student who will read THE BOOK.'

Example in (32c), which shows the null RP in a relative clause suggests that Akan does not actually permit 'gaps' in the extraction site of an A-bar extracted object argument.

As we saw with extracted subject arguments (except that subject prefixes, on the surface, occupied the extraction site), apart from focus constructions, RPs also show up when object DPs are extracted for relativisation, as in (33b) and (34), for animate and inanimate object DPs respectively. In (34), note that the object pronoun is overt because the construction involves a change of state predicate.

(33)   *Relativisation - animate*

    a.   Kofi hu-u   **ɔhyɛnkaní nó**.
       K   see-PST driver   DEF
       'Kofi saw the driver.'

    b.   [**Ɔhyɛnkaní (nó)**]$_1$ áa   Kofi hú-u   **nó**$_1$ nó á-ba.
       driver   DEF   REL K   see-PST 3SG CD PRF-come
       'The driver that Kofi saw has arrived.'

(34)   *Relativisation - inanimate*
    [**Kŕataá nó**]$_1$ áa   Kofi té-e   *(**nó**$_1$) nó á-fɔ.
     book   DEF REL K   tear-PST 3SG CD PRF-be.wet
    'The book that Kofi tore is wet.'

Again, in the following examples, we see the patterns for *ex situ* object Wh constructions; (35b) for animates, and (36) for inanimates.

(35)   *Ex situ Wh questions -animate*

    a.   Kofi hu-u   **ɔhyɛnkaní nó**.
       K   see-PST driver   DEF
       'Kofi saw the driver.'

    b.   **Hwán**$_1$ na   Kofi hú-u   *(**nó**$_1$) no?
       who   FOC K   see-PST 3SG   CD
       'Who did Kofi see?'

(36) *Ex situ Wh questions -inanimate*

Déén₁ na Kofi té-e   *(**nó**₁) no?
what FOC K tear-PST 3SG CD
'What did Kofi tear?'

Furthermore, resumption in Akan is unbounded, and insensitive to 'syntactic island' (see also, Saah & Goodluck 1995). In (32c), we saw an example with null RP in a relative clause. In (37), the RP of the animate DP *Amma* is in a Wh-island. This is not unusual, given the observation in the A-bar syntax literature that resumption tends to ameliorate island violations (cf. Ross 1973).

(37) *Island insensitive resumption*

Amma₁ na Kofi bísá-a   sɛ   [hwán na ɛ-dɔ́ **nó**₁ nó].
A   FOC K ask-PST COMP who FOC 3-love 3SG CD
'Kofi asked who loves AMA.'

In this section, we have seen that RPs in Akan are homophonous with the personal pronouns in the language, except that what looks like RPs for extracted subject are bound forms, which I have suggested, should be construed as agreement prefixes. But the real RPs refer to object DPs. The head of the resumption chain, i.e., the displaced DP, and the foot, i.e., the RP, tend to share the same number-person and animacy features. I interpret this as a kind of agreement between the RP and its DP. Thus, some kind of RP-antecedent agreement holds for all A-bar constructions. I will argue later that this follows from how the relationship between the two elements in the resumption dependency configuration is derived. Specifically, I will claim that they start out as part of a single nominal element.

3.2.3 Full versus default agreement relations

In this section, I present data that suggest that the number, person and animacy agreement that we have observed so far may not always obtain; sometimes, a default agreement, i.e., with ε-, is possible. But this is restricted to resumption relations involving third person local subjects in relative and *ex situ* focus constructions; first and second person arguments, subject prefixes of extracted non-local subjects and RPs of extracted objects permit only full agreement.

3.2.3.1 Distribution of default agreement

We saw in §3.2.2.1 that the default marker ε- may be used as the subject prefix for both singular and plural third person inanimate DPs. However, I present data in this section to show that ε- may also be used in cases where animate DPs have been extracted. First, let us consider (38), paying attention to the RP prefix on the verbs.

(38) a. **Kofi**₁ na ɔ₁-kán-n   kŕataá nó.
          K   FOC 3SG-read-PST book DEF

     b. **Kofi**₁ na ɛ₁-kán-n   kŕataá nó.
          K   FOC 3-read-PST book   DEF
          'KOFI read the book.'

We notice in (38a) that while the verbal prefix ɔ- agrees with its antecedent, i.e., *Kofi*, in the sense that both are third person, singular, and animate, their corresponding forms in (38b) agree only in terms of person, i.e., both are third person. We also see the optionality of the subject prefix agreement even when the extracted animate DP is a pronoun, as in (39).

(39) **Ɔno**₁   na ɛ-/ɔ-₁-kán-n   kŕataá nó.
      3SG.EMPH FOC 3-/3SG-read-PST book DEF
      'HE read the book.'

Another evidence in support of the lack of obligatory animacy agreement observation is given in (40), where the argument involved is animate and plural.

(40) *Non-agreeing subject RP- plural*

     [**Kofi né   Amma**]₁ na ɛ/wɔ₁-kán-n   kŕataá nó.
      K   CONJ A   FOC 3/3PL-read-PST book DEF
      'KOFI AND AMA read the book.'

Again, we see that both the agreeing prefix *wɔ-* and the default form are possible in similar contexts. As with singular DPs, extracted plural DPs also allow the optional agreement marking when they are pronominalised, as in (41).

(41) **Wɔn**₁ na ɛ-/wɔ-₁-kán-n   kŕataá nó.
      3PL   FOC 3-/3PL-read-PST book DEF
      'THEY read the book.'

Therefore, not only do we encounter a lack of strict one-to-one number agreement between A-bar extracted inanimate DPs and their RPs, but we also find a possible agreement mismatch between A-bar extracted animate DPs and their RPs in terms of animacy.

In the examples in (42a-b), we see that the above default agreement patterns also apply to relative clauses and *ex situ* Wh-constructions.

(42) *Agreement mismatches in relativisation and Wh constructions*

     a. [**Ɔhyɛnkaní (nó)**]₁ áa ɛ-/ɔ₁-pɛ́   siká   nó á-ba.
          driver   DEF REL 3-3SG-like money CD PRF-come
          'The driver who likes money has arrived.'

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b. **Hwán**₁ na **ɛ-/ɔ-**₁-pέ siká?
who FOC 3-3SG-like money
'Who likes money?'

Furthermore, it turns out that the agreement mismatch is also permitted in some embedded contexts. For instance, it is possible when the subject is the focused element in a complement clause, as in (43) and (44) where the clauses in (41) and (42) have respectively been used as the complement of the embedding predicate *nim* 'know'.

(43) *Embedded focus movement - singular*

a. Me-nim [CP sɛ **Kofi** káń-n kŕataá nó].
1SG-know COMP K read-PST book DEF
'I know Kofi read the book.'

b. Me-nim [CP sɛ **Kofi**₁ na ɔ-/ɛ₁-káń-n kŕataá nó].
1SG-know COMP K FOC 3SG-read-PST book DEF
'I know that KOFI read the book.'

(44) *Embedded focus movement -plural*

a. Me-nim [CP sɛ [**Kofi né Amma**] káń-n kŕataá nó].
1SG-know COMP K CONJ A read-PST book DEF
'I know that KOFI AND AMA read the book.'

b. Me-nim [CP sɛ [**Kofi né Amma**]₁ na wɔ-/ɛ₁-káń-n kŕataá
1SG-know COMP K CONJ A FOC 3PL-/3-read-PST book
nó].
DEF
'I know that KOFI AND AMA read the book.'

Regarding the (b) examples in (44) and (43), note that although the extraction is within an embedded clause, it is still local. For instance, (44b) is basically a case of merging the construction in (40) as a complement clause. Therefore, we can group these embedded A-bar constructions together with the extraction patterns involving non-embedded subjects.

3.2.3.2 Restrictions on default agreement

There are a number configurations in which the agreement optionality reported in the previous section breaks down. These include long distance subject extraction, extraction of local persons, topicalised subjects, and extracted objects. I illustrate these in turn.
We saw in the previous section that the agreement mismatch is possible in embedded focus positions. The relevant example is repeated as (45).

(45)   Me-nim   [CP sɛ   **Kofi**₁ na   **ɛ-/ɔ**₁-káń-n   kŕataá nó].
        1SG-know   COMP K   FOC 3SG-read-PST book   DEF
        'I know that KOFI read the book.'

However, it seems that when such constituents are extracted from such embedded positions to an even higher position, the non-agreeing 'resumptive' prefix *ɛ-* cannot occur in the extraction site. We can observe this by comparing the examples in (45) with the one in (46).

(46)   **Kofi**₁ na   me-ním   [CP sɛ   **??ɛ-/ɔ-**₁-káń-n   kŕataá nó].
        K   FOC 1SG-know   COMP 3-/3SG-read-PST book   DEF
        'I know KOFI read the book.'

As far as I can tell, the constructions involved are semantically equivalent, as shown in their English translation. However, only (46) seems to rule out the possibility of having the non-agreeing prefix in the base position. Furthermore, there is an even stronger verdict against using *ɛ-* as the RP prefix when the extracted subject DP is plural, as in (47b), versus (47a).

(47)   *Long distance subject focus - plural*

     a.   Me-nim   [CP sɛ   [**Kofi né**   **Amma**]₁ na   **ɛ-/wɔ**₁-káń-n   kŕataá nó].
           1SG-know   COMP K   CONJ A   FOC 3-/3PL-read-PST book   DEF

     b.   [**Kofi ne**   **Amma**]₁ na   me-ním   [CP sɛ   *****ɛ-/wɔ**₁-káń-n   kŕataá nó].
           K   CONJ A   FOC 1SG-know   COMP 3-/3PL-read-PST book   DEF
           'I know that KOFI AND AMA read the book.'

We saw in example (39) that focused third person subject pronouns of non-complement CPs may optionally allow the non-agreeing subject prefix marking on the verb. The following examples show that this optionality is not available for *ex situ* first and second person subject pronouns. In (48a-b), we observe that only the agreeing prefixes are permitted for first person singular and second person pronouns. We see a similar pattern for first and second person plural pronouns in (49a-b).

(48)   *Singular*

     a.   **Mé**₁   na   *****ɛ/mé**₁-káń-n   kŕataá nó.
           1SG.EMPH FOC 3/1SG-read-PST book   DEF
           'I read the book.'

     b.   **Wó**₁   na   *****ɛ/wó**₁-káń-n   kŕataá nó.
           2SG.EMPH FOC 3/2SG-read-PST book   DEF
           'YOU read the book.'

(49)   *Plural*

    a.   **Yɛ́n**₁   na   ***ɛ/yɛ**₁-káń-n   kŕataá nó.
         1PL.EMPH FOC 3/1PL-read-PST book DEF
         'WE read the book.'

    b.   **Mó**₁   na   ***ɛ/mó**₁-káń-n   kŕataá nó.
         2PL.EMPH FOC 3/2PL-read-PST book DEF
         'YOU read the book.'

An interesting observation which needs to be pointed out is the fact that while (what appear to be) displaced subjects in topic constructions also generally exhibit some pattern of resumption, only the agreeing RP is possible. We see this in (50a) for topicalised singular subject DPs, and (50b) for topicalised plural subject DPs; ε- is ruled out in both cases.[13]

(50)   *Topicalised subjects*

    a.   **Kofi**₁ deɛ ***ɛ/ɔ**₁-kan-n   kŕataá nó.
         K   TOP 3/3SG-read-PST book DEF

         Kofi₁, ***ɛ/ɔ**₁-kan-n   kŕataá nó.
         K   3/3SG-read-PST book DEF
         'As for Kofi, he read the book.'

    b.   **Kofi né**   **Amma**₁ deɛ ***ɛ/wɔ**₁-kan-n   kŕataá nó.
         K   CONJ A   TOP 3/3PL-read-PST book DEF

         [**Kofi né**   **Amma**]₁, ***ɛ/wɔ**₁-kan-n   kŕataá nó.
         K   CONJ A   3/3PL-read-PST book DEF
         'As for Kofi and Ama, they read the book.'

Therefore, unlike typical A-bar constructions, e.g., *ex situ* focus, and relative constructions which rule out the non-agreeing prefix only in long distance extractions, topic constructions do not permit ε- for displaced subjects even in a local extraction configuration. This is unexpected if a topicalised DP is derived via the same mechanism as A-bar extracted DPs. Considering such evidence, among others, I will argue in subsequent sections of this chapter that, in Akan, the mechanism for deriving topic constructions is fundamental different from that which is used in deriving *ex situ* focus and relative constructions. Specifically, I will claim that the former involves base-generation while the latter involves syntactic movement.[14]

Finally, the non-agreeing RP is not allowed in sites where object arguments have been A-bar extracted. This is shown in (51a) for animate object DP, and (51b) for inanimate object DP.

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[13] Note that both strategies in the (a) and the (b) examples are acceptable ways of topicalisation in Akan.

[14] We can imagine that the impossibility of ε- as an object RP may be related to the fact that it is a subject prefix.

(51)   *No non-agreeing RP for objects*

    a.   [**Abofrá nó**]$_1$ na   Kofi fŕɛ́-ɛ   ***ɛ/nó***$_1$.
         child   DEF FOC K   call-PST 3/3SG
         'It is the child that Kofi called.'

    b.   [**Ḱrataá nó**]$_1$ na   Kofi té-e   ***ɛ/nó***$_1$.
         book   DEF FOC K   tear-PST 3/3SG
         'It is the book that Kofi tore.'

3.2.4   Section summary

From the data presented so far, we can make the following generalisations about resumption in Akan. First, Akan requires some kind of RP for all A-bar extracted subject and object DPs. In the specific case of subjects, the marking is affix-like. Second, generally, the resumptive element must agree with its antecedent DP in terms of number, person and animacy features. However, a mismatch in terms of these features between a surface displaced subject and its prefix may be possible when the extraction does not cross a clause boundary. The main patterns are summarised in (52).

(52)   *Resumption/Agreement patterns in Asante Twi*

	Agreeing RP	Default RP (ɛ-)
Local subject extraction	✓	✓
Non-local subject extraction	✓	✗
Extraction of 1st/2nd person subject	✓	✗
Object extraction	✓	✗

Based on the distribution in (52), the analysis to be proposed in the remainder of this chapter attempts to address at least the following two questions.

(53)   *Issues to address*

    a.   What formal mechanism(s) regulate(s) A-bar extraction in the language, is it movement or base-generation?

    b.   Why are agreement mismatches permitted for local extraction, but not long-distance extraction?

3.3   Sources of 'resumption' in Akan

The standard approaches to the formal modelling of resumption across languages in the minimalist literature can be grouped into two main schools of thought, i.e., resumption is either a case of syntactic 'movement', or, a case of 'base-generation'. I will argue that depend-

ing on the kind of surface displacement configuration involved, resumption in Akan can be analysed as base-generation, or movement, and illustrate how this dichotomy is supported by different aspects of the data presented in the previous section. For instance, it points to a clear distinction between focus and relative constructions, which I will argue in §3.3.1, are derived via movement, on the one hand, and topic constructions, which I will argue in §3.3.2, are derived via base-generation, on the other. I shall restrict the illustrations in this section to only object RPs, the reason being that Akan has no 'subject RPs'. As I have indicated severally early on, I consider the pronominal prefixes on the verbs in A-bar extractions as spellouts of agreement on T. The explanation for this claim is presented in §3.3.3, where I also outline the main assumptions for the analysis to follow.

3.3.1 Resumption as movement

As the name suggests, in movement-based approaches to resumption, the surface displaced DP is assumed to have moved from its base-merged position to its 'criterial position', i.e., the position where its A-bar feature is locally checked. In the schema in (54), Spec, CP can be taken to be the criterial position. In this regard, the RP is generally assumed to be a phonetic realisation of a copy of the moved DP (see, e.g., Pesetsky 1998; van Urk 2016).

(54)   [$_{CP}$ **XP** C... [$_{vP}$...***t***(⇒**RP**)...]]

In the particular case of Akan, Korsah & Murphy (2016) analyse focus constructions (including *ex situ* Wh questions) and relative constructions as involving movement. Capitilising on a long observed pattern in the language, i.e., that the tones of the verb stems of such constructions are typically high when compared to verbs in their non-A-bar counterpart. They argue that these A-bar configurations involve syntactic movement. To illustrate this, let us compare the tone of the verb stem in (55a) with that of the same verb in (55b).[15]

(55)   a.   Kofi kan -n **kŕataá nó** mprɛnsa.
            K   read-PST book   DEF thrice
            'Kofi read the book thrice.'

       b.   [**Kŕataá nó**]$_1$ na   Kofi káń -n **no**$_1$ mprɛnsa.
             book   DEF FOC K   read-PST 3SG thrice
            'Kofi read THE BOOK thrice.'

We notice that the non-high tones (unmarked here) on /a/ and /n/ of the verb stem in (55a) become high in (55b). Korsah & Murphy (2016) show, furthermore, that the robustness of

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[15]The inclusion of the adverbial in the (55) is only meant to induce the overt realisation of the inanimate RP; it has no significant bearing on the process being discussed here.

the pattern in (55) is reinforced by the fact that this high tone seems to be registered on every verb involved in long A-bar extraction, such as (56b), in comparison with (56a).[16]

(56) a. Kwaku ⃞nim⃞ [CP sέ   Amma ⃞hu⃞-u [CP se   Kofi ⃞kan⃞-n **kŕataá**
          Kw   know COMP A   see-PST COMP K   read-PST book
          nó mprɛnsa]].
          DEF thrice
          ' Kwaku knows that Ama saw that Kofi read the book thrice.'

      b. [**Kŕataá nó**]₁ na Kwaku ⃞ním⃞ [CP sέ   Amma ⃞hú⃞-u [CP sɛ   Kofi
          book DEF FOC Kw   know COMP A   see-PST COMP K
          ⃞káń⃞-n **no**₁ mprɛnsá nó]].
          read-PST 3SG thrice CD
          'Kwaku knows that Ama saw that Kofi read THE BOOK thrice.'

Again, we observe in (56b) that all the verbs on the path of *Kŕataá nó*, which has crossed two intermediate CPs, change from non-high to high. Korsah & Murphy therefore analyse the presence of the high tone as a morphological reflex of successive cyclic movement, making a case for the *v*P as a phase, i.e., the high tone is the exponent inserted whenever the *v*P phase is crossed by a moving XP.[17] The derivation in (57) represents the sentence in (55b).

(57)   [CP **Kŕataá nó**₁ [C na [TP Kofi [*v*P **t**₁ kann **no**₁ mprɛnsa.]]]]

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[16]As indicated earlier, I discuss the status of the clause-final determiner, i.e., CD in chapter 4.

[17]It must be pointed out that apart from the tonal reflexes evidence, Korsah & Murphy (2016) adduce further evidence including, weak cross-over effects, quantifier scope ambiguity and connectivity effects, e.g., idiom reconstruction (i) and Principle C reconstruction (ii), in further support of their movement-based analysis.

(i)   *Idiom reconstruction*

       a. Ne-nán₁   na ɔ-**gyá**-ɛ   t₁ [PP wɔ   dán nó mú]
           1SG.POSS-leg FOC 3SG-leave-PST   be.located room DEF inside
           'It's defecating that he did in the room.'   (✔*idiomatic*)
           Also: 'It's his leg that he left in the room.'   (✔ *literal reading*)

       b. Ne-nán   deέ ɔ-**gya**-ɛ   [PP wɔ dán nó mú]
           1SG.POSS-leg TOP 3SG-leave-PST   LOC room DEF inside
           #'As for defecating he did it in the room.'   (**idiomatic*)
           'As for his leg, he left it in the room.'   (✔ *literal reading*)

(ii)   *Principle C reconstruction*

       a. [DP Kofi₁ nua   yi]ⱼ deɛ, ɔ₁-**dɔ**   noⱼ paa.
               Kofi brother DEM TOP 3SG-love 3SG really
           'As for this brother of Kofi's, he really loves him.'

       b. ??[DP Kofi₁ nua   yi]ⱼ na ɔ₁-**dɔ́** noⱼ paa.
               Kofi brother DEM FOC 3SG-love 3SG really
           'It is this brother of Kofi's that he really loves.'

In (57), the A-bar marked object DP first moves from the complement position of V to spec, *v*P, and then it subsequently moves to Spec, CP. Thus, under this approach, the RP may be seen as a spellout of a trace or a lower copy of the moved DP.

