Chapter 3

The Syntax of AAVE Copula Absence

3.1 Introduction

This chapter is concerned with the syntax of AAVE sentences like (1), where there is no surface realization of the copula.

(1) You in trouble.

Such copulaless sentences are available in many but not all contexts. At the same time, corresponding sentences with overt forms of the copula seem to be available in all contexts. Thus one of the main points of interest is the relationship between sentences with and without the copula in AAVE.

Throughout the literature on AAVE copula absence, the auxiliary and copula uses of *be* are lumped together. With the exception of Labov's phonological rules discussed in Section 3.3, the term *copula* is generally used to refer to both uses. As discussed in Section 2.5 of Chapter 2, there is good syntactic evidence for treating so-called copula and auxiliary uses of *be* as involving one and the same lexeme. Therefore, I see no reason not to follow this practice here.

Labov (1969, 1995) presents an analysis of AAVE copula absence in terms of phonological deletion of the residue left behind by copula contraction. In Section 3.3, I review the arguments for this analysis and argue that copula absence is better treated as a syntactic, rather than a phonological, phenomenon.

In Section 3.4, I review and extend the construction-based (i.e., surface-oriented) analysis of copula absence proposed by Mufwene (1992) and Sag and Wasow (1999). This analysis turns out to be falsified by subject extraction facts. Section 3.5 presents a second constructional analysis which also runs into empirical problems. Section 3.6 presents an analysis in terms of a phonologically empty form of *be*. Finally, Section 3.7 presents a third constructional analysis that builds on some of the intuitions of the silent verb analysis, and is able to account for all of the facts considered. Both of these last two analyses can be considered empty category analyses, at some level. Thus this chapter will show AAVE copula absence to be an exception to the general trend away from empty categories reviewed in the last chapter.

First, however, we turn to a brief discussion of data collection, grammaticality judgments, and individual variation in AAVE.

3.2 Data collection

The AAVE data considered in this chapter include some from published sources (principally Labov 1969, 1995), some from the data collected in interviews by the Copula Project at Stanford University, and some invented sentences that have been checked with four native speakers. The sentences from published sources were also checked with the same speakers. The judgments for the invented sentences were consistent across all four consultants unless otherwise indicated.

On top of the usual concerns surrounding grammaticality judgments, there are some additional issues that come up in eliciting grammaticality judgments in stigmatized varieties such as AAVE. First, there is the danger that consultants will deny the existence of any systematicity in the stigmatized variety and claim that "anything goes". However, three of the consultants I was working with are linguists, and the other has taken at least one course on the linguistics of AAVE. They all therefore see AAVE as a systematic variety. Further, they were all willing to say that some of the strings I tested were bad.

The next problem is bidialectalism. The speakers I consulted, like many adult speakers of AAVE, also have command of Standard English. It is therefore possible that certain sentences they judged to be grammatical are grammatical in fact only in the standard variety and not in AAVE. However, the speakers I consulted were willing to point out lexical choices in my sentences that were inauthentic (and correct them), as well as constructions that they believed were only available in the standard variety. It is not possible to tell if they caught everything, of course, but the fact that they pointed out some such inauthentic choices is encouraging.

It is important to note in this connection that copula presence is as much a feature of AAVE as copula absence. Labov (1995:33) illustrates this nicely with "sounding" (ritual insult) data that he collected, including the examples in (2). He writes, "Here the speakers of the language are engaged in intense interaction with each other, using their basic vernacular, and we observe the rapid alternation of zero, contracted and full forms of the copula."

(2) a. Your mother is a Phil D. Basket.
b. Your mama's a weight lifter.
c. Your mother a ass, period.
d. Because he old, he's old, that's why!

Finally, there is no reason to expect AAVE to be any more consistent across speakers than other varieties of English,[1] and my consultants did disagree on some of the sentences. There is always some amount of "noise" in grammaticality judgment data, as grammaticality judgments themselves are an aspect of performance (Schütze 1996). Further there is also legitimate regional variation (and my speakers did come from different parts of the country) as well as variation between individuals within the same community. However, my sample (4 speakers) was too small to tell legitimate variation from noise in the data. All I can do here is report the data in detail. If a sentence was not judged consistently by the different consultants, or if a consultant indicated that it seemed like something other AAVE speakers would say, this will be noted as the sentence is discussed below.

[1] Although it may be more consistent than some regional or national standards that may be learned later in life for most, if not all, speakers.

3.3 The phonological deletion analysis

Labov's (1972, Ch. 3;[2] 1995) deletion account states that copula absence is the result of a phonological rule of deletion fed by copula contraction. That is, AAVE is seen as taking the general English process of copula and auxiliary reduction one step further. This analysis can be seen as embodying two principle claims: (1) that the copula is present underlyingly, even when it is not realized overtly, and (2) that copula absence is only possible in environments where copula contraction is.

Section 3.3.1 reviews the technical details of Labov's analysis. Section 3.3.2 reviews Labov's evidence for the claim that copula absence is only possible where copula contraction is, and provides two robust counterexamples which falsify the claim. Section 3.3.3 reviews the evidence Labov adduces from the variation data for his phonological analysis and Rickford et al.'s (1991) arguments that this evidence is, at best, inconclusive.

3.3.1 Formalization

As formalized in Labov 1972, Ch. 3, this account consists of four SPE (Chomsky and Halle 1968) style rules: The 'weak word rule' reduces the stress of weak ([+W]) words, 'vowel reduction' reduces unstressed lax vowels to schwa, 'auxiliary contraction' deletes the schwa of a tensed vowel-initial auxiliary, and 'auxiliary deletion' deletes the remaining consonant. The rules are formalized as in Figure 3.1

Rule A in Figure 3.1 is designed to interact with Chomsky and Halle's (1968) cyclical nuclear stress rule so that any 'weak word' (in particular, auxiliaries) will have its stress removed completely, if it has already been reduced twice by the cyclical nuclear stress rule.[3] The intended effect is that the auxiliaries should be unstressed, and thus undergo vowel reduction (rule B), just in case they are not in stressed positions such as before ellipsis and extraction sites.

Rules C and D are variable rules, meaning that they apply optionally with some probability and are probabilistically sensitive to certain factors of the context. This is

[2] A revised version of Labov 1969.

[3] I.e., assigned the value '3stress' as opposed to '1stress' or '2stress'.

A Weak word rule

$$\begin{bmatrix} \text{+W} \\ \text{3stress} \\ \text{V} \end{bmatrix} \longrightarrow \begin{bmatrix} - \text{ stress} \end{bmatrix}$$

B Vowel reduction

$$\begin{bmatrix} -\text{stress} \\ -\text{tense} \\ \text{V} \end{bmatrix} \longrightarrow \begin{bmatrix} + \text{ cen} \end{bmatrix}$$

C Auxiliary contraction

$$\begin{bmatrix} +\text{voc} \\ -\text{str} \\ +\text{cen} \end{bmatrix} \longrightarrow \langle \phi \rangle \ / \left\langle \begin{matrix} +\text{Pro} \\ -\text{Cons} \end{matrix} \right\rangle \#\# \begin{bmatrix} \rule{1.5em}{0.4pt} \\ +\text{T} \end{bmatrix} \begin{matrix} \text{C}_0^1 \\ \langle {}^*\text{nas} \rangle \end{matrix} \ \#\# \left\langle \begin{matrix} +\text{Vb} \\ +\text{Fut} \\ -\text{NP} \end{matrix} \right\rangle$$

D Auxiliary deletion

$$\begin{bmatrix} +\text{cons} \end{bmatrix} \longrightarrow \langle \phi \rangle \ / \left\langle \begin{matrix} {}^*\text{strid} \\ +\text{cons} \\ +\text{Pro} \end{matrix} \right\rangle \#\# \begin{bmatrix} \rule{1.5em}{0.4pt} \\ -\text{nas} \\ +\text{cont} \end{bmatrix} \#\# \left\langle \begin{matrix} +\text{Vb} \\ +\text{Fut} \\ -\text{NP} \end{matrix} \right\rangle$$

Figure 3.1: Labov's phonological rules for copula absence

indicated in the notation by angle brackets around the output of the rule (signalling that the rule is a variable rule) and by angle brackets around some of the contextual factors, i.e., those with only probabilistic and not categorical effects. This aspect of Labov's analysis will be discussed briefly in Section 3.3.3 and in more detail in Chapter 5.