The description of the movement-based approaches given above is a rather simplified one. There are a couple of empirical and theoretical challenges. For instance, there is no consensus as to the nature of the spellout of the trace (or lower copy) of the extracted item.[18] Furthermore, given the evidence presented above, I will maintain in this dissertation that resumption in Akan is movement-driven. However, instead of the copy-spellout account, I will adopt a version of the movement-based approaches recently proposed in Klein (2017). I outline the details of the proposal in §3.3.3.

3.3.2 Resumption as base-generation

In base-generation approaches (see, e.g., Salzmann 2011, 2009; Shlonsky 1992; McCloskey 2011), the surface displaced DP is assumed to have resulted from directly merging it in the specifier of a CP, as sketched in (58).

(58)   [$_{CP}$ **XP** C... [$_{T/vP}$...**RP**...]]
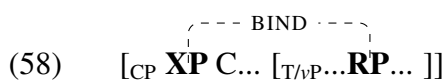
Given a configuration like (58), the φ feature dependency that a DP has with its RP in this approach is explained in terms of semantic binding between the RP and its surface antecedent in Spec, CP. In the representation in (58), the binding is indicated with the dashed line. This is for instance, the approach suggested by Saah to account for resumption in Akan when he writes:

> [...]pre-IP wh-words are not the result of syntactic wh-movement in Akan. Such sentences, as well as relative clauses, cleft and topicalized sentences in Akan neither exhibit gaps nor observe island constraints (i.e., Subjacency) which are minimum diagnostics of syntactic wh-movement as identified by Chomsky (1977), and many others after him, such as Soames & Perlmutter (1979), and Chung (1994). A plausible analysis of such constructions in Akan, therefore, is one that sees these structures as involving a base-generation of a constituent in [Spec, CP] and base-generation of a resumptive pronoun in the corresponding argument position within the complement or comment sentence/clause. (Saah 1994:173)

The above quotation suggests that Saah's conclusion is premised on the absence of evidence for a movement-base account. However, as the empirical evidence referred to in the previous

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[18]See Klein (2017), for instance, for a discussion of the associated problems.

section suggests, there is reason to assume that A-bar constructions with RPs in Akan involve movement. Accordingly, I will treat other information structure-related configurations which lack the requisite empirical evidence for syntactic movement, e.g., topic constructions, as derivable through base-generation. In concrete terms, if Korsah & Murphy are right, then topic constructions are good candidates for the approach suggested in Saah (1994); in such constructions, the evidence that Korsah & Murphy point to does not exist. For instance, we arrive at such a conclusion when we compare the tone of the verb stems of the topic constructions in (59). Here, we observe that, unlike the tones of verbs in focus and relative constructions (which become high), the verbs in (59) remain non-high. Given that the relevant verb stems lack the tonal reflexes, therefore, we can assume that there are no syntactic movement operations in (59).

(59) *Topicalised objects*

    a.   [**Kŕataá nó**]₁ déɛ́ Kofi ⟨kan⟩-n **no**₁ mprɛnsa.
        book   DEF TOP K   read-PST 3SG thrice
        'As for the book, Kofi read it thrice.'

    b.   [**Kŕataá nó**]₁ déɛ́ me-⟨nim⟩ sɛ́   Kofi ⟨kan⟩-n **no**₁ mprɛnsa.
        book   DEF TOP 1SG-know COMP K   read-PST 3SG thrice
        'As for the book, I know Kofi read it thrice.'

So, keeping it simple, the explanation for a construction like (59a) will be that *Kŕataá nó* 'the book' is base-merged in Spec, CP, and it binds a base-generated *no* in the complement position of *kan* 'read', as in (60).

(60)   [$_{CP}$ **Kŕataa nó** [$_C$ déɛ́ [$_{TP}$ Kofi [$_{vP}$ kann **no** mprɛnsa.]]]

$$\overset{\text{BIND}}{\overbrace{\qquad\qquad\qquad\qquad}}$$

3.3.3 RP as a spellout of stranded *phi*

In this chapter, I follow a proposal by Klein (2017) (and references cited therein) in assuming that resumption (in Akan) is first, syntactic movement-driven, and second, the RP is the spellout of the φ features left behind after an operator feature-bearing DP/NP has been moved out of the *phi* phrase (φP). The first part of this assumption has already been justified on empirical grounds in §3.3.1, so I will not belabour that point. In what follows, I flesh out the details of the second part, as well as propose a few modifications for the present purposes.[19]

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[19] Note the following feature notation convention:

(i)   a.   [F]: F is an inherent feature
       b.   [∗F∗]: F is an inherent feature which needs checking or valuing
       c.   [F:□]: F needs a value
       d.   [F:α]: α is the value of F

3.3.3.1 Klein (2017)'s proposal

In a proposal that modifies the structure assumed in the so-called 'Big DP' approach to resumption (see, among others, Boeckx 2003), Klein (2017) assumes that a resumptive pronoun and its antecedent DP (or NP) enter the derivation as part of one structure. The idea is that, every A-bar-marked nominal is actually a φP with an embedded DP, as in (61).

(61) *Base structure*

$$
\begin{array}{c}
\varphi\text{P} \\
\diagup\diagdown \\
\varphi \quad \text{DP} \\
\quad [*\text{OP}*]
\end{array}
$$

So, we see that the DP marked with the operator feature, i.e., [*OP*], is merged as the complement of a φ head. Presumably, at this stage, the two syntactic elements are local enough to share the relevant φ features, a justification for the φ morphological dependency between them later on. However, the φ head is eventually stranded when the DP undergoes A-bar movement, creating a structure like (62). According to Klein, this is how the relationship between an RP and its antecedent, such as *ɔbáá* and *nó* in (63), is derived.

(62) *φ stranding*

$$
\begin{array}{c}
\text{XP} \\
\diagup\diagdown \\
\text{DP}_1 \quad \varphi\text{P} \\
[*\text{OP}*] \quad \diagup\diagdown \\
\phantom{[*\text{OP}*]}\quad \varphi \quad t_1
\end{array}
$$

(63) Me-hu-u   **ɔbáá**   áa   Kofi wáré-e   **nó**₁ nó.
      1SGsee-PST woman REL K   mary-PST 3SG CD
      'I saw the woman whom Kofi married.'   (Saah 2010:92)

The representation of the resumption relation in (63) can be sketched as (64). Here, the A-bar-bound object DP moves from its base position as the complement of φ through an intermediate landing site to its criterial position in spec, XP.

(64)

$$
\begin{array}{c}
\text{XP} \\
\diagup\diagdown \\
\text{DP}_1 \quad t_1 \quad \varphi \quad t_1 \\
\text{ɔbáá} \\
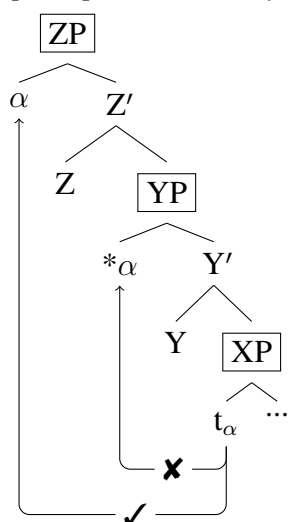\quad \text{nó}
\end{array}
$$

3.3.3.2 The approach here

I will adopt Klein (2017)'s base structure in (61). As I indicated in §2.4.1 of chapter 2 (for Gã, and for that matter Kwa in general, including Akan), one major advantage of such a structure is the plausibility of a uniform morpho-syntactic account for both resumptive pronouns and other anaphoric pronouns. Indeed, we have already pointed out that both kinds of pronouns in the language have a similar morphology (see §3.2.3). However, I am by no means implying that all pronouns in Akan originate in a structure like (61); only resumptive pronouns do. Furthermore, a stranded φ configuration like (62) may provide independent support for the presence RPs even in islands, as we saw in §3.2.2.2. It is important to also point out that under this approach, even extraction from a subject position will strand a φ(P) in the base position. Furthermore, in implementing the φ stranding operation, I will assume the following.

First, as far as the analysis presented here is concerned, φP is not a phase. This is a departure from Klein's implementation according to which this would mean finding a way to deal with the complement-to-spec antilocality constraint (Abels 2003). Therefore movement out of the φP, while it needs to conform to the comp-to-spec constraint, need not go through spec, φP. In any case, the comp-to-spec constraint is largely relevant for only object extraction. I will therefore assume an additional constraint, but one that is relevant for subject extraction, i.e., the spec-to-spec extraction. One such proposal comes from Erlewine (2016), as in (65).

(65)   a.   *Spec-to-Spec antilocality* (Erlewine 2016:431)

         Ā-movement of a phrase from the Specifier of XP must cross a maximal projection other than XP.

     b.   *Definition: crossing* (Erlewine 2016:445)

         Movement from position α to position β crosses γ if and only if γ dominates α but does not dominate β.

Let us spend a few paragraphs to explain how the conditions in (65) work. The constraint basically says that A-bar extraction of subjects constituents cannot proceed from one specifier to the immediately next higher specifier. We can represent this intuition with the configuration in (66), where t_α, *α/α and YP stand for α, β, and γ in (65) respectively.

(66)   *Spec-Spec antilocality configuration*

a.   ✘ γ (=YP) dominates both α (=t_α) and β (=*α).

b.   ✔ γ (=YP) dominates α (=t_α) but not β (=α).

As the keys below the schema in (66) show, the unsuccessful movement operations would have taken place from spec, XP to the immediately next higher specifier position, i.e., spec, YP. Conversely, in the successful movement step, spec, YP is crossed altogether. The main empirical motivation for the above constraint comes from the distribution of locality-sensitive morphological effects in Kaqchikel (Mayan, Guatemala) A(gent) (F)ocus constructions. The crucial data from Erlewine (2016) are succinctly presented below.

In non-A-bar constructions in Kaqchikel, ergative agreement is marked on the verb. We see this in (67a). However, when the subject argument, i.e., *Juan* in (67a) is A-bar extracted to create a focused Wh construction, the agreement on the verb stem found in the non-A-bar version in (67a) is no longer licit. We see this when we compare (67a) and (67bi). Instead, a different morphology, marked as **AF**, appears on a transitive verb, as we see in (67bii).

(67)   *Kaqchikel* (adapted from Erlewine 2016:430)

a.   Iwïr   x-∅-u-**tëj**   ri wäy ri a Juan.
     yesterday COM-B$_{3sg}$-A$_{3sg}$-eat the tortilla   Juan
     'Yesterday Juan ate the tortilla?'

bi. *Achike x-∅-u-**tëj**   ri wäy?
     who   COM-B-$_{3sg}$-A$_{3sg}$-eat the tortilla
     'Who ate the tortilla?'

bii. Achike x-∅-tj-**ö**   ri wäy.
     who   COM-B$_{3sg}$-eat-**AF** the tortilla
     'Who ate the tortilla?'

Interesting, when there is a syntactic material intervening between the Wh-focused subject

and the verbal complex, the **AF** morphology now disappears. We see this when we compare (67bii) with (68). Note that the affix on the verb stem no longer ends with *ö* like (67bii), but rather, *ëj*, like (67a).

(68)   *Kaqchikel* (Erlewine 2016:439)

Achike **kanqtzij** x-∅-u-**tëj**   ri   wäy.
who   actually   COM-B$_{3SG}$-A$_{3sg}$-eat the tortilla
'Who actually ate the tortilla?'

The gist of Erlewine (2016)'s analysis of these observations is that in the cases showing the **AF** morphology, the movement is syntactically calculated to be too short, in violation of a 'spec-to-spec constraint'. This is in contrast to cases like (68) where the presence of the intervening material makes the distance covered by the extracted material long enough, in conformity with the spec-to-spec constraint.

So, for the purposes of discussions in this chapter, the two constraints on the distance covered by an A-bar moved element can be summarised as (69).

(69)   a.   *Object extraction*: *comp-to-spec
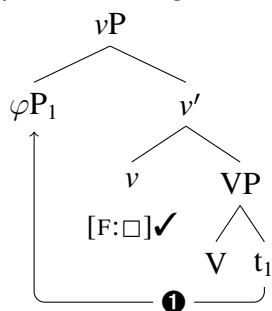   b.   *Subject*: *spec-to-spec

Returning to the implementation of the movement/extraction that leads to φ stranding in Akan, I assume that sub-extraction of the operator-marked DP is triggered by the operator feature, i.e., [*OP*], itself and nothing else.[20] Therefore, in constructions that involve resumption, the DP always moves to the edge of the nearest phase. For instance, for subject resumption, I assume the structure in (70).
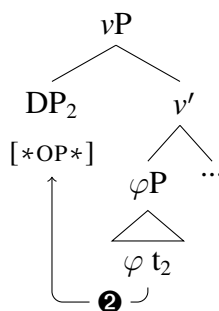
(70)   *Subject: stranding φ*
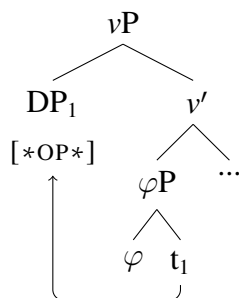
In (70), φP is base-merged in an inner spec, *v*P. The DP then moves to an outer spec, *v*P. For object resumption, I assume that generally, there are two steps involved, resulting in the structures in (71) and (72).

---

[20]In the present proposal, this is possibly what sets φPs in A-bar constructions apart from φPs in non-A-bar constructions. The DP complement of the φ head in the latter lacks an operator feature to drive the sub-extraction operation.

(71)   *φP scrambling*

```
                vP
              /    \
         φP₁        v′
          |        /  \
          |       v    VP
          |    [F:□]✓  /  \
          |          V    t₁
          └──────────❶────┘
```

(72)   *DP sub-extraction*

```
                vP
              /    \
         DP₂        v′
        [*OP*]     /  \
          |      φP    ...
          |      / \
          |     φ   t₂
          └─────❷
```

In (71), φP moves from a complement position in the VP to spec, *v*P. As the analysis in chapter 2 may suggest, this particular movement, triggered by agreement between φP and *v*, will be specific to resumption configurations involving an object argument that is animate in Kwa languages. The second step is schematised in (72). Here, the operator-marked DP inside the φP subsequently moves out to an outer specifier of *v*P. From there, it proceeds to its criterial position. A potential conceptual problem with respect to the steps for φ stranding in the context of object RPs in configurations like (72) is 'freezing', i.e., the idea that sub-extraction out of moved constituents tends to be illicit crosslinguistically (see, e.g., Ross 1967). Thus, ordinarily, we may want to rule out the step in (72). However, I assume that this problem does not arise in (72), because the sub-extraction operation applies string vacuously, i.e., it does not cross an X.[21]

For inanimate object resumption, however, there is no agreement between *v* and φP. Therefore, I assume that the first step, as in (71), does not take place, i.e., φP does not move. But since the operator feature needs to be checked in any case, the DP self-sub-extracts to spec, *v*P. I will assume in the details of the analysis (to be presented in §3.4.2) that the stranded φ in contexts involving an inanimate stranded φ is deleted, in line with the analysis in chapter 2. Therefore, in principle, the mechanism is similar to what takes place in derivations involving objects pronouns in non-A-bar configurations, except that these later cases involve more complex structures, i.e., φPs, compared to just φ in chapter 2.

3.3.4   Interim summary

In this section, I have assembled the theoretical machinery that may be deployed to explain the distribution of resumptive pronouns in Akan. I have suggested that it may arise from base-generation or movement. Specifically, I have presented empirical evidence to argue that that A-bar constructions here involve movement, but topic constructions seem to involve base-generation. I have also outlined other assumptions that will be needed for the analysis of the data discussed earlier. What is notable here is that the RP and the DP bearing the

---

[21]Furthermore, given the position from which the sub-extraction takes place, it is not clear how φP will count as an object, unless one assumes that the derivation remembers where it came from to spec, *v*P, a view that is conceptually undesirable.

operator feature originate as part of the same φP. The operator feature ultimately forces the DP to sub-extract towards its final A-bar landing site, stranding the φ head.

3.4 Deriving the patterns

In this section, I analyse each of the patterns of resumption (*cum* agreement) that were described in §3.2.2. Recall the various patterns a summary of which is repeated in (73).

(73)   *Resumption agreement patterns in Asante Twi*

	A-bar operation	Agree	Default (ε-)
(i)	Local subject extraction	✓	✓
(ii)	Non-local subject extraction	✓	✗
(iii)	1st/2nd person extraction	✓	✗
(iv)	Object extraction	✓	✗

I will maintain the use of the focus operator feature-driven movement in the illustrations, with the assumption that the derivation of relative constructions and Wh constructions follow similar steps.[22]

3.4.1 Subject resumption

The claim here is that Akan has null resumptive pronouns for subjects. Following the arguments presented in §3.2.1.1, I construe the subject prefixes in such contexts as agreement markers. In what follows, I show how the various subject agreement patterns may be derived.

3.4.1.1 Resumptive prefix as agreement on T

To begin, the discussions and the patterns illustrated so far have shown that the base position of extracted subjects are filled with a bound form that has some dependency with the extracted constituent. I am referring to prefixes like *ɔ-/ɛ-* on verb stems like *kán* in (74).

---

[22]A-bar heads against which an A-bar feature of a given DP operator is checked in syntax in the left periphery are to be understood as follows:

(i)   a.   [FOC:□]✓ = [FOC:+] (Focus construction)
        b.   [REL:□]✓ = [REL:+] (Relative construction)
        c.   [WH:□]✓ = [WH:+] (Wh construction)

On the morphology side, the features in (i) will be realised as follows.

(ii)   [FOC:+] ↔ *na*
        a.   [F:REL] ↔ *áa*
        b.   [F:WH] ↔ *hwan* 'who'/ *(ɛ)deɛn* 'what'

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(74)   **Kofi**₁ na   *(**ɛ-/ɔ-**₁)-káń-n   kŕataá nó.
       K   FOC 3-/3SG-read-PST book DEF
       'KOFI read the book.'

Here, I will treat such prefixes as agreement markers on T. Specifically, I will analyse each instance as a spellout of φ agreement between the A-bar-displaced constituent and a φ probe on T. This view seems to be empirically motivated, as the following four data points suggest.

First, we are able to directly link the morphology of subject markers in both A-bar and non-A-constructions. For instance, a subject pronominal prefix in the case of non-A-bar constructions is usually the same in form as an RP marked on the verb. We see this in (75).

(75)   a.   **Kofi**₁ na   *(**ɔ́**₁-)á-dá.
            K   FOC 3SG-PERF-sleep
            'KOFI is asleep'

       b.   **Ɔ**-a-dá.
            3SG-PERF-sleep
            'S/he is asleep'

Second, the pronominal prefixes are similar to other T(ense)-related affixes in the language. For instance, they are all bound forms that are marked on the verb. An example is the perfective marker *a-* in (75). Third, we saw in §3.2.1.2 that other agreement-related affixes, specifically, *ɛ-* may be marked on the verb even in non-A-bar contexts. The fact that it may be permitted in A-bar contexts also suggests that it is derived via a similar morpho-syntactic process, i.e., an interaction between T and the subject argument. Fourth, these subject pronominal markers are not as independent as 'real' pronouns, when compared with object pronouns. For instance, we saw in §3.2.1.1 that unlike object pronouns, a subject prefix cannot be conjoined with a full DP.

With the above reasons in mind, I propose that subject resumptive pronouns in Akan have a null morphological exponent, as in (76).

(76) $\varnothing \leftrightarrow \varphi[\text{CASE: NOM}]$

The morphological rule in (76) basically says that every φ head which is assigned a nominative case will be realised by a null vocabulary item. This proposal suggests an alternative way to account for instances of null pronouns in the language, except that it is specific to subject pronouns. From a conceptual perspective, and given the the theory of pronoun realisation proposed in chapter 2, this is expected. In other words, if the subject pronoun had a phonetic content, we would expect to find an independent pronoun (which could in addition function as an RP) for subjects, since they are base-merged in a specifier position. But we know the facts suggest otherwise. The various subject agreement prefixes are derived as follows.

3.4.1.2 Local subject extraction

Recall data like (77), showing the extraction of a non-embedded subject to an A-bar position. I will show how we can derive the optional agreement, and the lack of same in examples like (78). Note that the (a) examples differ from the (b) examples in terms of number.
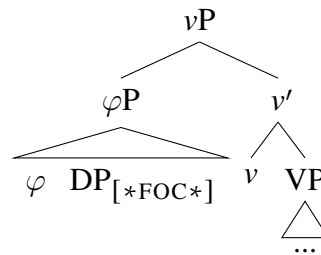
(77)   *Animate*

    a.   **Kofi₁** na **ɛ-/ɔ₁-káń-n**   kŕataá nó.
         K   FOC 3-/3SG-read-PST book DEF
         'KOFI read the book.'

    b.   [**Kofi né**   **Amma**]₁ na **ɛ-/wɔ₁-káń-n**   kŕataá nó.
          K   CONJ A   FOC 3-/3PL-read-PST book DEF
          ' KOFI AND AMA read the book.'

(78)   *Inanimate*
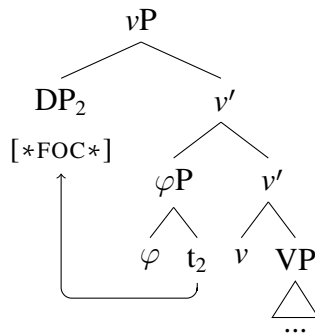
    a.   [**Krátaá nó**]₁ na   *ɔ-/ɛ₁-dá   pónó nó só.
         book   DEF FOC 3SG-/3-lie table DEF top
         'THE BOOK is on the table.'

    b.   [**N-kŕataá nó**]₁ na   *wɔ-/ɛ₁-dá pónó nó só.
         PL-book   DEF FOC 3PL-/3-lie table DEF top
         'THE BOOKS are on the table.'

First, let us imagine that the subject constituent to be extracted has already been built, as in (79). Note that the DP complement bears the operator feature. In a bottom-up derivation, after the VP has been built, v is merged, φP in (79) is merged in spec, vP, to get (80).

(79)   *Built φP*

$$\varphi\text{P}$$

    φ DP
          [∗FOC∗]

(80)   *Merge(V,φP)*

$$v\text{P}$$
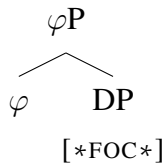
    φP v'
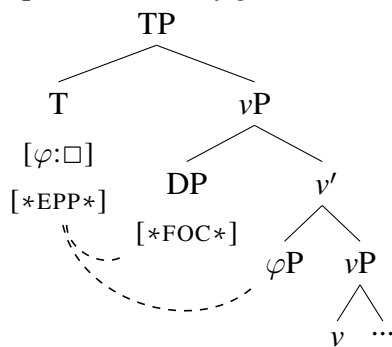 φ DP$_{[∗FOC∗]}$ v VP
                 ...

Ignoring external arguments for now, the stage in (80) is common to all syntactic derivations. However, given the operator feature on the DP complement of φ, the DP needs to move out, to assert a position that will make it possible for further movement towards its criterial position. However, the farthest it can move to is the edge of vP, i.e., spec,vP, since vP is a phase. Therefore, the DP sub-extracts to an outer specifier of vP, stranding φ(P), as in (81).

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(81)   *φ stranding*

$$
\begin{array}{c}
vP \\
\diagup \quad \diagdown \\
DP_2 \qquad v' \\
[*FOC*] \quad \diagup \quad \diagdown \\
\qquad \varphi P \quad\quad v' \\
\qquad \diagup\diagdown \quad \diagup\diagdown \\
\qquad \varphi \;\; t_2 \;\; v \;\; VP \\
\qquad\qquad\qquad \triangle \\
\qquad\qquad\qquad ...
\end{array}
$$

The movement step in (81) creates a configuration in which the edge (the specifier) of *v*P hosts two syntactic elements, i.e., a DP with an operator feature in the outer specifier, and a φ(P) in the inner specifier. This will be the structural configuration before T is merged. Following the rendition of the notion of 'equidistance' in Chomsky (1995:356), and its use in, for instance, Collins (1997b:22-24), McGinnis (1998:36, 102-24), Anagnostopoulou (2003:143-161), Ura (2000:31), among others, the configuration in (81) suggests that when T is merged, both DP and φP are in a position to move to spec, TP in order to fulfill an EPP requirement on T. This is schematised in (82).

(82)   *Equidistance configuration with T*

$$
\begin{array}{c}
TP \\
\diagup \qquad \diagdown \\
T \qquad\qquad vP \\
[\varphi:\square] \quad \diagup \quad \diagdown \\
[*EPP*] \;\; DP \qquad v' \\
\qquad [*FOC*] \quad \diagup\diagdown \\
\qquad\qquad \varphi P \;\; vP \\
\qquad\qquad\qquad \diagup\diagdown \\
\qquad\qquad\qquad v \;\; ...
\end{array}
$$

In (82), the idea is that both XPs at the edge of *v*P are in an 'equidistance' relationship with T (indicated here with the dashed lines). For the present purposes, I assume that it is this kind of configuration that makes it possible for either an agreeing or a default φ morphology to be realised on T. Note that given the 'equidistance' situation in (82), the DP cannot serve as an intervener for a possible dependency between φP and T. This means that, technically, it should be possible for φP in spec, *v*P and T to agree. However, that would suggest a less principled way of restricting how the φ features on T are checked. Given this problem, I propose that, in Akan, the unvalued φ feature on T in configurations like (82) is strictly ordered after EPP, as in (83).

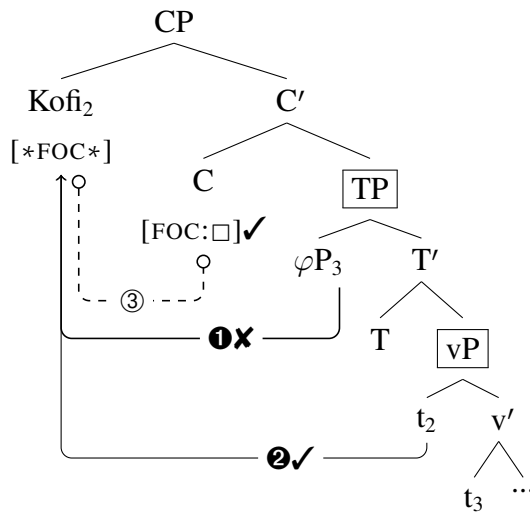(83)   *ordered features on T*
       $T_{[\text{EPP}]>[\varphi:\square]}$

That features are ordered on a given head has been independently proposed in the literature, see, e.g., Georgi (2014) and references cited therein. Given (83), an XP must move to spec, TP before the φ feature on a T probe searches for a match. This does not only restrict agreement in contexts like (82) to a spec-head relation, but it also ensures strict cyclicity (cf. Chomsky 1973:243). That is, once the specifier of T is projected, it, that is, T cannot successfully interact with a feature in spec, *v*P.

Now, returning to the derivations, let us first consider the agreeing situations. When φP is attracted to spec, TP first, we end up with the structure in (84). φP is able to establish 'full' φ agreement with T when T probes upward to find a matching Goal. The resultant configuration, shown in (85), is what eventually leads to the spellout of an agreeing resumptive pronoun on T.
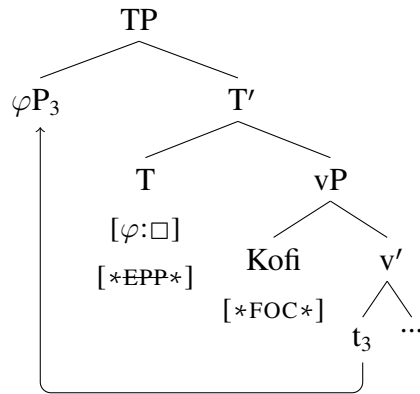
(84)   Step 1: *φP moves to Spec, TP*   (85)   Step 2: *φP-T agree*
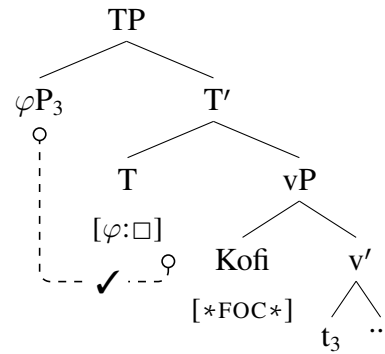
After the agreement relations in (85) have been sorted out, the derivation continues with a final movement to the criterial position, i.e., to spec, CP, after C has been merged. For this step, only the focus-marked DP is relevant. Therefore, although φP is structurally closer to the criterial position, it cannot move to spec, CP. Note that this otherwise possible step is not ruled out because of the anti-locality constraint. As far as the configuration in (85) is concerned, the sole reason why φP will not be able to move to spec, CP is that it lacks the necessary features to be attracted to that position. Thus, the DP moves from spec, *v*P to spec, CP. This derivation is represented in (86).
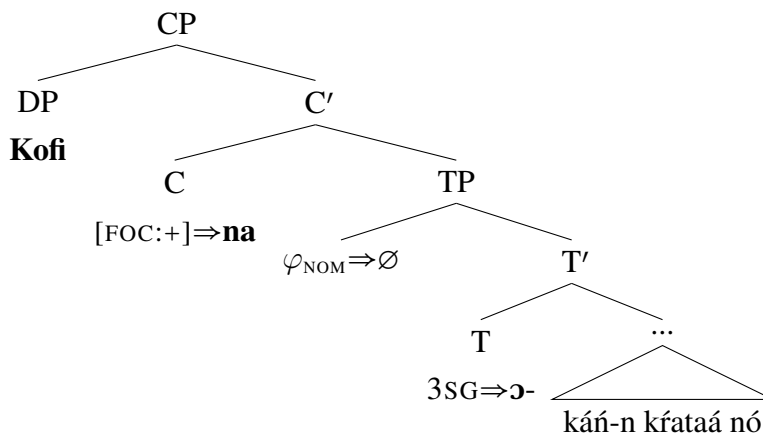
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(86)   Step 3: *DP movement from Spec, vP to spec, CP*

```
                        CP
                  ┌─────┴──────┐
               Kofi₂          C′
              [∗FOC∗]    ┌─────┴──────┐
                         C           TP
                     [FOC:□]✔   ┌─────┴────┐
                              φP₃        T′
                                    ┌─────┴────┐
                          ❶✗        T        vP
                                         ┌─────┴────┐
                               ❷✔        t₂        v′
                                              ┌────┴────┐
                                             t₃       ...
```

The position of DP in (86) makes it possible to check its A-bar feature with C. (The checked C in this context will be spelled out as a focus head.) Note also that the successful movement step in (86) obeys the criterial movement-specific anti-locality constraint of crossing at least one intervening XP beyond its immediate XP. The relevant XP here is TP. In concrete terms, if we consider data such as (87), the entire construction will be spelled out as (88).

(87) $T_{[\varphi:\ 3SG,PER]} \Rightarrow$ ɔ-

Kofi₁ na   ɔ-₁-káń-n   kŕataá nó.
K   FOC 3SG-read-PST book   DEF
' KOFI read the book.'

(88)   *Full spellout - agreeing RP*

```
                        CP
                  ┌─────┴──────┐
                 DP            C′
                Kofi     ┌─────┴──────┐
                         C           TP
                   [FOC:+]⇒na   ┌─────┴────┐
                            φNOM⇒∅        T′
                                     ┌─────┴────┐
                                     T         ...
                                  3SG⇒ɔ-   ┌────┴────┐
                                          káń-n kŕataá nó
```

In (88), note that the φ feature values of T is realised by the appropriate morphological exponent, for instance, based on the discussions in §3.2.1.2. Here, it is the prefix ɔ-, which realises morphosyntactic feature [3SG] of the terminal node T. As for the stranded φ(P) in spec, TP, it is realised as a null, presumably accounting for why no 'resumptive pronouns'

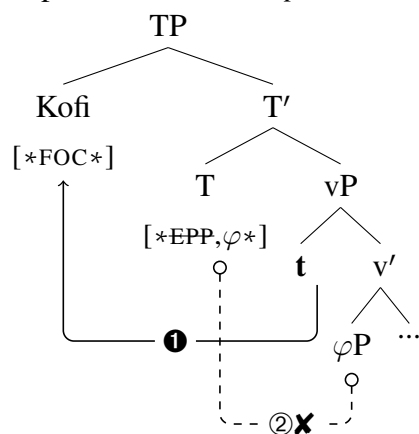are pronounced in such configurations.

Now, let us see how the system set up so far derives the default agreement cases, like in (89).

(89) **Kofi**₁ na   **ɛ-**₁-káń-n   kŕataá nó.
   K   FOC 3-read-PST book   DEF
      'KOFI read the book.'

I will demonstrate that this is the outcome when the A-bar-marked DP (not the φP), given equidistance, first moves to spec, TP. The details are as follows.

Recall that the EPP on T needs to be checked before its φ features are valued. Now, assuming this time around, that the need to satisfy the EPP property on T triggers the DP (and not the φP) to move to spec, T, given 'equidistance', this will result in a configuration like (90).

(90) Step 1: *DP moves to Spec, TP*   (91) Step 2: *Failed DP-T agree*
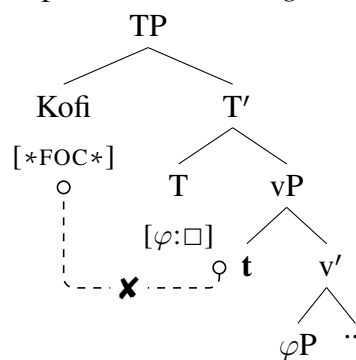
Note that the movement step in (90) does not violate the anti-locality constraint, since it is not a movement to an A-bar position. In other words, it does not displace *Kofi* from spec, *v*P to spec, CP, so the number of maximal XPs crossed does not matter here. Also, note that after *Kofi* has been moved to spec,TP, Agree is not possible between T and φP, due to strict cyclicity. Meanwhile, the moved DP is still not able to value the φ probe on T, i.e., when T probes upward. This is what (91) illustrates. The configuration in (90) suggests that T would end up with the feature profile that permits insertion of the default morphological exponent (see example (20)). The derivation proceeds as in (92).

(92)   Step 3: *DP movement from spec, TP to spec, FocP*
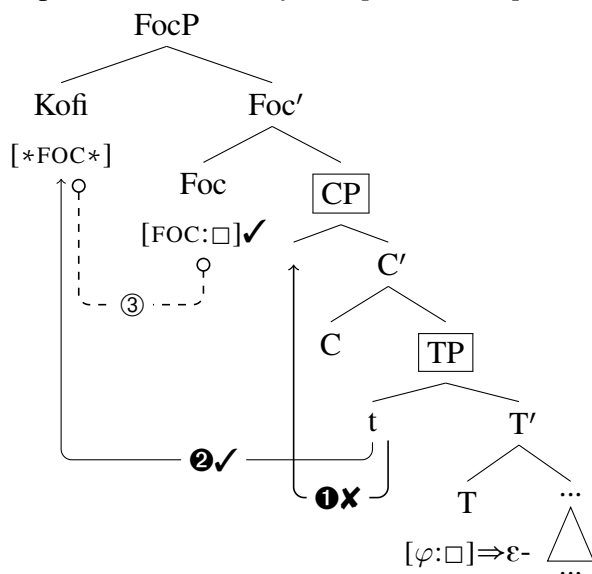
When C is merged in (92), there is an option for the focus-marked *Kofi* to move to spec, CP. However, this would violate the spec-to-spec anti-locality constraint, since it crosses only TP. If the movement step labeled as ❶ went through, the derivation would crash. Therefore, I assume that the step in ❶ does not take place at all. I propose that this problem is circumvented in such cases in Akan by merging an A-bar-specific functional head. In the specific case of (92), it is a focus head. We can then suppose that the CP in such configurations is a phase head only when it is the highest minimal XP. (This would perhaps account for the differences between (92) and (86).) Therefore, in (92), the head of FocP is treated as the phase head. This creates the necessary specifier for the movement step labeled as ❷ to take place. Notice that this step crosses CP in a addition to the TP in whose specifier the moving element originates. With *Kofi* in spec, FocP, its focus feature can be checked against the focus head - the operation labeled as ③.

Given the above analysis, we can conclude that the optional agreement that is observed in the case of subject resumptive pronouns in Akan can be attributed to which of either φP or an A-bar-marked DP, both equidistant from spec, *v*P, moves first to spec, TP in order fulfill an EPP requirement on T. When the former moves first, it results in full φ agreement between φP and T. When the latter moves first, it results in non-agreement, in which case a default morphological exponent, i.e., ε-, is spelled out on T. These have been summarised in (93).

(93)   *Optionality of agreement*

	Movement	Agree	Spell-out
(a)	DP-to-spec, TP	✘	Default
(b)	φP-to-spec, TP	✓	Full φ

In a related matter, we saw in §3.2.2.2 that the agreement patterns in (93) also hold in embedded A-bar constructions, such as (94). As sketched in (95), the patterns in (94) also presumably constitute local subject extraction, hence the availability of optional agreement.

(94) a. Me-nim [CP sɛ **Kofi₁** na **ɛ-/ɔ-₁**-káń-n kŕataá nó].
1SG-know COMP K FOC 3-/3SG-read-PST book DEF
'I know KOFI read the book.'

b. Me-nim [CP sɛ [**Kofi né Amma**]₁ na **ɛ-/wɔ-₁**-káń-n kŕataá
1SG-know COMP K CONJ A FOC 3-/3PL-read-PST book
nó].
DEF
'I know that KOFI AND AMA read the book.'

(95) [TP... [CP [**sɛ** FocP **Kofi₁** [**na** [CP [TP **t₁** T...]]]]]]

Note that the CP recursion in (95) is intervened by a Foc P, i.e., CP-FocP-CP. It turns out that, for whatever reason, in Akan this is the only this kind of CP recursion that makes it possible for the φ values on T to be checked in embedded contexts, as argued for next.

3.4.1.3 Non-local subject extraction

Recall data such as (96), which show that only agreeing resumptive prefixes are allowed in the base position when subject extraction takes place from the *v*/TP of an embedded clause.

(96) a. **Kofi₁** na me-ním [CP sɛ **??ɛ-/ɔ-₁**-káń-n kŕataá nó].
K FOC 1SG-know COMP 3-/3SG-read-PST book DEF
'I know KOFI who read the book.'

b. [**Kofi ne Amma**]₁ na me-ním [CP sɛ **??ɛ-/wɔ₁**-káń-n kŕataá
K CONJ A FOC 1SG-know COMP 3-/3PL-read-PST book
nó].
DEF
'I know that KOFI AND AMA read the book.'

I will claim that non-agreeing resumptive prefixes are illicit in contexts like (96) because unlike local subject extraction, the A-bar-marked DP in such long subject extraction configurations never moves to spec, TP. I will argue that this is only apparent if we assume that embedded CPs in such constructions do not have an A-bar projection on top of the CP. Thus, unlike the CP-FocP-CP case that we saw in (95), the embedding configurations in (96) look like (97). This further restricts the φ agreement possibilities in such derivations.

(97) [FocP [**na** [CP [CP [TP **t₁** T...]]]]]

Given (97), I propose the derivational steps in (98), for the cases in which φP moves first, in

constructions like (96). As before, the second step suggests that φP and T will agree. The derivation then continues until the operator-marked DP finally reaches spec, FocP.