The auxiliary contraction rule C applies to an unstressed vowel (schwa), and optionally deletes it just in case it belongs to a tensed (+T) word that consists only of the vowel and possibly one following consonant. (## indicates a word boundary.) In this way, it picks out schwas belonging to tensed auxiliaries. (*Has* contraction would involve an earlier rule of /h/ deletion).

The auxiliary deletion rule deletes consonants that are the sole segment in a word (cf. the ## specifications on either side of the context). Further, it only applies to non-nasal continuants, thus avoiding deleting /m/ and generating ungrammatical strings like (3).[4]

(3)*I the winner.

The only way to get words that are just one consonant long is to take the output of the auxiliary contraction rule. Thus, contraction feeds deletion. It is important to note in this regard that *contraction* here refers to full contraction, where the auxiliary is reduced to a single consonant. In some contexts, one finds forms that are spelled the same, but in fact the schwa is retained. Labov's deletion rule requires full contraction before it can apply. The next two subsections review Labov's evidence for this analysis and argue that copula absence is better treated as a syntactic phenomenon.

3.3.2 Distributional evidence

Labov's first line of argumentation for the deletion analysis is the claim that copula absence is possible in AAVE just in case copula contraction is possible in Standard English. Labov argues that the two varieties share a basic core grammar, although AAVE has some additional rules, including the rule of auxiliary deletion. To substantiate this claim, Labov shows that copula absence is disallowed in seven contexts that also bar contraction. These are given in Table 3.1. I will discuss each of these environments here as they provide a core set of data that any analysis must account for. Further, in some cases, the data are not as clear as Labov claims, partially because he was working solely with attested data, not grammaticality judgments.[5]

[4] It appears that this constraint might not be as absolute as the literature implies. While all four consultants rejected (3), one accepted (i) and one more recognized (i) as something other speakers might say.

(i) I tired.

[5] "The * symbol is usually used to indicate intuitive reactions of unacceptability: here it refers to patterns of production that are so clear that they support predictions of what is possible or not possible." (1995:39) All of the sentences quoted from Labov in this section have been checked with native speakers. In cases where Labov only illustrated his claims with positive data, I have provided and checked the corresponding ungrammatical examples.

a.	nonfinite contexts
b.	imperatives
c.	ellipsis
d.	emphasis
e.	past tense
f.	inversion
g.	complement extraction

Table 3.1: Environments disallowing both contraction and copula absence

Nonfinite contexts The copula is obligatorily present in non-finite contexts, for example, after *to* in (4).[6]

(4) a. *You got to ϕ good, Rednall!
b. You got to be good, Rednall! (L95)[7]

Further, there is no contracted form of non-finite *be*. On Labov's account, this follows because the form *be*, required in non-finite contexts, is not of the right phonological shape for contraction, so neither contraction nor deletion are possible.

Imperatives The copula is obligatorily present in imperatives, as shown in (5).

(5) a. Be cool, brothers! (L95)
b. *ϕ nice to your mother!

On Labov's account, imperatives are just a subcase of non-finite contexts, as the same form (*be*) is involved in both.

Ellipsis Copula absence is not possible before (verb phrase) ellipsis:

(6) a. (You ain't the best sounder, Eddie!) I ain't! He is! (L95)
b. *They said he wild, and he ϕ. (S&W99)

Contraction is also not possible (in AAVE or other English dialects) in this environment:

[6] In these examples, ϕ indicates the position where the copula is expected but not present.

[7] Key to data sources: L72: Labov 1972, Ch. 3; L95: Labov 1995; S&W99: Sag and Wasow 1999, Ch. 14

(7) a. They said he('s) wild, and he IS.
 b. *They said he wild, and he's.

On Labov's account, this follows because *is* is stressed (by virtue of being final in its phrase) and thus can be neither contracted nor, *a fortiori*, deleted.

Emphasis Labov illustrates the emphasis case with the following examples:

(8) a. Allah IS god. (L95)
 b. He IS a expert. (L95)

However, if a form of *be* were emphasized and then deleted in some example, the phonological effects of emphasis would be deleted along with the copula Thus counterexamples to this claimed generalization might not be apparent in production data. The only difference between copula absence examples with and without emphasis on the deleted copula is their meaning. The question to ask is whether a sentence like (9), with no special stress on any word, could be used to mean the same thing as (8b).