(98)   *Agreeing embedded $T_{[\varphi:3\text{SG, PER}]} \Rightarrow \text{ɔ-}$*
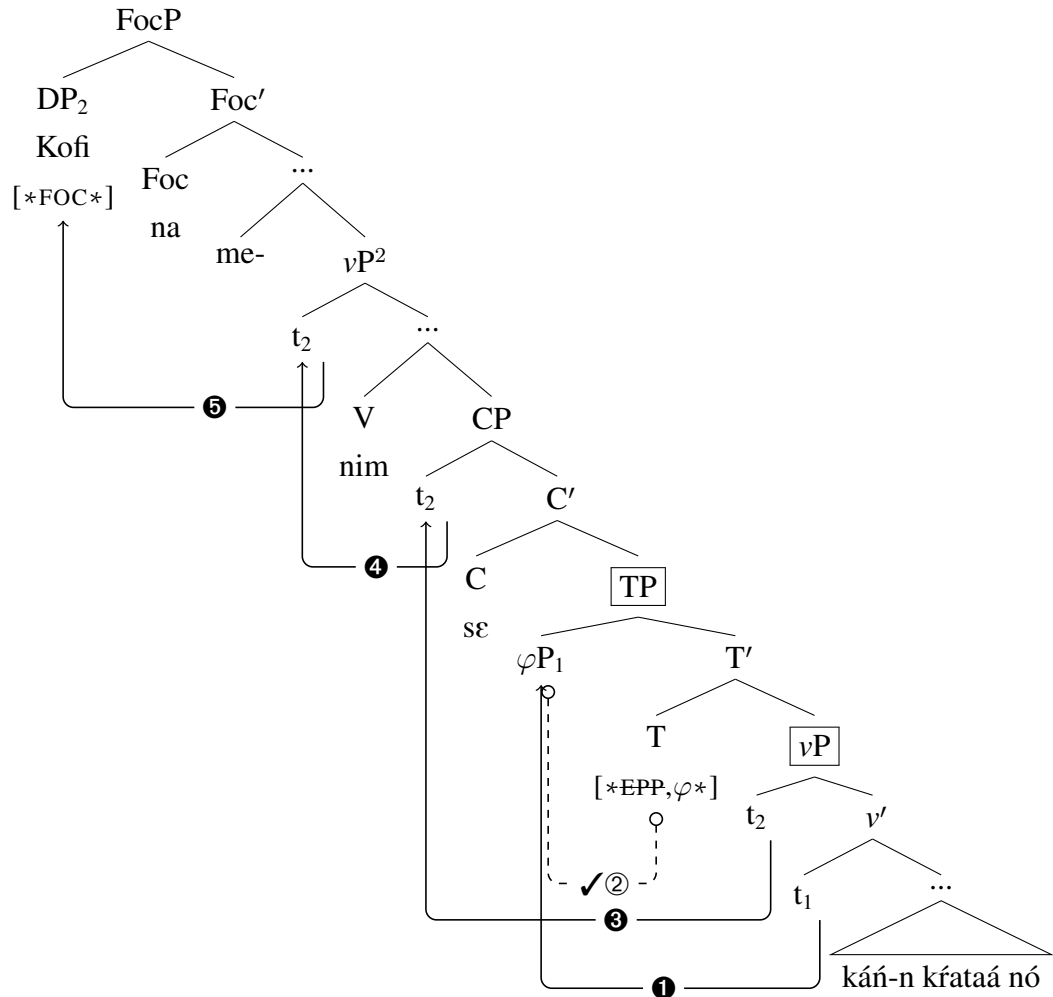
Now, recall from earlier derivations that default agreement comes about only when the DP moves first to spec, TP. Therefore, unlike (98), a derivation with a non-agreeing φ would have the DP go through spec, TP, as in (99), ultimately leading to a crash.

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(99) *Non-agreeing T in embedded contexts*
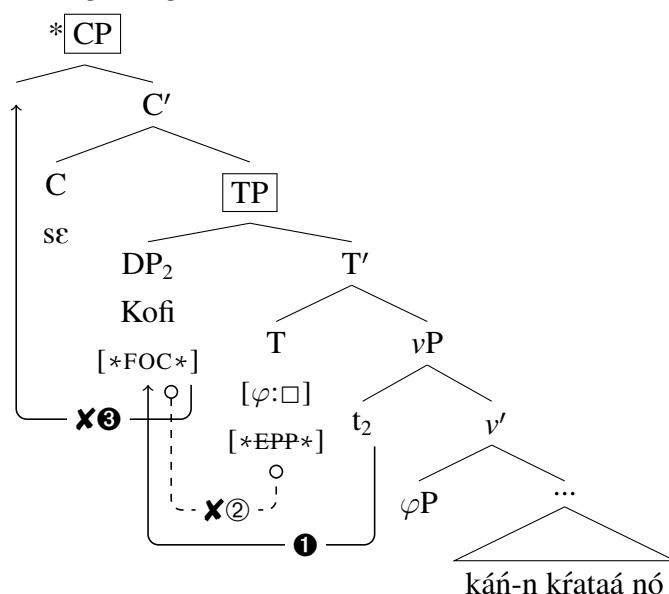
In (99), *Kofi* first moves from spec, *v*P to spec, TP, resulting in non-agreement with T, as the second step indicates. The crucial step is the third one, which violates the ban on a movement that is too short, i.e., Erlewine (2016)'s spec-to-spec anti-locality condition on A-bar-driven movements, as we saw early on. Here, the otherwise successful movement step in (99) would have crossed only TP before landing in the next potential specifier, i.e., spec, CP. Furthermore, the derivation is unable to continue, because of the inertia of the focus-marked DP in spec, TP. Ultimately, the derivation crashes because the DP will not reach its criterial position for its A-bar feature to be checked. Had this step succeeded, as it does with DPs moving from matrix spec, *v*P, the failed φ agreement would have resulted in a default agreement, i.e., ε-, on T.

Comparing (98) to (99), therefore, the illicitness of (99) seems to fall out from a conspiracy between 'equidistance', which allows the DP to first move to spec, TP, and the anti-locality constraint, which rules out an otherwise possible DP movement from spec, TP to spec, CP.

A matter that arises is, why a configuration like (99) does not project an intermediate FocP, as we saw in (95). Suppose this option were available, it would mean the A-bar-marked DP would freeze in that intermediate position, another situation which would cause the derivation to crash. Furthermore, the derivations in (98) and (99) lend indirect support for my assumption that in Akan A-bar configurations, only the highest A-bar XPs count as phases.

3.4.1.4   Blocking default agreement for 1st/2nd persons

This section will be concerned with explaining data such as (100), where first and second person subject arguments are extracted from non-embedded contexts, and yet, unlike third person subjects, default agreement on T is blocked; only full φ agreement is permitted.

(100) *First and second person non-embedded subjects*

    a. **Mó**$_1$ na   *ɛ-/**mó**$_1$-káń-n kŕataá nó.
       2PL.EMPH FOC 3-/2PL-read-PST book DEF
       'YOU (as opposed to some other people) read the book.'

    b. **Mé**$_1$ na   ***ɛ-/me-**$_1$-káń-n kŕataá nó.
       1SG.EMPH FOC 3-/2SG-read-PST book DEF
       'I (as opposed to someone else) read the book.'

Here, I note arguments in the literature (see, e.g., Heck & Müller 2007; Béjar & Rezac 2009), which suggest that 1st and 2nd person arguments crosslinguistically require their φ features to be checked. Suppose the proponents are right, then I assume the following structure for local persons in Akan.

(101) *Base structure of 1st/2nd subject pronouns*

$$\varphi P$$
$$\varphi \qquad \varphi P$$
$$[*OP*]$$
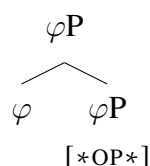
The structure in (101) implies that when φ is stranded, irrespective of the XP that moves to spec, TP, there will be full agreement with T.[23]
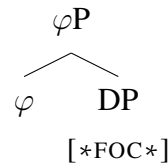
3.4.2 Object extraction

The data we have seen so far suggest that extracted object arguments require overt resumptive pronouns. In addition, they permit no default agreement morphology. We sketched the configurations in which they occur in §3.3.3.2. In this section, I will give more details about how exactly such configurations may be derived, and illustrate a few derivation.
It is important to emphasise that the animate-inanimate distinction (see chapter 2) is crucial for the analysis presented here. As we may recall, the relevant φ-related information for such element is person. Therefore, I assume the configurations in (102) and (103) respectively as the base structures for animate and inanimate object resumptive structures.

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[23]This analysis merits a comment about extracted 3rd person pronouns. As we saw in example (39), their base positions permit the default marker. For those, I assume a structure like (i). Here, default agreement is achieved when D moves spec, TP.
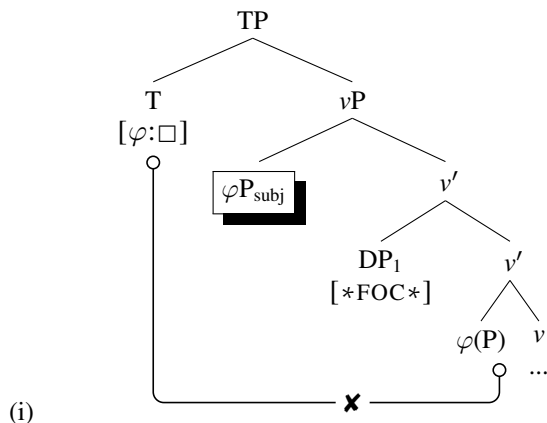
(i) *Base structure of 3rd subject pronouns*

$$\varphi P$$
$$\varphi \qquad D$$
$$[*OP*]$$
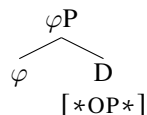
(102)   *Animate objects*

φP
```
      φP
     /  \
    φ    DP
 [PER]  [∗FOC∗]
```
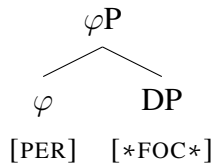
(103)   *Inanimate objects*

```
      φP
     /  \
    φ    DP
        [∗FOC∗]
```

The above structures suggest that the person feature will be accessible with φP in (102), but not with (103). Therefore, when *v* is merged and its person probe searches for a matching goal, only (102) will moved to spec,*v*P (see chapter 2), resulting in a configuration like (104).
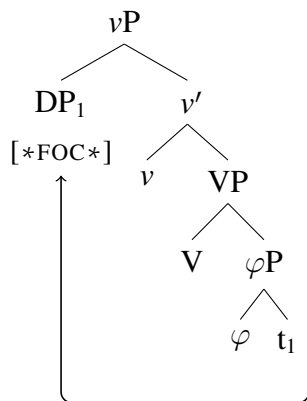
(104)   *φP moves to spec, vP animate objects*

```
           vP
          /  \
       φP₁    v'
        ↑    /  \
        |   v    VP
        | [PER:□]✔  / \
        |        V   t₁
        |_____|
```
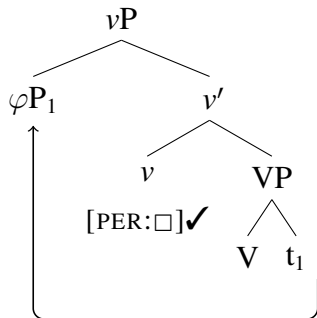
From (104), the focus feature-marked DP in (102) sub-extracts to an outer spec, *v*P, stranding φP (on its way to an A-bar position). The stranded (object) φ, given that it is now in a specifier position, is then spelled out as a resumptive pronoun. That the stranded (animate) φ in (104) is overtly realised will then be the only difference between the RP in (102), and its (inanimate) counterpart in (103), which will be null. In the specific instance of the latter, φ will be stranded in its base position, because it lacks the necessary (person) feature to be attracted to spec, *v*P, as represented in (105).[24]

---

[24]A potentially interesting situation that requires clarification is what happens with the dynamics of φ agreement with T, when a subject φP is merged in the course derivation, i.e., before the object DP moves to spec, FocP? While I will not concern myself with the details here, we can imagine that given the bottom-up approach to the derivations, we will, at some point, have a configuration like the following, which suggests that any potential φ agreement dependency between the object φP and T is totally ruled out for minimality reasons.

```
              TP
             /  \
            T    vP
         [φ:□]  /  \
            ○  φP_subj  v'
                      /  \
                    DP₁   v'
                  [∗FOC∗] / \
                       φ(P)  v
                         ○   ...
            |_____✘_____|
```

(i)

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(105)   *φ stranding -inanimate objects*

```
                vP
              /    \
          DP₁       v′
        [∗FOC∗]    /  \
                  v    VP
                      /  \
                     V    φP
                         /  \
                        φ    t₁
```

Given (105), we can imagine that the structure of the VP reduces to a symmetrical c-command relationship between V and the stranded φP. On the assumption that φP is no longer internally complex, we predict that it will be deleted, as it happens with non-RP object pronouns, following see chapter 2.

Granted this account of a stranded object φP, we can conclude that Akan does not make any surface difference between subject resumptive pronouns (which have a null exponent), and an inanimate object RPs in clause-final position (which are stripped of their phonetic properties).

3.4.3   Section summary

I have argued in this section that the subject marking on verbs in A-bar constructions results from agreement between T heads and a stranded φ(P) in spec, TP in the course of the derivation. When the A-bar-marked DP, instead, moves to spec, TP, we get instances of default agreement morphology on T, leading to the realisation of the default agreement marker ε- in such contexts. I have argued that this accounts for the agreement optionality available for third person local subject extraction. For first and second person pronouns extraction, however, I have argued that they do not occur with default agreement because the moving constituent is also a φ element. For non-local subject extraction, for which default agreement is blocked, I have argued that such constructions possibly do not project an A-bar position in the embedded context. Most crucially, I have argued that in resumption constructions involving subject arguments, the stranded φP, whether it is left in spec, vP or spec, TP, is exponed by a null morphological element. I have suggested that for this reason subject resumptive pronouns in Akan are, in fact, never overtly realised. For extracted objects, I have argued that their RP realisation basically works like ordinary pronouns in the Kwa grammar, as was discussed in chapter 2.

3.5 Extending the analysis

In this section, I will briefly sketch how the analysis proposed so far may be extended to the remaining data, particularly to topicalisation and non-A-bar constructions. I will then briefly comment on the subject resumption pattern in Yoruba.

3.5.1 Resumption and topicalisation

As I indicated earlier, there is empirical basis to conceive of a topicalisation construction like (106) as a kind of base-generation configuration. Recall that such constructions do not permit default agreement.

(106) **Kofi**$_1$ deɛ *ɛ-/ɔ$_1$-kan-n   kŕataá nó.
       K   TOP 3-/3SG-read-PST book   DEF
       'As for Kofi, he read the book.'

In the current system, we know that non-agreeing φ on T is permitted only when the operator-marked DP moves to spec, TP before proceeding to its criterial position. Thus, the explanation for the topicalisation construction cases will follow from the representation in (107).

(107)   *topic constructions*
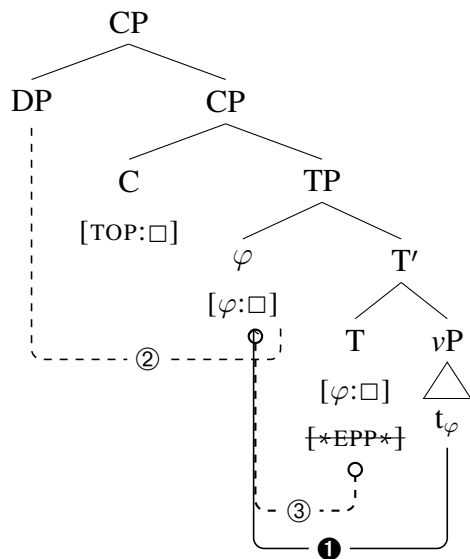
In (107), first, φ (note, without an operator-marked DP) is base-merged in spec, vP. This will be the only XP available to satisfy the EPP requirement on T. Accordingly, φ moves to Spec, TP. Here, note that it actually cannot agree with T yet, because its value ultimately depends on the second step. Therefore, I assume that after the first step, only a kind of 'link' is established between φ and T. Subsequently, when the base-merged operator DP binds φ,

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then the relevant φ agreement value can be shared with T.[25]

3.5.2 Default agreement in non-A-bar contexts

An empirically-motivated question that arises from analysing the pronominal prefixes on the verbs in A-bar constructions as agreement on T is: Why do we not always see φ agreement on Ts in Akan (even) in non-A-bar constructions? An evidence against this is (108), as we saw in §3.2.1.2.

(108) **Kofi** (*ɔ-/ɛ-)**su**-ui.
       K   3SG-/3-cry-PST
       'Kofi cried.'

Recall from earlier discussions that ε- is also a kind of third person agreement marker, e.g., for inanimate subjects, except that, due to underspecification, it is also the default form in the language. So, in fact, we could assume that there is a spellout of the φ value of T in contexts like (108). In this respect, two observations require explanation. First, how come only the default form is always realised? Second, why does this morphology alternate with a (phonetically)-null form? The latter question is with reference to the fact that ε- is optional in (108).

The first question is straightforwardly answered by subjecting data like (108) to the derivational machinery that we have already developed to account for the φ agreement relations in resumption constructions. Here, we predict that (full) agreement will never be possible. This is because the DP that moves to spec, TP presumably lacks φ features, as is the case when an A-bar-marked DP in resumptive structures moves to spec, TP.[26] Therefore, we end up with a configuration like (109).

(109) $T_{[\varphi\,:]} \Rightarrow \varepsilon$-

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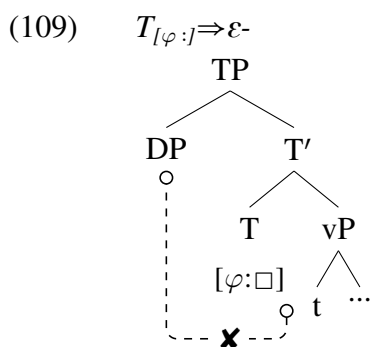
[25] A possible way to formally model this is Arregi & Nevins (2012)' approach to Agree.

[26] Here, we can further assume that Akan makes a distinction between two kinds of φ features on DPs: (a) an interpretable φ, which has a semantic effect, e.g., it distinguishes plural from singular DPs, and (b) φ that drives formal mechanisms, which is not semantically interpretable. It is the latter that we find in, for instance, the base structure of resumptive XPs, as has been assumed so far.

In (109), given that the DP does not originate in a φP, all things being equal, it is not possible for a φP to move to spec, TP, a step that would occasion (full φ) agreement on the verb. We can answer the second question by assuming that in cases like (109), the default agreement marker is an allomorph of a null morpheme for default agreement marking, as in (110).

(110)   *allomorphs of* $\mathrm{T}_{[\varphi:\square]} \leftrightarrow \varepsilon\text{-} / \varnothing$

3.5.3 Resumption in Yoruba

Yoruba also has resumptive pronouns (cf. Adesola 2010). The reported data have an interesting consequence for the analysis proposed in this chapter. The facts suggest that, unlike Akan, Yoruba has morphologically-independent (overt) subject RPs, as (111) shows.

(111)   [**Olu ati Aɗe**]₁ ni Òjó ṣo pé **o/wọ́n**₁ ra   isu.
           Olu and Ade   be Ojo say that they   buy yams
           'It was Ollu and Ade that Ojo said bought the yams.'   (Adesola 2010:81,fn.16)

Given the approach taken here, I assume that the morphology of the resumptive subject pronouns in Yoruba possibly shows an earlier system from which the Akan subject prefixes have developed. That is, in the Akan case, the pronouns have been reanalysed from their independent forms, as we find in Yoruba, into affixes. This is not implausible for this group of languages. For instance, Ejike (1995) analyses bound subject prefixes in Igbo as clitics. Considering the current proposal and the insight we get from these data points and independently-motivated claims about family-related languages elsewhere, we could think of all these as a situation whereby these pronouns have maintained their independent forms in Yoruba, have developed into clitics in Igbo, and have developed into inflectional affixes in Akan.

3.6 Summary and further issues

This chapter has been concerned with resumption in Akan. The empirical point of contention has been that despite previous claims that the language has both subject and object resumption, only object resumptive pronouns are free forms, and according to the analysis pursued here, what would then be considered as subject resumptive pronouns are, in fact, subject prefixes. Also, while the language requires full agreement between the resumptive pronouns and their antecedents for objects, the pronominal element that marks what looks like subject resumption may optionally agree. Essentially, when there is no full φ agreement, a default agreement marker in the language is used. We also noted that even for the optional subject agreement patterns, it is restricted to local contexts; long distance extraction of embedded subjects does not allow the default agreement. The proposed analysis relied on the following main assumptions. First, resumption in Akan is movement-driven. Second, operator feature-bearing DPs that undergo extraction actually originate as part of a bigger φP, and that the resumptive pronouns result from the stranding of the φ head in the course of the derivation. Third, criterial movement obeys the spec-to-spec anti-locality constraint.