(9) He a expert.

The answer is appears to be that it cannot.[8]

Inversion Labov includes among his environments which disallow both deletion and contraction two inversion environments: tag questions and matrix polar questions. Tag questions are illustrated in (10).

(10) a. It ain't a flower show, is it?
 b. *It ain't a flower show, ϕ it?

[8] I found this out by first asking my consultants directly if (9) and (8b) could mean the same thing. Two said no. For the two who said yes, I followed up by asking whether B's responses in the following short discourses meant the same thing.

(i) A: Don't ask Paul, he's no expert.
 B: But he IS a expert.
(ii) A: Don't ask Paul, he's no expert.
 B: But he a expert.

Of these two speakers, one detected a contrast, but the other did not.

The situation is somewhat more complicated with matrix polar questions. First, since AAVE, like other English dialects, allows intonation questions like (11), it is not possible to tell where in the string the underlying copula would be in questions like (12).

(11) You're done?

(12) You done?

Negative polarity items would seem to distinguish the two:

(13) a. Are you done yet?
b.*You're done yet?
c. You done yet?

According to this test, the source of (13c) and therefore also (12) would have to be the inverted form. However, (13c) is a grammatical *reduced question* (Hendrick 1982) in Standard English as well. This means that it does not necessarily involve the same mechanisms as other examples of copula absence in AAVE.

It would seem that matrix *wh* questions would provide a better test. Copula absence is allowed in matrix *wh* questions (Sag and Wasow 1999:331):

(14) a. Where he going?
b. Who you talking to?

While (14b) is also acceptable as a reduced question in Standard English, (14a), with a third person singular subject is not (Hendrick 1982).

However, it turns out that the picture isn't much clearer in this case. First, it's not at all clear that AAVE must have the same constraints on reduced questions as Standard English. More importantly, although Sag and Wasow (1999) claim that AAVE, like Standard English, requires subject-auxiliary inversion in matrix *wh*-questions, (15a–b) were accepted by all four consultants and (15c–e) by some.[9]

[9] Curiously enough, none accepted the present tense counterparts of (15d–e), although the contracted forms were rated as marginal (and restricted to certain kinds of speakers, such as the elderly or young children) by two consultants.

(i) *What he is/he's doing?
(ii) *Where he is/he's going?

(15) a. Who you think gon come?
b. What they found there?
c. What he should do?[10]
d. What he was doing?[11]
e. Where he was going?

It appears that for one of these speakers, matrix *wh* questions require inversion just in case the clause is headed by an auxiliary. For the others, matrix *wh* questions allow inversion, but do not require it.[12]

Another inversion context to consider is inversion triggered by *so*. According to Pullum and Zwicky (1997), this is a possible environment for contraction, and my consultants agree that *so's* in (16a) need only be one syllable long. Copula absence, however, is not allowed in this environment:

(16) a. I'm tired and so's my dog.
b. *I'm tired and so my dog.

That this is indeed an inversion context is shown by the ungrammaticality of (17), on the intended interpretation.

(17)*I'm tired and so my dog is.

Perhaps the most general statement of copula absence across these environments is to say that copula absence does not appear where inversion is required, that matrix polar questions such as (12) and (13c) are instances of some other process or construction, and that *wh* questions do not require inversion.

This predicts that the null copula should be barred from other inversion contexts. One such context is exclamatives, such as (18).

[10](15c) was rated fine by one consultant, fine but like an older person's speech by another, and ? by a third.

[11](15d) sounded "childish, but not unusual" to one consultant.

[12]It is not immediately clear how to account for the *is* facts in footnote 9. One possibility is to allow constraints on the combination of certain words with certain constructions. Another is that the deviance of these examples is actually an instance of stylistic discord (Sylva and Zwicky 1975): the relatively standard overt *is* may clash with the non-standard uninverted *wh* question. According to Sylva and Zwicky, judgments of stylistic discord are distinguishable from judgments of ungrammaticality, so it may be possible in principle to test whether this is indeed a case of stylistic discord.

(18) Is he ever tall!

It's a little unclear if this is actually a good sentence in AAVE. Two of the speakers consulted accepted it, one rejected it, and one accepted it but identified it as being from another dialect. Nonetheless, all of the consultants rejected the uninverted version (19a) and the copulaless version (19b).

(19) a. *He is ever tall!
b. *ϕ he ever tall!

To the extent that (18) is a sentence of AAVE, these data provide further support for the claim that copula absence is disallowed in inversion contexts.

Note that the facts regarding inversion triggered by *so* complicate Labov's account somewhat in that the examples in (16) require some further (syntactic) restriction on the deletion rule to keep it from applying. Labov was able to reformulate all of the (categorical) syntactic constraints on copula absence that he found in terms of phonological constraints to do with stress placement and/or the identity of the segment deleted (only /r/ and /z/, not /m/). However, since copula absence does not pattern with contraction in embedded inversion contexts, it is not possible to appeal to stress to rule out (16b).[13] This encroachment of syntactic constraints on copula absence can be taken as one piece of evidence that it is perhaps best treated as a syntactic phenomenon. We now turn to some evidence that deletion is not in fact fed by contraction.

Past tense Labov illustrates the claim that all past tense forms of the copula are overt with the positive examples in (20).[14]

(20) a. I was small; I was sump'm about one years o'baby.
b. She was likin me ... she was likin George too.

[13]Note, however, that Pullum and Zwicky (1997) argue that contraction itself is subject to both syntactic and phonological constraints.

[14](20a) was rejected by some of my consultants, for reasons not related to the copula (the plural *years* with the determiner *one* and the form *o'baby*). (20b) was uniformly accepted.

Note that this is a crucial case for Labov: *was* does not contract completely, and examples of copula absence with past tense interpretation would constitute a case of deletion without contraction.

Green (in preparation) cites the following literary example, from John Edgar Wideman's *Brothers and Keepers*, 1984, p. 114.

(21) I dug being militant cause I was good. It was something I could do. Rap to people. Whip a righteous message on em. People knew my name. They'd listen. And I'd steady take care of business. **This was when Rap Brown and Stokeley and Bobby Seale and them ϕ on TV**. I identified with those cats... [emphasis added]

Three of my consultants accept the boldface sentence in this context, and only one of those accepts the same sentence with overt *is/are*. However, the other two both identified the sentence as somewhat surprising, noting the role of context in facilitating its acceptability.

Another possible example comes from a narrative collected by Fay McNair-Knox, although in this case it's difficult to tell whether the copulaless sentences involve the past or the historical present:[15]

(22) They was searchin an stuff, so me an Maria say, "They fiddin ta turn it out, so we fiddin ta go." **So we tryin to find our partners you know, an we hangin, you know**. An then the thing, this white an this Black girl was fightin, huh? They was tearin it off. [emphasis added]

Judging from these attested examples, a more general account of tense and copula absence would say that copulaless sentences are unspecified for tense, and get the common present tense interpretation as a default. However, available syntactic tests would seem to contradict this. In particular, three of the four native speakers consulted rejected the sentences in (23), and the fourth found them somewhat marginal.

(23) a.*He here yesterday.
b.*He here, wasn't he?

[15] This example was checked with two consultants who both accepted the boldface sentence in this context.

It's not clear what exactly is going on with copula absence and tense. It seems that the present tense reading is preferred, to the point where it is the only one apparent in decontextualized examples, but not necessarily the only one possible. Next we turn to two clear counterexamples to Labov's claim.

Complement extraction According to Labov, the copula is obligatorily present if its complement is extracted:

(24) a. I don't care what you are. (L95)
b. *I don't care what you ϕ.

Again, contraction is not possible in this environment in AAVE or other English dialects, and the explanation Labov appeals to is in terms of stress.

(25)*I don't care what you're.

In an attempt to show that it really is stress that's the problem and not just final position, Labov (1995) notes the following data and gives the explanation below.[16]

(26)

AAVE	Other English dialects
a.*Who it?	*Who's it?
b. Who IT? [in a game]	Who's IT?
c.*What it?	*What's it?
d. What it for/Wha's it for?	What's it for?

> We can't say [(26a)] with the dummy *it*, since dummy *it* is not stressable and the stress must be placed on the copula; but we can say [(26b)] with lexical *IT* which accepts stress. We can't say [(26c)], with dummy *it*, since again the copula has to take the stress; but we can say [(26d)], when the word *for* follows to take the main nuclear stress. (1995:40)

Although stress undeniably plays a role in the distribution of contraction, and sentence-final position, equally undeniably, is not the only environment in which the copula receives stress, there's something else going on in the examples in (26). Consider the related sentences in (27).