Given these assumptions, I have proposed that Akan has null exponents for stranded subject φ(P)s, and that the pronominal affixes on verbs in such A-bar constructions are morphological spellouts of the φ agreement profile that T realises at the end of its interaction with an XP in spec, TP. Whenever the XP is φ(P), then full agreement is realised. The asymmetries observed between agreement prefixes in relation to extraction from embedded versus non-embedded CPs have been explained in terms of the kind of projection that is allowed in a given constructions. I have argued that in constructions involving extraction from an embedded subject position, default agreement is blocked because the A-bar-bound DP never moves to the embedded spec, TP. Object resumptive pronouns on the other hand are the actual spellout of the stranded φ heads, although the technical mechanism is subject to the object pronoun linearisation mechanism proposed in chapter 2.

The analysis was extended to another information structure-related construction, i.e., topic constructions, which allow no default agreement, and the optional default agreement marking pattern in non-A-bar constructions in Akan. For the former, I have argued that default agreement is blocked because they are derived via base-generation. This implies that the head of the resumption chain in a topic construction, conceptually, does not originate in the same phrase as its referent pronoun. Therefore, such XPs never get to reach spec, TP, the configuration that is needed for default agreement to be possible. For default agreement in non-A-bar constructions, I have argued that it is because the XPs that move to spec, TP basically lack φ features to agree. Furthermore, I proposed that the optionality between a default versus and the null spellout is such contexts is attributable to allomorphy.

If the analysis presented in this chapter is correct, then a number of further issues come to

the fore. I will mention two here. First, the place of Akan in terms of the debate about 'Null Subject Languages' (NLS) may have to be re-assessed. This seems quite crucial, especially given the fact that, apart from the language not having overt subject pronouns, as per the analysis in this chapter, there is data like (112), which seem to provide empirical support for Jaeggli & Safir (1989)'s Morphological Uniformity Theory (MUT) about NSLs.

(112)   a.   Me-kɔ́ 'I go.'

         b.   Wó-kɔ́ 'you go.'

         c.   Ɔ-kɔ́ 's/he goes.'

         d.   Yɛ-kɔ́ 'we go.'

         e.   Mó-kɔ́ 'you (PL) go.'

         f.   Wɔ-kɔ́ 'They go.'

According to the MUT, only languages with a uniform morphological inflection paradigm permit null subjects. Therefore, possibly, Akan is an NSL after all, since it has uniform morphological inflection, as in (112).

Second, a number of Kwa languages also do not have morphologically independent subject pronouns, just like Akan. This, for instance, may be obvious from the Gã data presented in this dissertation (see chapters 2 and 4). In this respect, the following statement from Kropp Dakubu (2008:104) suggests that the idea mooted in this chapter may, in fact, be extended to Gã.

> The grammatical component (INFL) of the verb includes a set of subject agreement features. The pronoun prefixes are considered to express subject agreement features of the verb word because, although they do not normally occur if an NP subject immediately precedes the verb, the pronominal elements are phonologically inseparable from the word, and because agreement between verbs is required in respect of these features in serial constructions.

Inspired by the above quotation, extending the current proposal to sister Kwa languages is a matter that will be taken up in future research.

Chapter 4

Clausal determiners in Gã

4.1 Introduction

This chapter discusses the distribution of the so-called 'clausal determiners' (CDs) in Kwa (see, e.g., Lefebvre 1992a,b), from the perspective of Gã.

4.1.1 Overview of the problem

Let us first consider the occurrence of the determiner-like element, i.e., *lɛ́* in (1) and (2).

(1) Mɛ́ni$_1$ ni Osa le   ákɛ́ mí-sumɔ-ɔ   t$_1$ *(**lɛ́**)?
     what FOC O   know COMP 1SG-like-HAB   CD
     'WHAT does Osa know that I like.'

(2) Osa le   ákɛ́ mí-sumɔ-ɔ   mɛ́ní (***lɛ́**)?
     O   know COMP 1SG-like-HAB what   CD
   'What does Osa know that I like' Literally: 'Osa knows that I like is WHAT?'

The two constructions illustrate the basic contrast between contexts where a CD is required (1), and where it is not permitted (2). Apart from CPs from which A-bar extraction has taken place, such as (1), the CD also occurs in relative clauses, CP subjects, as well as adverbial constructions like *if*, *while*, and *when* clauses. The goal of this chapter is to provide a unified analysis for its occurrence in all these otherwise unrelated contexts. The expected outcome, therefore, would be that all contexts where CDs are allowed form a natural class, to the exclusion of contexts where it is not allowed, e.g., (2).

4.1.2 Overview of the analysis

I will argue that the contexts where the presence of the CD is obligatory, i.e., at the right edge of a CP from which extraction has taken place (1), a relative clause, a CP subject, among

others, constitute a natural class of contexts where the CD, i.e., *lɛ́*, heads a DP shell projected on top of a CP, in line with a proposal by, for instance, Kiparsky & Kiparsky (1970). The data from Gã (and other Kwa languages), therefore, seem to provide overt evidence for this claim. I will argue, furthermore, that contexts like (2) where the presence of the CD is illicit is rather the exception; this is a structural context where the DP shell has been removed in the course of the derivation, in terms of Müller (2017). I will propose that the relevant syntactic configuration that licenses the removal of the DP shell is minimal c-command between a 'Remove'-feature-bearing verbal head V, and the head of the DP shell, as illustrated in (3). The configuration in (3) basically means that V has a syntactic feature that requires an XP headed by D in its c-command domain to be removed or deleted from the structure.

(3)   *Licensing condition for DP shell removal*

```
            VP
           /  \
          V    DP
       [−D−]  /  \
             CP   D
```
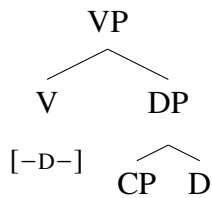
Thus, we will see that configurations in which the CD is not permitted, e.g., (2), conform to (3), i.e., V is able to interact with D in order to trigger the removal of the DP. Therefore, I will claim that constructions in Gã, which require the presence of a CD typically involve syntactic configurations for which the structural configuration in (3) is either blocked by an independent syntactic process, or the configuration in (3) does not affect it at all. Crucially, either situation makes the removal of the DP shell impossible, as we will find to be the case for configurations like (1), relative clauses, subject CPs, and clause-initial adverbial clauses. The remainder of the chapter is organised as follows. In §4.2, I present a broader background to the distribution of clausal determiners in Gã, and illustrate a few examples from sister Kwa languages. §4.3 first outlines the key assumptions, and then proceeds to analyse the relevant patterns. §4.4 is the conclusion.

4.2   Distribution of clausal determiners

I would like to open the discussion here with the following two quotes, which I think aptly express the empirical and theoretical focus of this chapter. First, from Kropp Dakubu (1992), who, in "an attempt to solve a syntactic problem in Gã" (p.3) with respect to the distribution of the definite determiner *lɛ́* (represented as **H-lɛ** in the quote), states that:

> The problem arises from the fact that the particle H-lɛ occurs in two distinguish-
> able situations. It typically occurs in a nominal phrase, where it occurs at the
> final (right-most) position, excluding intensifiers [...]. **H-lɛ** also occurs, just as

typically, at the end of certain kinds of subordinate clauses. These may be relative clauses [...], conditional, temporal or other kinds of adverbial clauses [...].
(pp.3-4)

Here, Kropp Dakubu points out what is characteristic of the CD in Gã, i.e., it is morphophonologically similar to the definite determiner in the language. We see this when we compare *lɛ́* in the following examples.

(4)   a.   tsó **lɛ́**
         tree DEF
         'the tree'

      b.   [tsó (lɛ́)]₁ ní   Taki kwɔ́   t₁ *(**lɛ́**)
            tree DEF REL T   climb   CD
            'the tree that Taki climbed'

From (4b), it seems that the CD specifies an entire clause as definite, or familiar (see, e.g., Renans 2016b), or as 'afore-mentioned'(see, e.g., Aboh 2005b:266), unlike the regular definite determiner (4a), which specifies just the noun as such.[1]

The second quote, and perhaps the more theoretically exciting one, is taken from the introductory remarks by Aboh & Essegbey (2010a) regarding Saah (2010)'s contribution.

A point that may bear on the discussion is that in Akan, [...] the relative clause involves a sentence-final particle that is homophonous with the determiner [...]. Whichever way, it might turn out that these elements have a say in the possibility of argument extraction in these languages. (p.xii)

The present section will provide empirical support for Aboh & Essegbey's take, with focus on the distribution of CDs in Gã. In §4.2.1, we will look at its distribution with respect to CP arguments of verbs. We will notice that the presence or absence of a CD consistently interacts with argument extraction from a given CP. In §4.2.2, I will present some *a priori* options to analyse such data. We will subsequently consider more data, in §4.2.3, paying

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[1]I need to mention that there is no consensus in terms of glossing what we are referring to and glossing here as the CD. Due to its syntactic position and semantic effect, elsewhere, it has been glossed as T(erminal) P(article) Ameka (1991), C(lause) F(inal) M(arker) Dorvlo (2008). In Boadi (1972), it is glossed as a relative particle, perhaps because of its indispensability in relative clauses. But for Aboh (2005a), it is simply a Det(erminer). (Saah 2010:92) maintains the CD glossing, although he interprets it to be equivalent to the deictic distal marker 'that'. What is not in doubt, though, is the fact that the CD, in almost all the Kwa languages that I know have it, is homophonous with the definite determiner, as the table in (i) shows. This is perhaps connected to its definiteness/familiarity interpretation. But, I will not address such matters in this work.

(i)   *clausal/definite deteminers*

	Gã	Akan	Ewe	Gungbe	Fon	Dangme
CD	lɛ	no	lá	lɔ́	ɔ	ɔ/a
DEF	lɛ	no	lá	lɔ́	ɔ	ɔ/a

greater attention to the distribution of the CD in contexts outside of complement CPs. Here, we will look at relative clauses, subject CPs, and adverbial clauses, e.g., conditional and temporal clauses. In §4.2.4, I present a brief survey of the distribution of CDs in other Kwa languages.

4.2.1 The clausal determiner and CP complementation

This section presents data that suggest that whenever an argument is A-bar extracted from a CP complement, a CD is required in that CP, otherwise, the CD is not permitted in such CPs. From this, I will conclude that CP complements are nominal in nature. In (5), I have given a sample list of CP-taking predicates in Gã.

(5)　　*CP-taking verbs*

    a.　*le* 'know'

    b.　*káé* 'remember'

    c.　*jwɛŋ* 'think'

    d.　*bí* 'ask'

    e.　*yɔ́sé* 'realise'

    f.　*kpɛlɛ́* 'agree'

The predicates in (5) typically occur with a CP complement, headed by the complementiser *áké*, as in (6). In these constructions, each of the CP complements contains a TP (= a clause).

(6)　*CP complements without extraction*

    a.　Osa **le**　　[CP áké　[TP Taki tsɛ́ Momo]].
　　　　　O　know　COMP　T　call M
　　　　　'Osa knows that Taki called Momo.'

    b.　Osa **yɔ́sé**　[CP áké　[TP Taki baá-tsɛ́ Momo]].
　　　　　O　realise　COMP　T　FUT-call M
　　　　　'Osa realised that Taki will call Momo.'

    c.　Osa **kpɛlɛ́** [CP áké　[TP Taki á-tsɛ́　Momo]].
　　　　　O　agree　COMP　T　SBJN-call M
　　　　　'Osa agreed that Taki should call Momo.'

Note, that each of these TPs can independently occur, as in (7), for the TP in (6a). Let us consider *tsɛ́* in (7) as our non-CP-selecting predicate, and (6a) and (7) as basic examples of constructions with CP complement and DP complement respectively. In this regard, we notice that neither construction contains any determiner.

(7)   *NP-complement without extraction*
        [_{TP} Taki **tsɛ́** Momo].
            T   call M
        'Taki called Momo.'

Now let us consider what happens when we A-bar extract out of the various XPs in the constructions in (6). Suppose we extract the subject of the TP in (7), we end up with (8).

(8)   *Extraction from non-CP*
        Osa₁ ni   [_{TP} t₁ **le**   [_{CP} ákɛ́   [_{TP} Taki tsɛ́ Momo (**lɛ́**)]]].
        O   FOC   know   COMP   T   call M   CD
        'OSA knows that Taki called Momo (as expected).'

In (8), we observe that a CD optionally shows up at the right edge of the construction. We may attribute this to the extraction, given that a similar pattern is seen when we extract from a similar position in a non-CP complementation construction, as in (9).

(9)   Taki₁ ni   [_{TP} t₁ tsɛ́ Momo (**lɛ́**)].
        T   FOC   call M   CD
        'TAKI called Momo (as expected).'

Interestingly, however, the optionality of the CD seems to disappear when the extraction takes place from a CP. Consider (10), where the CD cannot be omitted.

(10)   *Focus from CP*

        a. Taki₁ [ni Osa le   [_{CP} akɛ **e₁**-tsɛ́   Momo ??(**lɛ́**)]].
            T   FOC O know   COMP 3SG-call M   CD
            'Osa knows that TAKI called Momo.'

        b. Momo₁ [ni Osa le   [_{CP} akɛ Taki tsɛ́ **lɛ́**₁ ??(**lɛ́**)]].
            M   FOC O know   COMP T   call 3SG CD
            'Osa knows that Taki called MOMO'

A more compelling evidence for the required presence of the CD in contexts like (10) is seen with the distribution of Wh-elements. Gã, like many of its neighbours, has both *in situ* and *ex situ* question strategies (see, e.g., Kotey 2003). For predicates that select CPs that embed question phrases, e.g., *bí* 'ask', it is infelicitous for the CD to occur when the question word is *in situ*. This is illustrated for embedded Wh-subjects in (11a), and for embedded Wh-objects in (11b).

(11)   *in situ Wh elements*

    a.   Osa bí [CP akɛ **námɔ** tsɛ́ Momo] (***lɛ́**)?
         O ask COMP who call M   CD
         'Osa asked who called Momo'

    b.   Osa bí [CP akɛ   Taki tsɛ́ **námɔ** (***lɛ́**)].
         O ask COMP T   call who   CD
         'Osa asked who Taki called.'

The illicitness of the CD in (11) cannot be due to the idiosyncratic properties of the predicates or the arguments involved. For instance, if we use another predicate, like *na* 'see', which may also select an interrogative CP, the CD is still not allowed, as in (12). Similarly, if we changed the animacy property of the question word for, e.g., (11b), as in (13), the CD is still not permitted.

(12)   Osa na [CP ákɛ́ **námɔ** tsɛ́ Momo] (***lɛ́**).
       O   see COMP who call M   CD
       'Osa saw who call Momo.'

(13)   Osa bí [CP ákɛ́   Taki hé **mɛ́ni**] (***lɛ́**).
       O ask COMP T   buy what   CD
       'Osa asked what Taki bought.'

But once again, like the non-Wh focus cases in (10), when the question word is extracted out of the CP, the CD is obligatory. We see this in (14a), for a Wh-subject inside a CP, and (14b), for a Wh-object inside a CP.

(14)   *Ex situ Wh focus*[2]

    a.   Námɔ$_1$ [ni Osa le   [CP ákɛ́ **e**$_1$-tsɛ́   Momo]] *(**lɛ́**)?
         WHO FOC O know   COMP 3SG-call M   CD
         'WHO does Osa know that called Momo?'

    b.   Mɛni$_1$ [ni Osa le   [CP ákɛ́   Taki he **t**$_1$]] *(**lɛ́**)?
         what FOC O know   COMP T   buy   CD
         'WHAT does Osa know that Taki bought?'

A data point that needs to be emphasised is that the CD in the cases above could not be a stranded definite determiner, for at least two reasons. First, unlike some Indo-European languages , e.g., German, proper names in Gã do not occur with a definite determiner (15).[3]

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[2]Note that similar configurations involving non-CP-taking verbs behave just like (9).

[3]For instance, the following is possible in German:

(i)   **der** Hans (Literally: 'the Hans')

(15) a. Taki tsɛ́ Momo (*lɛ́).
          T   call M   DEF
          'Taki called (??the) Momo.'

      b. Taki (??lɛ́) tsɛ́ Momo.
          T   DEF   call M
          '(*The) Taki called Momo.'

Given (15), therefore, if we embedded (15a) in a CP, and A-bar fronted *Momo*, as in (16), we cannot readily construe the presence of (what we have been referring to as) the CD to be the stranded head of a DP from which *Momo* has been extracted. If the CD originated as part of the base XP containing *Momo*, then a bare noun would have been fronted, in which case we would not expect a pronoun that refers to *Momo* contrary to, for instance, (16).

(16) Námɔ₁ ni Osa le   [CP ákɛ́ Taki tsɛ́ lɛ́₁ *(lɛ́)]?
      who   FOC O know   COMP T   call 3SG CD
      'WHO does Osa know that Taki called?'

Second, granted (16), we can imagine that even in contexts where a full DP, such as *tsɔné lɛ́* 'the car' (17a) has been Wh-extracted, as in (17b), the *lɛ́* in the CP could not be the stranded part of the interrogative XP. If that were the case, we predict that (17c) should not be possible.

(17) a. Osa le   [CP ákɛ́ Taki hé **tsɔné lɛ́**].
          O   know   COMP T   buy vehicle DEF
          'Osa knows that Taki bought the car.'

      b. **Mɛ́ni**₁ ni Osa le   [CP ákɛ́ Taki hé t₁ *(lɛ́)]?
          what   FOC O know   COMP T   buy   CD
          'WHAT does Osa know that Taki bought?'

      c. [**Tsɔné lɛ́**]₁ ni Osa le   [CP ákɛ́ Taki hé t₁ *(lɛ́)].
          vehicle DEF FOC O know   COMP T   buy   CD
          'Osa know that Taki bought THE CAR.'

As we see in (17c), the would-have-been-stranded definite determiner has actually been fronted together with its complement, and yet, the CD still shows up in the CP.

The empirical generalisation from the foregoing observations is that extraction from CPs obligatorily requires the presence of a CD at the right edge of the CP, but non-extraction from a similar position does not require a CD to be present in the embedded clause.

4.2.2 Analytical options

We could analyse the pattern described above in two main ways, given in (18).

(18) a. The CD is never there; its presence is due to A-bar extraction (out of CP).

      b. The CD is always there; its absence is due to lack of extraction.

The more obvious option is (18a), which allows us to treat the CD as another instance of morphological reflex of A-bar extraction, as we find elsewhere, e.g., in Tagalog (see, e.g., Rackowski & Richards 2005), or Akan (see, e.g., Korsah & Murphy 2016). Reference to the Akan situation in particular is insightful, since it turns out that Akan exhibits a similar pattern for the distribution of CDs; see §4.2.4.1. On such empirical basis, following the case of Akan, we may want to model the presence versus absence of the CD like the tonal reflexes of successive A-bar movement i.e. the CD can be taken to be a reflex of A-bar movement from the CP. Furthermore, while this may be perfectly reasonable for the Akan situation, one cannot ignore the striking similarities between the distribution of CDs in both Akan and Gã. Accordingly, we would want to pursue a similar analysis for the CD distribution patterns in both languages.

Granted that the above promising line of thought is on the right track, we predict that the CD would only surface when there is an A-bar extraction. However, the data suggest otherwise. On the one hand, we find further empirical support for this approach in the syntax of relative clauses, which arguably always involve A-bar extraction. Predictably, the CD is obligatory in all such clauses. On the other hand, however, it turns out that there are other contexts that do not involve A-bar extraction *per se*, yet, we find a CD occurring. These include subject CPs and preposed adverbial phrases such as *if*, *while* and *when* clauses. Such examples are independently attested in a number of Kwa languages (see §4.2.4), Gã being one of them.

As it turns out, when all the contexts where the presence of the CD is obligatory are put together, they readily lend themselves to the second analytical option in (18) i.e. the CD is always present, but it is absent when there is no extraction. I therefore propose to model the absence of the CD in the non-extraction contexts as a case structure removal (Müller 2017) i.e. the CD is always present in the syntax, as the head of a DP shell that is typically projected on top of all CPs (Kiparsky & Kiparsky 1970). But in constructions where its overtness is illicit, or it is absent, the DP shell has been removed.

I will claim that the overtness of the CD in CPs from which extraction has taken place results from the configuration created by the position of the extracted element at some point in the derivation. The structure that is so-created interferes with the otherwise regular removal (=deletion) operation that targets the head of the DP shell, i.e., the CD. Therefore, if the CD escapes removal, its DP cannot be removed either.