[16] The string *what it for* was accepted by one consultant, rated marginal by one, and identified as something other speakers might say by a third. The fourth consultant rejected it.

(27) a. It's Kim.
 b. Kim's IT.
 c. It's the mail.
 d. It's for cooking.

In (26a) and (26c) (corresponding to (27a) and (27c)), the complement of *is* is extracted. On the other hand, (26b) is a subject *wh* question; the complement of the copula is still in situ. Likewise, in (26d), the extracted element corresponds to something inside of the complement (the complement of *for*), so that the complement of the copula itself is not extracted. In sum, the pattern shown in (26) is just a sub-case of the claimed ban on copula absence in the context of complement extraction.

However, it turns out that the complement of the copula can be extracted, in certain situations:[17]

(28) a. How old your baby?
 b. How tall that basketball player?
 c. Where your car?
 d. When your birthday?
 e. I don't know how old his baby.

This is problematic for Labov because, in non-inverted contexts, it leads to minimal sets like (29). Here the putatively deleted form (29b) is possible, but the contracted form (29c) is not.[18]

(29) a. How old you think his baby is?
 b. How old you think his baby?
 c. *How old you think his baby's

There is actually a second possible 'source' for (29b) for two of the speakers consulted, namely (30a). For one of these speakers, contraction is not possible here, either.

[17] There is some variation across speakers with respect to these sentences. One speaker accepted all of them. One more identified (28d) as something other speakers might say and accepted the rest. The third speaker rated (28b) and (28e) as marginal and accepted the rest. The fourth speaker accepted (28c) and (28e), rated (28a) and (28b) as marginal, and rejected (28d). (28c) was accepted by all four speakers.

[18] (29a) was accepted by three of the four consultants. The other judgments in this set are uniform across all four speakers.

(30) a. How old you think is his baby?
b. %How old you think's his baby?

The details of complement extraction with the silent copula will be taken up again in Section 3.6.4.

Subject extraction The minimal set in (31) provides a second example where deletion is possible but contraction isn't:

(31) a. Tha's the man they say is in love.
b. Tha's the man they say ϕ in love.
c.*Tha's the man they say's in love. (with complete contraction)

Sentences (31a), with a full, uncontracted form of the copula, and (31b), with no overt form of the copula, were accepted by all four consultants. (31c), on the other hand, with complete contraction of the copula, is ungrammatical.[19] Not surprisingly, this is a context that appears to block complete contraction in other English dialects as well.[20]

Labov's deletion analysis has some initial plausibility, as it seemed at first glance that there was a significant parallelism to account for between copula absence and contraction. However, we have seen in this section that that parallelism is in fact

[19] One consultant did accept it, but it appears that this was the result of interference of the inflectional *-s*. This consultant does get the contrast once the possibility of that inflection is removed, as in (i):

(i) a. Tha's the man they gon say is in love.
b. Tha's the man they gon say in love.
c.*Tha's the man they gon say's in love. (with complete contraction)

[20] Strangely enough, although a preceding vowel is usually more conducive to contraction (see §3.3.3 below), corresponding sentences with preceding consonants are better. (i) was accepted with complete contraction by three of four consultants.

(i) Tha's the man they said's in love.

Although this fact is puzzling, it does not detract from the force of (31) as a counterexample to Labov's deletion analysis. Labov's analysis makes the strong prediction that contraction must be possible EVERYWHERE deletion is, because deletion is fed by contraction. Any environment, no matter how specifically characterized, where deletion is possible and contraction is not, is a fatal counterexample.

inexact. There is at least one environment (embedded inversion) where contraction is possible without deletion, making it harder to account for the distribution of copula absence in purely phonological terms. More importantly, copula absence is possible and contraction impossible in at least two environments (complement extraction and subject extraction) and possibly one more (past tense contexts). Thus deletion is possible in at least two environments where contraction isn't and copula absence cannot be completely accounted for in terms of a rule that deletes the consonant left by copula contraction. If the deletion rule has to remove the vowel as well, it becomes much less natural as a phonological rule. Finally, as will be shown in Sections 3.6 and 3.7, syntactic analyses can also provide natural accounts of the failure of copula absence when it occurs. Indeed, such an account will be necessary in general, as Ferguson (1971) has shown that other languages (e.g., Russian and Arabic) which allow copulaless sentences and have nothing corresponding to English auxiliary contraction, nonetheless require an overt copula in a set of contexts similar to that found in AAVE.[21] Before proceeding to the syntactic accounts, however, Section 3.3.3 discusses the other type of evidence Labov adduced for his deletion account.

3.3.3 Variable evidence

In addition to the hard constraints on copula absence, Labov studied the soft or probabilistic constraints, by recording naturally occurring speech and observing features of the context of each occurrence of copula absence or copula presence. These constraints will be discussed in more detail in Chapter 4. Here, we will consider the one such constraint that constituted evidence for Labov's argument that copula absence is a phonological phenomenon. Labov found that deletion and contraction differed in the way they were affected by the preceding phonological environment: A preceding vowel favored contraction, while a preceding consonant favored deletion. This is illustrated in Table 3.2, for data from two of the groups Labov studied (adapted from Table 2.2 of Labov 1995:46).[22]

[21] A similar point is made in Rickford et al. 1991.

[22] The rates of deletion and contraction add up to more than 100% because of Labov's method for calculating them, discussed immediately below.

Preceding segment	Rate of contraction	N	Rate of deletion	N
Cobras				
__ C	.41	46	.80	20
__ V	.90	32	.41	29
Jets				
__ C	.32	93	.70	30
__ V	.90	32	.41	29

Table 3.2: Effect of preceding phonological environment, South Harlem

This result would follow nicely from a phonological account. As Labov argues, the favoring effect of a preceding vowel on contraction and the favoring effect of a preceding consonant on deletion can both be seen as reflexes of a pressure towards creating optimal CVC syllables.

However, Rickford et al. (1991) show that this effect is dependent on how one calculates the rates of each variant. In Labov's (1969, 1995) system, since deletion is analyzed as being fed by contraction, both deleted forms and contracted forms were counted as instances of contraction. That is, the rate of contraction is the number of contracted or deleted forms divided by the total number of forms (contracted, deleted, or full). Again, since deletion is fed by contraction, the rate of deletion is just the number of deleted forms divided by the number of contracted forms. These methods of counting forms are known as 'Labov Contraction' and 'Labov Deletion', respectively.

Romaine (1982) proposes an alternative in which zero forms are counted as a proportion of all tokens and contracted forms as a proportion of only the overt tokens. This method of counting contracted forms is known as 'Romaine Contraction'. A third proposal is 'Straight Deletion' (same as Romaine's proposal for deletion) and 'Straight Contraction', where contracted forms are counted as a proportion of all tokens. Rickford et al. (1991) point out that Straight Deletion and Romaine Contraction make more sense in light of the history of AAVE: If AAVE, as a decreolizing variety, has a diachronic process of copula insertion, then there is no reason to look at the zero forms as a proportion of zero + contracted forms. Likewise, there's no reason to consider the zero forms as potential input to a contraction rule. This amounts to treating AAVE copula absence as a syntactic rather than phonological phenomenon, and is consistent with both of the syntactic analyses presented below.

Rickford et al. (1991) find that (for their East Palo Alto data) the effect of the preceding phonological environment on contraction is constant across the different ways of calculating the proportion of contracted elements: a preceding vowel always favors contraction. However, the effect of the preceding phonological environment on deletion (zero forms) IS dependent on the method of calculation. With Labov Deletion, a preceding consonant favors the zero forms, while a preceding vowel favors the contracted forms. With Straight Deletion, there is no significant effect of the preceding phonological environment. This is illustrated in Table 3.3, excerpted from Rickford et al.'s Table 6 (1991:117). The values given are variable rule factor weights and parentheses around a value indicate that the factor was not chosen as significant by the Varbrul program.[23]

Preceding segment	Labov Deletion	Straight Deletion
__ C	.59	(.47)
__ V	.41	(.53)

Table 3.3: Effect of preceding phonological environment, East Palo Alto

As Rickford et al. note, these results show that the possible phonological effect on copula deletion cannot be used to argue for either a phonological or a syntactic analysis of the phenomenon. If the frequency of each variant is calculated according to Labov's theory that contraction feeds deletion, a phonological effect appears for deletion. If the frequency of forms is calculated according to a theory where the zero form is a separate lexical item, no phonological effect is found.