4.2.3 The clausal determiner beyond CP complements

This section presents evidence to show that the CD occurs outside of contexts where extraction has taken place from a CP. Particularly, we will look at its occurrence in relative clauses (§4.2.3.1), subject CPs (§4.2.3.2), and adverbial clauses (§4.2.3.3).

4.2.3.1 Relative clauses

As one would expect, given the discussion in §4.2.1, when the head of a relative clause originates in a CP, an obligatory CD is required in that CP, as (19b) and (20) illustrate.[4]

(19)   a.   Osa le   [$_{CP}$ ákɛ́   Taki hé **tsɔné lɛ́**].
            O   know   COMP T   buy vehicle DEF
            'Osa knows that Taki bought the car.'

       b.   [[**Tsɔné (lɛ́)**]$_1$ [ní Osa le   [$_{CP}$ ákɛ́   Taki hé **t**$_1$ *(**lɛ́**)]]] e-laaje.
            vehicle DEF REL O know   COMP T   buy   CD   PERF-lost
            'The vehicle that Osa knows that Taki bought is missing.'

(20)   [**Mɔ**$_1$ [ní Osa le   [$_{CP}$ ákɛ́ **e**$_1$-hé   tsɔné lɛ́ *(**lɛ́**)]]] jí Taki.
         person REL O know   COMP 3SG-buy vehicle DEF CD   is T
         'Taki is the one who Osa knows that Taki bought the car.'

In (19b), the object of the verb in the CP complement in (19a) has been relativised while in (20), the subject of the embedded verb has been relativised. What matters here is that in both situations, the CD cannot be left out, whatsoever. We also see in (19) that the head of the relative clause may optionally be definite. As far as I know, there is no obvious differences in interpretation that is based on whether the head of the relative clause is a full definite DP or a bare noun. For instance, like *mɔ* 'person' in (20), when the non-specific/generic noun *niyenii* 'food' is the head of a relative clause, as in (21), it is interpreted as definite.[5]

(21)   Níyeníí$_1$ ní   [$_{TP}$ Taki sumɔ-ɔ   **t**$_1$ *(**lɛ**)] é-ta.
        food   REL   T   like-HAB   CD   PERF-be.finished
        'THE FOOD that Taki likes is finished'

Regarding the two successive *lɛ́* forms on the right edge of the relative clause in (20), in spoken Gã, only one is pronounced. I assume that in such situations, it is the indispensable CD that is pronounced.[6]

Returning to how the syntax of relative clauses contribute to our understanding of the distribution of the CD, it is not obvious to me as to whether the presence of the CD in the above constructions is due to the extraction from the CPs. This is because CDs independently occur on the right edge of relative clauses, whether the head noun is from a CP or not, as in (22).

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[4]Note the phonological difference between the REL(ative) particle *ní* (with high tone), and the FOC(us) particle *ni* (with low tone).

[5]In the context of the present discussion, I have nothing insightful to say about these observations in particular.

[6]See chapter 4 of Saah (1994) for a similar pattern in Akan.

(22) a. Mí-sumɔ-ɔ   [ataádé lɛ́]₁ ní   o-hé   t₁ *(lɛ́).
          1SG-like-HAB dress   DEF REL 2SG-buy   CD
          'I like the dress that you bought.'

      b. Ataádé lɛ́   ní   o-hé   *(lɛ́) yɛ   bíɛ́.
          dress   DEF REL 2SG-buy   CD be.located here
          'The dress that you bought is here.'   (adapted from Kropp Dakubu 1992:4)

In (22a), the object of the non-CP-taking verb *sumɔ* 'like' is the head of the relative clause, i.e., the relative clause modifies *ataádé lɛ́* 'the dress'. In (22b), the same DP which has been relativised is the subject of the verb *yɛ* 'be.located'. Again, we notice that the CD is obligatory.[7] In line with the assumption that the CD is always present in the syntax, I will argue in §4.3 that it is not deleted in relative clause constructions because the displaced DP ends up in the specifier position of the DP shell that dominates the relative CP.

4.2.3.2 Subject CPs

The CD is also obligatorily present in CP subjects, as in (23).

(23) [CP Ákɛ́ ámlaló   lɛ́ tsé tóó nɔ́ *(lɛ́)] feé maŋ-bíí   lɛ́ mííshɛɛ.
          COMP government DEF tear tax top CD   do country-people DEF happiness
          'That the government reduced taxes made the people happy.'

In (23), the subject of the entire clause (with *feé* 'make' as the main predicate) is the CP with its right edge occupied by an obligatory CD. What is interesting here is that, unlike the

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[7]Another group of constructions, which are related to relative clauses, and have obligatory clausal determiners are factive constructions (see, e.g., Collins 1994), or predicate relativisation constructions (Aboh 2010b:15). These are exemplified in (i), the glossing as CD is mine.

(i) *Factive constructions*

     a. Xo ɖee   Bayi xo Kofi ɔ   vɛ   nu mi.
         hit which Bayi hit K   CD bothers to me
         'The fact that Kofi hit Bayi bothers me.'   [*Fon* (adapted from Collins 1994:32)]

     b. Wlé ɖĕ mi wlé dàxó lɔ lɛ́   vé ná Kofi.
         catch that 1PL catch big CD NUM hurt for K
         'The fact that we caught the [aforementioned] big crab hurt Kofi.'   [*Gungbe* (adapted from Aboh 2005a:278)]

As the examples above show, the CD is an integral part of the construction. But given that these are essentially of the same structure as the regular cases of relative clause formation, the presence of the CD does not come as a surprise. In fact, this pattern also obtains in Gã, as in (ii).

(ii) Sɔle-mɔ ní   Krístofói sɔle-ɔ   amɛ-há-a Ghana lɛ hi.
      pray-NML REL Christians pray-HAB 3PL-give Ghana CD be.good
      'The fact that Christians pray for Ghana is good.'

I will not analyse such data in this work.

patterns that we saw for complement CPs and relative clauses in the previous sections, there is no obvious argument extraction or surface displacement of any constituent, be it within or across the CP, in these cases.

4.2.3.3 Adverbial clauses

A number of adverbial clauses also obligatorily require the CD. I will focus on *if*, i.e., conditional clauses and *when/while* clauses. Among the two sets of adverbial constructions, *if* clauses stand out, because they can occur in two structural positions i.e. (what looks like) high (= before the matrix clause), or low (= after the matrix clause). But *when/while* clauses seem to occur in only a high position. Their correlation with the occurrence of the CD has sometimes been construed as an indication of subordination, as the quote from Kropp Dakubu (1992) in §4.1 suggests.[8] In what follows, I illustrate how the CD is distributed in the context of these two sets of adverbials.

First, let us consider the following *if* clauses, adapted from Kropp Dakubu (1992:4).

(24)   *Conditional clause*

    a.   M-á-yá,   kέ(jí) o-ba   (*lέ).
        1SG-FUT-go COND 2SG-come CD
        'I will go if you come.'

    b.   Kέ(jí) o-bá   *(lέ), m-á-yá.
        COND 2SG-come CD 1SG-FUT-go
        'If you come, I will go.'

We observe in (24) that the position of the *if* clause bears on the presence or absence of the CD. For instance, when it occurs after the main clause with the predicate *ya* 'go', a position that can be described in structural terms as low, the CD is not allowed (24a). However, when the adverbial clause occurs in clause-initial position, a position that we can describe as high, the CD obligatorily occurs on its right edge (24b), like all other instances where the CD is obligatory.[9]

Given this observation, in analysing *if* clause in §4.3.5, I will treat it like a complement clause. On such an assumption, I will argue that the pattern in (24b) involves a movement operation that bleeds the deletion of the DP shell. When it stays in *in situ*, its DP shell is removed. Thus, as (24a) suggests, it is perfectly fine for the *if* clause to occur low without an overt CD.

Moving on to *when* and *while* clauses, for these, a configuration comparable to (24a), in

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[8]See also, chapter 8 of Ameka (1991) for Ewe.

[9]In fact, the equivalent of *if...then* in Gã is traditionally thought of as the discontinuous particle *kέ(jí)...lέ*, suggesting that the CD is considered to be an integral part of the configuration. This may also indicate that its occurrence in the low position is atypical, a situation that would otherwise make it similar to the distribution of the CD in other adverbial clauses, which, as we will see later, does not occur in the low positions.

which the adverbial clause is in a low position, seems illicit. Regarding the following examples, note that in Gã, both *when* and *while* clauses are marked by the clause-initial particle *béní*.[10] In (25), we observe that the *béní* clause is illicit in a low position (see Kropp Dakubu 1992:4).

(25)   *when clause*
        Mí-te   shi   (??béní e-bá).
        1SG-ICV ground   when 3SG-come
        'I got up when he came.'

Given, (25), it is not obvious to me whether the illicitness of the CD in a low position in a construction like (26a) is due to the position of the entire *when* clause, or the presence of the CD. What is clear, however, is that when the *when* clause occurs in a high position, as in (26b), the CD is obligatory.

(26)   *when clause*

        a. Mi-te   shi   béní e-bá   (??**lέ**).
            1SG-ICV ground when 3SG-come CD
            'I got up when he came.'

        b. Béní e-bá   *(**lέ**), mi-te   shi.
            when 3SG-come CD 1SG-stand ground
            'when he came, I got up.'

We notice a similarly situation with *while* clauses; it is only fine in high position (27b-c).

(27)   *while clauses*

        a. ??Osa mii-shwέ   béní   Taki mii-kasé   níí.
           O   PROG-play while T   PROG-learn thing

        b. ??Osa mii-shwέ   béní   Taki mii-kasé   níí   (**lέ**).
           O   PROG-play while T   PROG-learn thing CD

        c. Béní Taki mii-kasé   níí   *(**lέ**), Osa mii-shwέ.
            while T   PROG-learn thing CD O   PROG-play
            'While Taki is learning, Osa is playing.'

Again, we see that the *while* clause is infelicitous in a low position without the CD (27a). Furthermore, it is infelicitous with the CD in a similar position (27b). But crucially, in the pre-matrix clause position (27c), the CD is required at the right edge of the *while* clause. The pieces of evidence presented above so far suggest a possible distributional difference between *if* clauses on the one hand, and *when/while* clauses on the other hand, in Gã. There-

---

[10]The only thing that differentiates them and affects their interpretation in a given context is the aspectual property of the predicate involved; *when* predicates must be perfective, while *while* must be imperfective.

fore, we can imagine that this correlates with some differences in how they are derived. For *when/while* clauses, there is an apparent cue in the morphology of the *when/while* particle *béní*, which perhaps sets them apart from *if* clauses. The details are presented as follows.

I claim that *when/while* clauses in Gã constitute another kind of relative clause in the language. This is empirically supported by the fact that what looks like the subordinating particle *béní* can readily be morphologically decomposed and analysed as containing a relative complementiser, as in (28).

(28)   *deriving béní 'when/while'*

    a.   *bee ́lɛ́* 'the time' + *ní* 'REL(ativiser)'

    b.   *bee ́lɛ́ + ní*

    c.   ⇒ *béní*

As may be obvious from §4.2.3.1, the relative particle is *ní*. I propose that what happens in (28) is that the long vowel of *bee* 'time', i.e., *-ee*, is shortened (for whatever morpho-phonological reason), as we see in (28b). Meanwhile, the segmental part of the definite determiner is elided (again, for whatever morpho-phonological reason), leaving behind its floating high tone (see, e.g., Kropp Dakubu 1992; Wentum 1997). Subsequently, the floating high tone docks on the preceding (shortened) vowel, leading to the output in (28c).

Given (28), we can conclude that *béní* actually means '(the) time that'. This suggests that *when/while* clauses are comparable to relative clauses in terms of how they are derived. If this insight is genuine, then, the fact that *when/while* clauses require a CD in a particular structural configuration is expected.[11]

But there is a further connection between relative clauses and *when* and *while* clauses, namely, none of them are core arguments in constructions in which they occur. For instance, if we take (22b), we can omit the relative clause, and the construction will be fine, as in (29).

(29)   Ataádé lɛ́   ~~ní~~   ~~o-hé~~   lɛ́   yɛ   bíɛ́.
    dress   DEF REL 2SG-buy   CD be.located here
    'The dress ~~that you bought~~ is here.'

---

[11]Furthermore, the hypothesis that it derives from 'the time' also helps to connect the interpretation of *when* and *while* clauses and their aspectual properties. For instance, as we saw earlier, *when* clauses are typically expressed using perfective aspect, and *while* clauses tend to be in the imperfective aspect. Also, the morphological derivation sketched above seems to be supported by a more transparent analog in Akan, where, for instance, the form *(a)bre a* 'time that/which' is used for similar constructions, as in (i).

(i)   a.   (A)**bré á**   Kofi sí-i   dán   nó, ná   Amma á-tɔ   fíé.
        time   REL K   build-PST house CD then A   PERF-buy house
        'By the time Kofi built a house, Ama had bought a house.'

    b.   (A)**bré á**   Kofi ré-sí   dán   nó, ná   Amma ŕe-tɔ́   fíé.
        time   REL K   PROG-build house CD then A   PROG-buy house
        'While Kofi was builing a house, Ama was buying a house.'

Similarly, the *when/while* clauses in the following constructions can be omitted, and there will be no problems whatsoever in terms of their grammaticality.

(30) a. ~~Béní e-bá~~ lɛ́, mí-te shi.
          when 3SG-come CD 1SG-stand ground
          '~~When he came~~, I got up.'

      b. ~~Béní Taki mii-kasé~~ ~~níí~~ lɛ́, Osa mii-shwɛ́.
          while T PROG-learn thing CD O PROG-play
          '~~While Taki is learning~~, Osa is playing.'

I will, therefore, suppose a uniform analysis for the distribution of both relative clauses and *when/while* clauses with respect to the occurrence of CDs.[12]

We can summarise the above observations about adverbials with CDs as follows.

(31) *Distribution of adverbials*

	Adverbial	occurs high	occurs low
a.	*if* clause	✓	✓ (without CD)
b.	*when/while* clause	✓	✗ (N/A)

We observe in (31) that adverb clauses that require the CD typically occur in a high position.

---

[12]The distribution of *reason* clauses follows a similar pattern as *when/while* clauses, i.e., they typically occur in clause-initial positions. For instance, it is infelicitous when they occur in a low position (ia).

(i) *reason clause*
     Taki kpee Momo (??Osa hewɔ).
     T   marry M   O   be.reason
     'Taki married Momo because of Osa.'

Predictably, it is also infelicitous when the CD occurs as part of the *reason* clauses in a low position (iia). But, again, it is fine, and requires a CD when it occurs in a high position, preceding the matrix clause (iib).

(ii) *reason clauses*
      a. Taki kpee Momo Osa hewɔ   (??**lɛ́**).
          T   marry M   O   be.reason CD
          'Taki married Momo because of Osa.'
      b. Osa hewɔ   *(**lɛ́**), Taki kpee Momo.
          O   be.reason CD T   marry M
          'Because of Osa, Taki married Momo.'

But, unlike *when/while* clauses, there is no obvious morphology that likens the distribution of the CD in (ii) to the patterns that we have seen earlier. Therefore, in analysing it, I will rely solely on its distribution, i.e., in a high positon in the clause. I will assume that it is base-generated in a specifier position that is comparable to where subject CPs are base-generated. This would then be the reason why either clause would have obligatory CD.

4.2.3.4 Interim summary

We can summarise the distribution of CDs in Gã seen so far as in (32).[13]

(32)   *Where the CD is required*

a.	complement CP without A-bar trace	✗
b.	complement CP with A-bar trace	✓
c.	relative clause	✓
d.	subject CP	✓
e.	preposed *if* clause	✓
f.	*while/when* clause	✓

In (32), we can consider (32e-f) as showing further empirical support for the hypothesis that the CD is always present, just as we saw for (32b-d) early on. An issue that needs clarification, therefore, further details of which will be given in §4.3, is how (32e-f) compares to (32b-d) (to the exclusion of (32a)), such that they all require the presence of the CD. On the surface, we would expect that (32b-f) are derivationally-related. As I have suggested already, *while/when* clauses (32f) behave like relative clauses (32c). Furthermore, we will see in §4.3.5 that there is an independent motivation to suggest that *if* clause (32e) behave like complements in constructions in which they occur. So we can, in the meantime, liken them to complement CPs (32a-b). If these analogies are correct, we can draw the linkages in (33) between adverbial and non-adverbial clauses with respect to the distribution of CDs.

(33)   *what adverbials compare to wrt. CDs*

	Adverbial	Like
a.	*if* clause	complement CP
b.	*when/while* clause	Relative clause

4.2.4 The clausal determiner elsewhere in Kwa

As was indicated in §4.1, the CD has received varied characterisation in the Kwa literature. In this section, I present a few instances of its distribution in languages like Akan, Ewe, Fongbe, Gungbe, and Logba.

4.2.4.1 Akan

For Akan, Boadi (2005:54) says that for a construction that requires (what we are considering here as the CD) *nó*, it is 'stylistically infelicitous' not to use it. The commonest occurrence is found in relative clauses, as the following examples from Saah (2010:92) illustrate. The

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[13]Where 'trace' refers to the base position of an extracted constituent, without any theoretical connotation.

sentence in (34a) shows the relativisation of a subject DP, and (34b) shows same for an object DP.

(34)   a.   Abofrá áa   ɔ-kɔ́-ɔ   hɔ́ **nó** bέ-ya-re.
                child   REL 3SG-go-PST there CD FUT-be.sick
                'The child who went there will fall ill.'

                (Reference here is to a child who has already been mentioned)

    b.   Me-hu-u   ɔbaa$_1$ áa Kofi wáré-e   no$_1$ **nó**.
                1SG-see-PST woman REL K   marry-PST 3SG CD
                'I saw the woman whom Kofi married.'

According to Saah (1994:95), an NP that is modified by a relative clause, such as we have in *Abofrá* in (34), form a complex NP. I take this to mean that the XP containing the relative clause is DP-like, in accordance with the assumption based on which the analysis will proceed. It is instructive to also note that Boadi (2005:53-54) expresses a similar view about the distribution of complement clauses, saying 'they are nominal' in nature. Regarding the occurrence of the CD with extraction from CPs, consider the following examples.

(35)   *Ex situ Wh focus*

    a.   **Hwán**$_1$ [na Kofi ním   [$_{CP}$ śɛ   ɔ$_1$-pέ   Amma *(**nó**)]]?
                who   FOC K   know   COMP 3SG-like A   CD
                'WHO does Kofi know that s/he likes Ama?'

    b.   Kofi ním   [$_{CP}$ śɛ   **hwán** pɛ Amma (***nó**)]]?
                K   know   COMP who like A   CD
                ' Kofi knows that who likes Ama?'

As we saw for Gã, (35a) shows that when a Wh-element is extracted from a CP, it results in an obligatory CD inside the CP. But when there is no extraction from same, the CD cannot occur in the CP.

There are also adverbial clauses which require a CD in Akan, just like Gã. The *when* clauses in (36a) are adapted from Amfo (2007:17). (Note that the CD here is glossed as a D(ependent)C(lause)M(arker).)

(36)   a.   Kwame dú-u   Nkran **nó**, ná abofrá nó á-da.
                K   arrive-PST Accra DCM then child   DEF PERF-sleep
                'When Kwame got to Accra (at the time), the child was asleep.'

    b. ??Ná abofrá nó á-da   Kwame dú-u   Nkran **nó**.
               then child   DEF PERF-sleep K   arrive-PST Accra CD

Like Gã, we notice in (36b) that the subordinate clause with the CD cannot occur low.[14]

---

[14]Unlike Gã however, Akan does not have the CD in conditionals. The equivalent of *kέ(jí)...lέ* 'if...then' in Gã in Akan is *sɛ...a.*, the latter glossed as COMP in the following examples adapted from Saah (1994:165)]

4.2.4.2 Ewe

The CD is also used in similar contexts in Ewe. As Ameka (1991:chapter 8) notes, the equivalent of the CD in Ewe, i.e., *lá*, is also a form that is homophonous with the definite determiner, and a nominaliser in the language. In (37), he cites its use as 'a terminal particle' (TP) in what appears to be a conditional clause.

(37)   ne tsi   dza nyuuie **lá**, núɖuɖu a-bɔ́.
         if water fall welll   TP food   FUT-abound
         'If it rains well, there will be enough food.   (Ameka 1991:267)

According to Ameka, such use of *lá* typically occurs in adverbial constructions like conditional clauses, and time and reason clauses. Furthermore, we see in the following illustrations (from the Aŋlɔ dialect) that Ewe also uses *á* (the equivalent of *lá*) in relative clauses.

(38)   a.   wó=ɖa nú-á   le   ze-a   me.
              3P-cook thing-DEF LOC pot=DEF in
              'They cooked the food in the pot.'

         b.   ze yi   me wò=ɖa   nú-á   le=**á**   ƒo   ɖi.
              pot REL in 3SG-cook thing-DEF LOC=TOP strike dirt
              'The pot in which cooked is dirty.'   (Huttar et al. 2013:113)

In (38b), the object of the preposition *le* is the head of the relative clause. Note that the head of the relative clause here is indefinite and non-specific. However, this appears not to affect the interpretation of the relative clause, as (39) shows.

(39)   ze=a   yi   me wò=ɖa   nú-á   le=**á**   ƒo   ɖi.
         pot-DEF REL in 3SG-cook thing-DEF LOC=TOP strike dirt
         'The pot in which s/he cooked is dirty.'   [*Aŋlɔ*, Nathaniel Dogbator, p.c.]

The main difference between (38) and (39) is that the head of the relative clause, i.e., *ze* 'pot' is definite in the latter. The above data suggest that Ewe uses the CD in similar contexts as does Gã.

4.2.4.3 Fongbe

The following example, adapted Lefebvre & Brousseau (2002:500), illustrates the use of the CD in a relative clause in Fongbe.

(i)   (**Sɛ**) wo-hu akutú **a**,   tɔ bi   ma me.
         if   2SG-see orange COMP buy some give me
         'If you see oranges, buy some for me.'

(40) Súnû ɔ́   ɖé-e   gbà   mɔ́tò ɔ́   ɔ́.
      man DEF REL-3SG destroy car   DEF DEF
      'the man who destroyed a car'

We observe in (40) that the CD occurs despite there being an adjacent overt definite determiner.

4.2.4.4 Gungbe

The example in (41b), from Aboh (2005a:266), suggests an instance of a CD in Gungbe.

(41) a. Kófí wɛ́ xɔ́ ágásá (lɔ́) (lɛ́).
          Kofi FOC buy crab   DET NUM
          'Kofi bought the [aforementioned] crabs.'
      b. Kófí wɛ́ xɔ́ ágásá ɖàxó [ɖě   mí wlé] **lɔ́** lɛ́.
          Kofi FOC buy crab   big   that_Rel 1PL catch DET NUM
          'Kofi bought the [aforementioned] big crabs that we caught.'

In Aboh's analysis, the DET, i.e., the CD in our case, is a Top(ic) head of a 'split DP' system.

4.2.4.5 Logba

Finally, for Logba, the following data from Dorvlo (2008:186) show that the equivalent of the CD, glossed here the C(lause) F(inal) M(arker), like we find in Gã, occurs in a conditional clause when it precedes the matrix clause, as in (42b). But there is no surface evidence of the CFM when a similar clause occurs after the matrix clause, as in (42b).

(42) a. Xé   i-na   i-nyɔ   é-ke-**é**,   i-na   i-nyɔ
          COND CM-person AM-two SM.PL-set.trap-**CFM** CM-person AM-two
          é-dze=é.
          SM-PL-see=3SG.OBJ
          'If two people set a trap, two people watch it.
      b. Kofi ɔ-bɔ́-zɔ́   avablɔmɛ xé   o-dzé   o-ɖu.
          K   SM.SG.FUT-go CM-hospital COND CM.SG-see CM-sickness
          'Kofi will go to the hospital if he falls sick.'

Dorvlo presents further evidence that suggests that a similar pattern occurs with *when* clauses.

4.3 Analysis

In this section, I propose an analysis for the patterns of CD distribution in Gã that we have seen from the previous sections. Recall, again, the main patterns, repeated in (43).

(43)   *where the CD is required*

a.	complement CP without A-bar trace	✗
b.	complement CP with A-bar trace	✓
c.	relative clause	✓
d.	subject CP	✓
e.	preposed *if* clause	✓
f.	*while/when* clause	✓

The main puzzle is seen between (43a) where the CD cannot occur, and (43b-f) where it must occur, on the one hand, and then the structural similarities between the patterns in (43b-g), on the other. The gist of the analysis is that the CD is deleted in (43a), but in all other contexts, this deletion is independently prevented. I will first outline the main assumptions, and then proceed to derive the patterns.

4.3.1   Assumptions

Two main independently proposed assumptions can be put together to derive the patterns of CD distribution that are of interest here. These are (a) CPs are born with DP shell, and (b) there is an operation that removes this DP shell in a specific structural configuration.

4.3.1.1   CPs with DP shells

First, let us assume that all CPs in Gã including complement clauses, subject clauses, and relative clauses have a base structure like (44), in which the CP is a complement of D.

(44)   *Base structure of CPs*

```
        DP
       /  \
      D    CP
          /  \
         C    TP
```
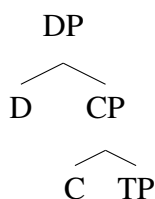
The idea that CPs are born with a nominal shell is not new. It has been suggested for CP-like configurations like factive constructions, e.g., Kiparsky & Kiparsky (1970:157-158), Collins (1994:34), Aboh (2005a), relative clauses, e.g., Aboh (2005a), Pietraszko (2017), sentential subjects, e.g., Davies & Dubinsky (2009), and embedded clauses, e.g., Müller (1995); Müller & Sternefeld (1995), Déchaine (2001:94). For instance, Déchaine (2001) proposes that complement CPs in Yoruba are nominalised structures with an abstract D head. Similarly, in a recent article comparing complement clauses with relative clauses in Ndebele, Pietraszko (2017) presents data that suggest that the complement clause controls object agreement, and the complementiser head shows φ features to this effect, facts which she interprets to mean

that such CPs have a nominal property. For Akan, as I indicated earlier, Boadi (1972) and Saah (1994) have suggested that the relative clause is a nominalised structure.

For complement clauses in particular, the idea of they being nominal would mean that CP-selecting predicates actually select DPs, just like their strictly-DP-selecting counterparts. In principle, this is highly plausible. For instance, as (45) shows, such predicates, e.g., *le* 'know' may also select DPs after all.

(45) Osa le   [DP e-tɔ́mɔ-i].
      O   know   POSS-mistake-PL
      'Osa knows his mistakes.'

In terms of the phenomenon under investigation here, the D in (44) is what functions as the clausal determiner. Again, this would make sense not only because a particle with similar morphology is used as the definite determiner in Gã, but also, in a sister language like Ewe, a morpheme of similar shape functions as the nominaliser (see, e.g., Ameka 1991).

4.3.1.2 Structure removal

Granted that all CPs are born with a DP shell, then the obvious way to explain the absence of the CD, and for that matter, the DP shell, in a given construction with a CP would be that it has been deleted from the structure. One principled way of implementing this, which I adopt in this dissertation, is Müller (2017)' s 'Remove' operation. Here, it is assumed that there is a mirror image of the structure-building operation 'Merge' (46a), namely, 'Remove' (46b), in grammar.

(46) a. Merge (α, [•β•]) → [$_\alpha$ α β] = α **merges** with something with the feature β.
      b. Remove (α, [–β–]) → [$_\alpha$ α β] = α **removes** something with the feature β.

Müller suggests that 'Remove', just like 'Merge', is (a) feature-driven, (b) may apply to both heads and phrases, (c) obeys strict cyclicity, and (d) can be external or internal. Furthermore, its empirical coverage, so far, includes passives (cf. Murphy 2016), applicative, restructuring, and complex prefield constructions in German.

In Müller's system, [–F–], i.e., that which triggers the removal is ordered on a lexical head (after its structure-building feature), and it may affect both complements and specifiers. In the specific case of the clausal determiner phenomenon we are dealing with here, I assume a more restrictive version of the conditions under which Remove applies, as stated below.

a. Only CP embedding V heads in Gã are endowed with [–D–], the feature that removes the (C)D heads and hence DPs. Here, we can think of [–D–] as a kind of probe feature, which targets a goal with the feature [C]. This will be a DP with an

embedded CP . Let us designate this as DP$_{[C]}$. I assume that this a way in which Gã grammar would avoid indiscriminate removal of DP complements of V, so that non-DP shells will escape removal.

b. A successful Remove operation is contingent on a successful dependency between V$_{[-D-]}$ and D$_{[\bullet c \bullet]}$, the head of DP$_{[C]}$. This dependency is restricted to the minimal c-command relation in (47), to be understood as in (48).
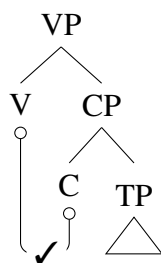
(47) *Configuration for CD removal*

```
              VP
           ／      ＼
         V          DP[C]
     [•D•]>[−D−]    ／  ＼
                  CP    D
                      [•c•]
```
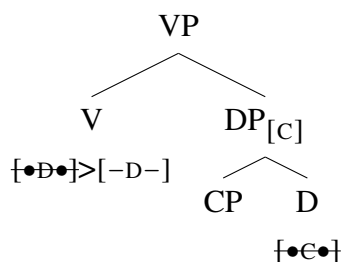
(48)

a. Merge (D$_{[\bullet C \bullet]}$, CP) → [$_{DP}$ D CP]

b. Merge (V$_{[\bullet D \bullet]}$, DP) → [$_{VP}$ V DP]

c. Remove (V[−D−], (DP[C]) → ...

The operation in (48c) is what we are most interested in here. I will argue that it is that which derives the differences between complement clauses with a CD, and those without one. Furthermore, we are able to account for the remaining patterns in (43) based on the fact that V$_{[-D-]}$ is not able to access D always, albeit for independent reasons.

A question that may arise is: why would V be endowed with a feature that removes the DP projection in a configuration like (47)? One possible explanation could be that V needs to interact with C, e.g., in terms of Agree, or any relevant dependency, in a configuration like (49). However, when the DP shell is present, the CP will appear too embedded for a successful syntactic dependency. This situation would block DP removal in cases like (50).

(49) *Possible V-C interaction*　　　(50)

```
        VP                              VP
      ／  ＼                          ／  ＼
     V     CP                        V     DP
     ○    ／ ＼                       ○    ／  ＼
     │   C    TP                     │   CP    D
     └──✓ ○   △                     │  ／ ＼
             ...                     │  C    TP
                                     └──✗ ○   △
                                             ...
```
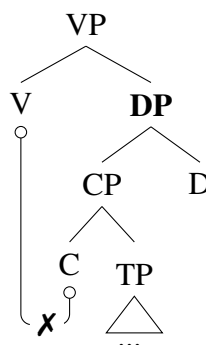
Thus, we can suppose that a successful Remove operation would make the structure trans-

parent for the kind of interaction that is suggested by (49). However, we will see that the interaction in (49) may not be necessary after all, in which case we could think of (50) as a failed Agree configuration (cf. Preminger 2014). Let us see how the above proposal derives the patterns in (43).

4.3.2 Complement clauses

Recall the asymmetry with complement clauses with regard to the distribution of CDs. The relevant data are repeated in (51).

(51) a. Osa le   [CP ákɛ́   Taki hé **mɛ́ni**₁ (*lɛ́)]?
          O   know   COMP T   buy what   CD
          'What does Osa know that Taki bought?'

          Literally: 'Osa knows that Taki bought **what**?'

      b. **Mɛ́ni**₁ ni Osa le   [CP ákɛ́   Taki hé t₁ *(**lɛ́**)]?
          what FOC O   know   COMP T   buy   CD
          'WHAT does Osa know that Taki bought?'

Given the assumptions outlined in §4.3.1, I propose that in (51a) the head of the DP shell is illicit because it has been removed from the structure, while in (51b), the removal of same is blocked, because the Remove operation tries to take place at the time when the moving XP, i.e., *mɛ́ni*, is in transit at spec, DP. Let us look at the actual derivational steps involved.
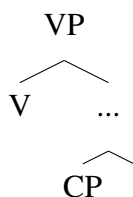
4.3.2.1 Complement CPs without extraction

Here, I derive why CD does not occur in constructions like (51a). Suppose that the first two derivational steps in (48) would have already taken place, the Remove head would establish a dependency with D, as in (52). Afterwards, first, D will be deleted, as in ❶ in (53). Then, the entire DP projection is deleted. This latter operation is labelled ❷ in (53).

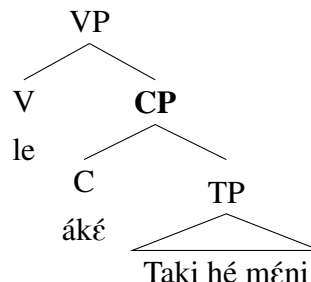(52) *Deriving*

(53) *DP shell removal*

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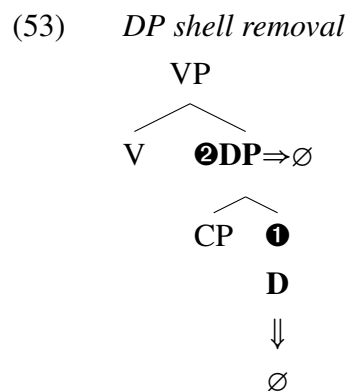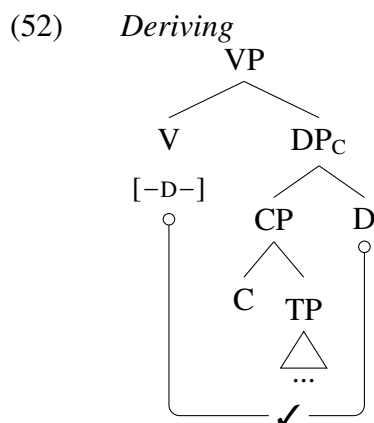
As a consequence of the deletion, the CP complement of D is temporarily left hanging in the structure, as in (54). Subsequently, it re-associates with V, as in (55).

(54)   *Unassociated CP*

```
        VP
       /  \
      V    ...
           
           CP
```
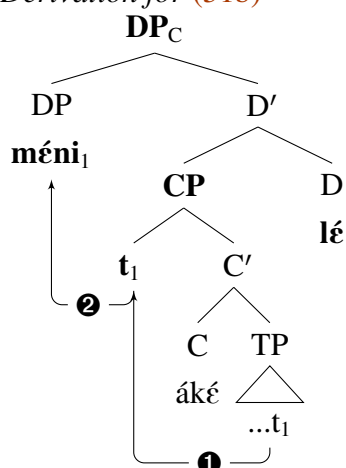
(55)   *CP reassociates with V* (51a)

```
          VP
         /  \
        V    CP
        le   / \
            C   TP
           ákɛ́  / \
              Taki hé mɛ́ni
```

Steps like (54) and (55) have been argued to take place in the derivation of restructuring infinitives in German (see Müller 2017:16ff).

4.3.2.2   Complement CPs with extraction

Let us now account for why a CD is always present in a complement CP from which A-bar extraction has taken place. I suggest that such constructions, at some point in the derivation have the moving constituent in the specifier of the DP shell. In the following derivation, for instance, the A-bar-bound element, i.e., *mɛ́ni* 'what', is forced to pass through not only the edge of the CP phase, but also that of the DP phase. Thus, the specifier of the DP is projected for the moving element to stop there, on its way to its criterial position.

(56)   *Derivation for* (51b)

```
              DP_C
             /    \
           DP      D′
         méni₁    /  \
                CP     D
               / \     lɛ́
             t₁   C′
                 /  \
                C    TP
               ákɛ́   /\
                   ...t₁
```

The configuration in (56) is particularly crucial for accounting for the differences between structures like (56), which ultimately realise an overt (C)D and the one we saw in the previous section, in which the (C)D is removed. As represented in (57), in the above configuration (56), after $V_{[-D-]}$ has established the necessary dependency with D, removing the DP shell would imply also removing the moving A-bar-bound constituent in spec, DP.

(57)   *Remove is bled by movement to spec, DP*
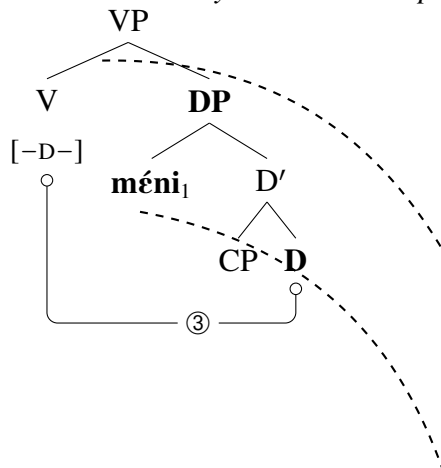
Since the A-bar feature of *méni* needs to be checked, should the targeted removal in (57) take place, we predict that such derivations would always crash. But this is certainly not what we find in Gã. This further suggests that in such configurations, V and C will not be able to interact, presumably because of the 'unremoved' intervening D(P). This is something that we could treat as a failed Agree, as was indicted earlier.

To conclude, we can summarise the proposal in this section as follows. The reason why the CD of a complement clause from which A-bar extraction has taken place is always present is that the A-bar movement creates a configuration that makes the DP shell irremovable.

4.3.3 Relative clauses

In §4.2.3.1, we saw that the CD is typically obligatory in relative clauses, as in (58). I argue in this section that such CDs are not removed because at the point of their possible removal, the displaced constituent of the relative clause occupies the specifier of the DP shell.

(58)   a.   Mí-sumɔ-ɔ   [ataádé lɛ́]$_1$ ní   o-hé   t$_1$ *(**lɛ́**).
              1SG-like-HAB dress   DEF REL 2SG-buy   CD
              'I like the dress that you bought.'

       b.   Níyeníí$_1$ ní   Taki sumɔ-ɔ   t$_1$ *(**lɛ**) é-ta.
              food   REL T   like-HAB   CD PERF-be.finished
              'The food that Taki likes is finished.'

One standard approach to relative clause analysis, which at first sight appears compatible with the DP shell idea being pursued here is the head raising analysis (see, e.g., Åfarli 1994; Kayne 1994; Bianchi 1999; Aoun & Choueiri 2000; Bhatt 2002). On this account, the head noun of the relative clause in a construction like (58b) is derived by A-bar extracting it from within the TP to the specifier of the CP headed by the relative complementiser. The head of the equivalent of the DP shell is then externally merged. We can represent this as (59).

(59)   [$_{DP}$ D [$_{CP}$ N$_1$ [$_{C'}$ REL [$_{TP}$... t$_1$]]]]

In a configuration like (59), the later merged D head surfaces as the definite determiner adjacent to the head noun in, for instance, the English translation 'the food' in (58b). However, given data such as (58a), which suggest that the moving element could, in fact, be a full DP, e.g., *ataádé lɛ́* 'the dress', and the fact that the head of the DP shell is, on the surface, never adjacent to the head noun of the relative clause, I will assume that what is raised to spec, CP is a DP (see also Borsley 1997). Thus, the D head of the moving DP is different from the head of the DP shell, as represented in (60).

(60)   [$_{DP}$ D [$_{CP}$ **DP**$_1$ [$_{C'}$ REL [$_{TP}$... t$_1$]]]]

Given (60), we can account for the overtness of the CD in relative clauses as follows.

The derivation of relative clauses that modify nouns in object position essentially proceeds like that of CP complements from which extraction has taken place; the moving DP stops at spec, CP and moves further to spec, DP. Therefore, when the DP remover head is merged, the filled spec, DP prevents the removal operation from taking place. The resultant configuration for (58a) is therefore comparable to the representation in (57).

The DP shell removal is not possible also for relative clauses in subject positions, albeit for a different reason. Here, the entire relative clause is in a subject position, i.e., spec, TP in (61).

(61)   *subject relative clause* (58b)
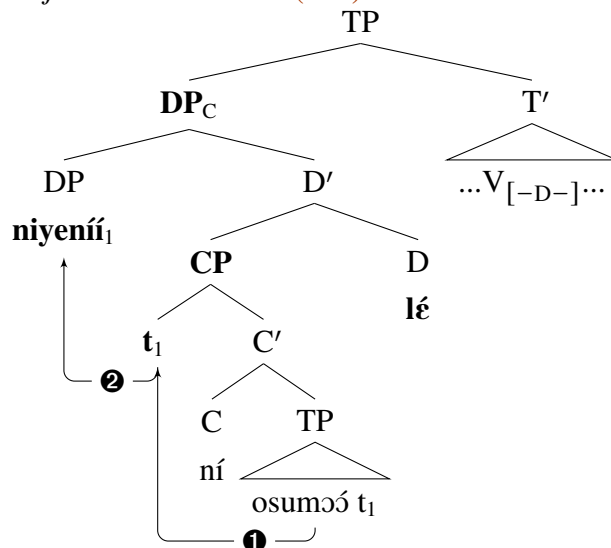
What the structure in (61) suggests is that the attempt to remove the DP shell, i.e., by merging V, occurs at a point in the derivation when the D head, which projects the DP shell itself, is yet to be merged. Therefore, Remove here is counter-fed by late merger of the DP.

4.3.4 Subject CPs

For CPs in subject position, such as example (23), repeated as (62), the presence of the DP shell is, perhaps, independently motivated by the fact that they are merged in the same structural position as nominal subject arguments. (Note that the latter are DPs as well.)

(62)   [CP Ákɛ́ ámlaló   lɛ́   tsé tóó nɔ́ *(**lɛ́**)] feé maŋ-bíí   lɛ́   mííshɛɛ.
         COMP government DEF tear tax top   CD   do country-people DEF happiness
         'That the government reduced taxes made the people happy.'

Thus, they are base-merged either in spec, *v*P (63) or spec, TP (64).

(63)   *spec, TP subject CP*

TP
DP   T′
Ákɛ́ ámlaló lɛ́... ;   T   *v*P
           ...V$_{[-D-]}$...

(64)   *spec, vP subject CP*

*v*P
DP   *v*′
Ákɛ́ ámlaló lɛ́...   *v*   ....
         ...V$_{[-D-]}$...

Given configurations like (63) and (64), the prediction is that the DP shell cannot be removed. The configurations do not meet the condition for Remove to be effected; there is no minimal c-command relation with the potential goal of the Remove probe head V$_{[-D-]}$. This is basically so because the subject CP (=) is merged too late into the derivation.

4.3.5 Conditional clauses

With *if* clauses, I claim that they are base-merged in a complement-like position. When the *if* clause is *in situ*, it is removed. But when it moves to a pre-matrix clause position, it escapes the structure removal process.

It has been argued that *if* clauses are adjuncts, given that their syntactic position is less restricted. Specifically, they can either precede or follow the main clause in a given construction. For Gã, we observed such a situation in example (24), repeated as (65).

(65)   a.   M-á-yá,   kɛ́(jí) o-ba   (***lɛ́**).
            1SG-FUT-go COND 2SG-come   CD
            'I will go if you come.'

     b.   Kɛ́(jí) o-ba   *(**lɛ́**), m-á-yá.
            COND 2SG-come   CD   1SG-FUT-go
            'If you come, I will go.'

Furthermore, Bhatt & Pancheva (2006:647) refer to the data in (66) from Collins (1998) as

providing further empirical support for this claim. The examples in (66) suggest that it is illicit to cleft-front the *if* clause out of the syntactic island in (66b), i.e., *why the teacher will fire the TA*, unlike when a similar syntactic operation is carried out from the non-island *the teacher will fire the TA* in (66a).

(66)   a.   It is if the student fails that the teacher will fire the TA.

          b.   *It is if the student fails that Bill wonders why the teacher will fire the TA.

We can point to facts comparable to (66) in Gã, as shown in (67b), where it is ungrammatical to extract from a Wh-phrase. Thus, *if* clauses in Gã also show this adjunct-like behaviour.

(67)   a.   Kɛ́(jí) o-ba   ni   m-á-yá.
              COND 2SG-come FOC 1SG-FUT-go
              'It is if you come that I will go.'

          b.   [*Kɛ́(jí) o-ba]$_1$ ni   Taki bí [$_{CP}$ ákɛ   mɛ́ni hewɔ má-yá   t$_1$].
              COND 2SG-come FOC T   ask   COMP what reason 1SG-FUT-go
              '*It is if you come that Taki asked why I will go.'

Granted that *if* clauses are adjuncts, Bhatt & Pancheva use the English equivalent of (68) (see the English translation) to demonstrate that *if* clauses are constituents of the VP.

(68)

    M-á-nyɛ́   **má-yá**,   kɛ́(jí) o-ba   shi Taki nyɛ́ŋ   ~~é-yá~~,   ~~kɛ́(jí)~~
    1SG-FUT-can 1SG-FUT-go COND 2SG-come but T   can-NEG 3SG-go COND
    ~~o-ba~~.
    2SG-come
    'I can go if you come but Taki cannot ~~go if you come~~.'

In (68), two VPs have been conjoined, an indication that they are constituents of the same kind. Therefore, the elided part of the second conjunct, i.e., the *if* clause, must have a corresponding XP in the first conjunct, i.e., the *if* clauses preceding the matrix clause (in bold).

While I do not have any empirical basis to doubt the evidence above suggesting that *if* clauses may be adjuncts (especially in the specific case of Gã), I will focus on an aspect of Bhatt & Pancheva's work that suggests that *if* clauses may also not be *bona fide* adjuncts. Specifically, they point to the equivalent of data such as (69) (see Bhatt & Pancheva 2006:64ff).

(69)   *Principle C effect in conditionals*

        a.   Kɛ́(jí) **Taki$_1$** bá   *lɛ́* e$_{1/2}$-baá-yá.
              COND T   come CD 3SG-FUT-go
   'If Taki comes, he will go.'

b. E**2/*1**-baá-yá kέ(jí) **Taki₁** ba.
   3SG-FUT-go COND T   come
   'He will go if Taki comes.'

The illustrations in (69) indicate that *if* clauses that appear in high positions could have reached their surface position via movement, and not necessarily via adjunction, as their adverbial properties seem to suggest.[15] In (69a), the R-expression, i.e., *Taki* contained in the *if* clauses in the high position is able to bind a pronoun in the matrix. This suggests that there is a c-command relationship between the two nominal elements. But crucially, we can also take the anaphoric pronoun to be occupying the base position of the R-expression, suggesting that it might have moved to its surface position. In (69b) on the hand, when the same *if* clause is low, presumably in its base position, it is not able to bind a pronoun in a high position. I interpret these binding facts to mean that when the *if* clause is in a high position, it has moved; otherwise, it stays low.

In the context of the distribution of CDs in Gã, assuming that the head of an *if* clause is a CP, with a DP shell, then I propose that when the *if* CP stays low, the DP shell is removed. But when it moves high, it escapes removal. Specifically, I argue that in terms of their derivations, conditional clauses in a low position are comparable to complement clauses without A-bar extraction, just as conditional clauses in a high position are comparable to complement clauses from which A-bar extraction has taken place, as was illustrated in §4.3.2.1. Let us, first, see how this works for the cases where the *if* CP is low.

When the *if* clause is low, i.e., *in situ*, given that there is no movement out of the CP to spec, DP, the specifier of the DP shell remains unprojected. This implies that when *v* is merged, the DP shell can conveniently be removed without any further problems. As before, when the DP shell is removed, the CP re-associates to V. These steps are sketched in (70) and (71).

(70)   *If clause is low*
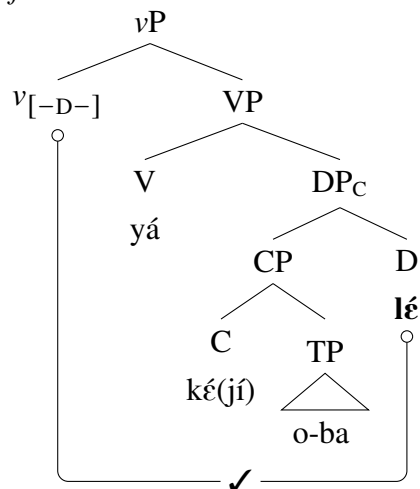
(71)   *DP shell removed*

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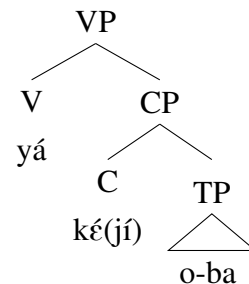
[15]For further discussion and a potential counter-evidence, see Iatridou (1991).

When the *if* clause is in a high position, there are two possibilities, given the binding facts that we saw earlier. First, we can have a configuration like (72), in which the entire DP containing the *if* clause is moved to the specifier of a higher functional projection. Here, we can suppose that the movement operation involving DP$_C$ is ordered before the Remove operation.

(72)   [$_{FP}$ [$_{DP}$ [$_{CP}$ kɛ́(jí) [$_{TP}$ obá]] **lɛ́**]$_1$ [$_{F'}$ F [$_{TP}$ máyá **t**$_1$]]]]

The alternative (non-movement) derivation would be one in which the *if* clause is base-merged in spec, FP, as in (73). Here, the derivation will look like that of subject CPs except that the DP shell is merged in a spec, FP.

(73)   [$_{FP}$ [$_{DP}$ [$_{CP}$ kɛ́(jí) [$_{TP}$ obá] **lɛ́**] [$_{F'}$ F [$_{TP}$ máyá]]]]

Whether *if* clauses are derived via (72) or (73), for our purposes, it is significant to note that in both situations, the operation that would otherwise remove the DP shell is ineffective. That is, it either tries to apply after the *if* clause has moved, as in (72), or the DP shell is merged rather too later, as in (73). Both situations result in an overt realisation of the clausal determiner .

4.3.6 *when/while* clauses

In §4.2.3.3, I presented evidence to that suggest not only do *when/while* clauses not occur in low positions, but they have a striking morphosyntactic similarity with relative clauses in Gã. Therefore, I propose the structure in (75) for (74a-b).

(74)   a.   Béní Taki mii-kasé   níí   *(**lɛ́**), Osa mii-shwɛ́.
              while T   PROG-learn thing CD   O   PROG-play
              'While Taki is learning, Osa is playing.'

        b.   Béní e-bá   *(**lɛ́**), mí-te   shi.
              when 3SG-come   CD   1SG-stand ground
              'when he came, I got up.'

(75)   *while/when clause*

```
                              FP
                 ┌────────────┴────────────┐
               DP_C                         F′
         ┌──────┴──────┐              ┌──────┴──────┐
       DP₁           D′              F            TP
     Be<é lέ>    ┌────┴────┐                   ┌────┴────┐
                CP         D                  T         vP
            ┌────┴───┐    lέ                        ┌────┴────┐
           t₁       C′                          Osa miishέ/mite shi
                 ┌───┴───┐
                C       TP
               ní   ┌────┴────┐
                  Taki miikasé níí/ebá
```
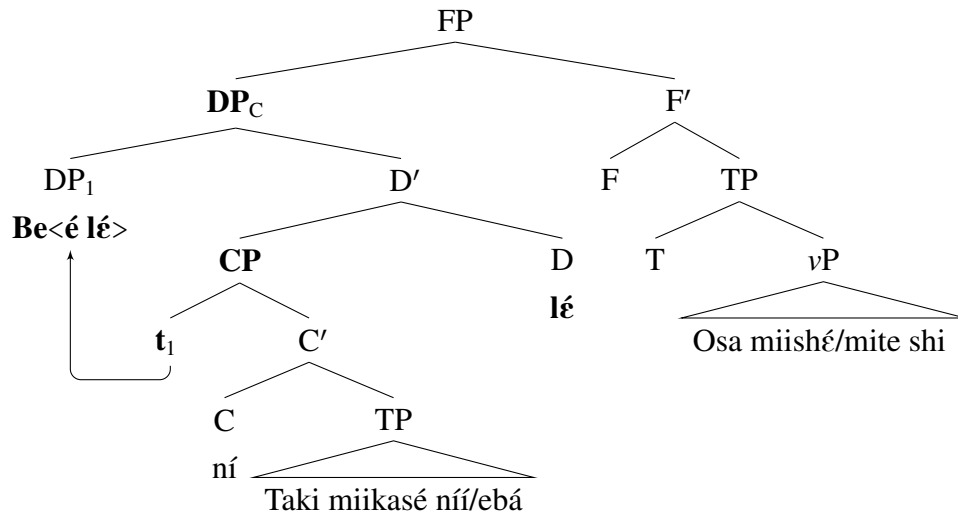
In (75), the head of the relative clause, i.e., *beé lέ* 'the time' (realised as *bé*, see §4.2.3.3),
which raises to spec, DP, is base-merged in spec, CP.[16] That it does not move from within
TP (compared to the head of canonical relative clauses in the language) might be motivated
by the fact that it is not an argument of the verb. Crucially, since the *while/when clause*
is projected in a subject position, its DP shell cannot be removed. Thus, this illustrates
another counter-feeding situation that results in the ever presence of clausal determiners in
such constructions.

4.4   Summary and conclusion

The aim of this chapter was to account for the occurrence of clausal determiners (CDs) in
Gã in a uniform way, as opposed to their absence in other contexts where we expect them to
show up. In §4.2, I presented data that suggest that the CD is obligatory in CP complements
from which A-bar extraction has taken place, relative clauses, subject CPs, *if* clauses, and
when/while clauses. It was assumed that the common property about all such constituents
is that they are CP-like. However, we saw that a complement clause from which no A-bar
extraction has taken place does not permit the occurrence of the CD, although there is no
reason to doubt its status as a CP.

Accounting for the above asymmetry in §4.4 , it was realised that the context where the CD
cannot occur is the exception. The proposal was that the CD is always present, as the D head
of a DP shell projected on all CPs, and that the exceptional case involves a situation where
the DP shell has been removed, in terms of Müller (2017). Therefore, the contexts where the
presence of the CD is obligatory constitute situations whereby the removal of the DP shell is

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[16]Like canonical relative clauses, whether the DP in spec, CP moves to spec, DP or not, it does not affect the
distribution of the CD.

independently blocked.

For a CP complement with A-bar extraction out of it, I argued that the obligatory presence of the CD is due to the fact that the moving constituent stops at the specifier of the DP (shell) at the time the Remove operation is supposed to take place.

In relative clauses, I suggested that the displaced constituent which functions as the head of the relative clause actually moves from spec, CP to the specifier of the DP shell. For object relative clauses, the situation is similar to what happens with CP complements from which A-bar movement has taken place.

Regarding subject CPs, although there is no movement to spec, DP (shell), there is a situation where the removal is not possible, because at the time when the Remove operation is supposed to take place, the subject CP is yet to be merged. When it is subsequently merged however, it is too late for the DP shell to be removed.

For *if* clauses, I presented evidence that suggest that they might be complement (clauses) in constructions in which they occur. Taking them to be CPs, therefore, I argued that the absence of the CD, when such clauses are in a low position, might be due to the fact that the DP shell is removed *in situ*. Conversely, whenever the CD is overtly realised, it must be the case that the *if* clause was either base-merged a higher structural position or it has moved there.
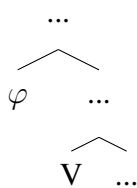
Finally, I adduced empirical evidence to show that *when/while* clauses in Gã look like relative clauses. Thus, their behaviour in terms of retaining the clausal determiner when they occur in a high position in the clause is expected is expected.

Chapter 5

Conclusion

I have presented various arguments in the preceding chapters towards achieving the central goal of this dissertation, i.e., identifying natural classes for linguistic expressions based on structural configurations in which they occur. The main points can be summarised as follows. First, regarding the distribution of object pronouns in Kwa languages, I argued in chapter 2 that upon a closer examination of the structural contexts in which null versus overt object pronouns occur, overt object pronouns consistently occur in the specifier of some XP, as in a configuration like (1). Pronominal objects that are realised as null on the other hand seem to occur in a configuration like (2). The difference between the two structures and how they relate to the pronominal realisation was modelled after Kayne (1994)'s LCA, which enabled us to PF-delete the object pronoun in a context like (2).

(1) *Overt*

    ...
    φ ...
        V ...

(2) *Null*

    VP
    V φ
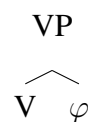
In terms of how the pronoun in (1) reaches the specifier position, I demonstrated that this actually depends on the construction involved. For pronouns that precede adverbials on the surface, I presented empirical evidence to show that they move to a higher specifier position, because the adverb precedes the VP in its base-merged position. For object pronouns of change of state verbs, I argued that the complex syntactic structure of such predicates, which, presumably, follows from their semantic complexity, independently means that object pronouns that occur with them are base-merged in a specifier position within the VP. For pronominal arguments of depictive predicates, they are base-merged in the specifier of a small clause. For animate object pronouns in clause-final positions, they have a formal feature that makes them move to spec, vP. Their inanimate counterparts lack this derivational

step, leaving them *in situ*, as in (2). A summary of the main results is given in (3).

(3)   *Object pronoun issues*

	Phenomenon	Surface effect	Analysis
i.	Before adverbials	Overt	Pronoun moves to spec, FP
ii.	Before depictives	Overt	Pronoun born in spec, SC
iii.	With CoS predicates	Overt	Pronoun born in spec, VP
iv.	Clause-final		
	Animate	Overt	Pronoun moves to spec, vP
	Inanimate	**Null**	**Pronoun deleted at PF**

Second, with respect to the resumption phenomenon in Akan, discussed in chapter 3, I argued that the language does not have an overt realisation for subject pronouns; although they are syntactically available, they are morphologically null. Therefore, the subject prefixes that are realised on verbs when subject arguments are A-bar extracted are better re-analysed as a spellout of φ agreement on T. I showed that this way of modelling such morphology enables us to explain several other otherwise unexpected morphological effects in the language. For instance, we are able to account for default agreement configurations in both A-bar and non-A-bar constructions. In A-bar contexts, I suggested that default agreement is only possible when the A-bar-bound DP moves to spec, TP, against the background that the resumptive pronoun is a stranded φ element in the structure (Klein 2017). For extraction from embedded subject contexts, it became apparent that such configurations do not project an A-bar position in embedded contexts, a situation that would otherwise allow default agreement. For object resumptive pronouns, which were considered to be the only genuine cases of overt resumption, the analysis suggests that they never move to spec, TP to begin with. Furthermore, their spellout basically follows the system proposed in chapter 2. These would explain why the default (resumptive) 'pronoun' is not an option in such contexts. A summary of the resumption issues and the outcome of the analysis is presented in (4).

(4)   *Resumption/Agree patterns*

		AGREE OPTION	
i.	**Matrix subjects**	**Optional**	φ**P/DP in spec, TP**
ii.	Embedded subjects	Obligatory	DP skips spec, TP
iii.	Objects	Obligatory	No φ-T Agree

Finally, the clausal determiner in Gã (and Kwa) issue that was discussed in chapter 4 gave the following results. I argued that when we encounter CPs without a clausal determiner, then its DP shell must have been removed (following Müller 2017) in the course of the derivation. I argued that all constructions for which the clausal determiner is overt involve derivations in which the removal operation is blocked or does not seem to matter. In complement clauses

with extraction, the A-bar-bound element transiting spec, DP blocks the removal. For subject clauses, the c-command relation required for the removal is non-existent. For relative clauses, the relativised head stops at spec, DP. For *if* and *when/while* clauses in a high position, they are structurally beyond the reach of the head that triggers the removal. However, for CPs and complement clauses without any internal A-bar displacement, if they are not base-merged in a specifier position outside the c-command domain of the remover head, their DP shell is always removed. This accounts for the lack of an overt clausal determiner in such contexts. A summary of the results from chapter 4 is presented in (5).

(5) *Clausal determiners*

i.	CP complement		
	without A-bar extraction	**Null CD**	**DP shell removed**
	with A-bar extraction	Overt CD	DP shell retained
ii.	Relative clauses	Overt CD	DP shell retained
iii.	Subject CPs	Overt CD	DP shell retained
iv.	Adverbial clauses		
	clause-initial	Overt CD	DP shell retained
	clause-final	**Null CD**	**DP shell removed**

What I have done in this dissertation is to bring new empirical perspective to existing theoretical issues. At first sight, the empirical generalisations that emerge from each of the various data sets concerning the main phenomena discussed seem to defy the usual sense of natural classes, i.e., where members of class share a feature. However, I have demonstrated that it is possible to make sense of all these seemingly unrelated pieces of empirical puzzles by simply appealing to syntactic structure, as captured in the tables in (3), (4) , and (5) .

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