[23]For more on Varbrul, see Chapter 4.

3.3.4 Summary

In this section we have seen that Labov's phonological analysis of copula absence is not, in fact, supported by the evidence. There are counterexamples to the parallelism between contraction and deletion and the variable evidence is inconclusive. Further, as suggested by Rickford et al. (1991), inasmuch as Labov's analysis embodies historical claims, it is inaccurate. On the deletion account, copula absence is conceptualized as the result of AAVE speakers taking the general English process of contraction one step further. However, in the decades since Labov's original (1969) proposal, much evidence has been found to support the theory that AAVE developed from an earlier creole, rather than by dialect divergence from other English varieties. The original creole is thought to have had categorical copula absence in many environments. This means that the historical process is one of copula insertion rather than copula deletion. For more on the creole origins of AAVE, see Section 5.4.3 of Chapter 5 and Rickford 1998.

3.4 Constructional analysis I

Mufwene (1992) and Sag and Wasow (1999) independently suggest similar constructional analyses of copula absence in AAVE. These constructional analyses avoid the need to posit a rule of deletion or even a phonologically empty verb, and as such, are in keeping with the surface-orientation of much recent work in HPSG.

Building on the observation that copulaless sentences in AAVE have the same distribution as finite clauses (32), the construction posited builds a finite clause out of an NP and a predicative phrase.

(32) a. You ϕ in trouble. (S&W99)
b. If you ϕ alone, watch out! (S&W99)
c. The man she ϕ lookin for ain't here. (S&W99)
d. He just feel like he ϕ gettin cripple up from arthritis. (L95)

Mufwene's (1992) version is given in (33), where PredP stands for Predicative Phrase, a cover category for NP, AP and PP predicates and participial verb phrases.

(33) S $\rightarrow$ NP PredP

This rule (33) assigns the structure in (35) to the sentence in (34).[24]

(34) Kim ϕ tired.

(35)
```
        S
   ┌────┴────┐
   NP      PredP
   |         |
  Kim      tired
```

Importantly, there is no phrase structural position in this tree for the copula.

3.4.1 Formalization

Figure 3.2 gives the full details the *zero-copula-phrase* proposed by Sag and Wasow (1999), translated into the notation described in Chapter 2. The first thing to notice about this construction is that it is not a headed construction: the syntactic category of the mother is not the same as the syntactic category of either daughter. Copulaless sentences in AAVE have predicates that are not finite verbs, and yet they pattern the same way as regular sentences headed by finite verbs. Accordingly, the *zero-copula-phrase* has no HEAD-DTR feature, but rather two NON-HEAD-DTRS, and it is not a subtype of *headed-phrase*.

The information given in (33) is also encoded in the *zero-copula-phrase*: The mother is a sentence (that is, something finite and verbal with all of its valence requirements satisfied), the first daughter is an NP and the second daughter is a predicative ([PRED +]) phrase.[25] Notice that the value of HEAD on the second daughter is underspecified: It could be anything (*verb, noun, adjective, preposition*), as long as it is also [PRED +]. This is the same natural category selected by *be*.

[24] Accepted by all but one of my consultants, who identified it as something other speakers would say.

[25] Copulaless clauses with non-NP subjects may be possible for some speakers. One consultant accepted (i).

(i) What I want to know who done it?

Any of the analyses discussed here can easily be generalized to allow non-NP subjects.

$$
\begin{bmatrix}
\textit{zero-copula-phrase} & \\
\text{PHON} & \boxed{A} \oplus \boxed{B} \\
\text{SYNSEM} & \begin{bmatrix} \text{LOCAL} & \begin{bmatrix} \text{CAT} & \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{verb} & \\ \text{FORM} & \textit{fin} \end{bmatrix} \\ \text{SUBJ} & \langle\ \rangle \\ \text{COMPS} & \langle\ \rangle \end{bmatrix} \\ \text{CONT} & \begin{bmatrix} \text{INDEX} & \boxed{2} \\ \text{RELS} & \boxed{C} \oplus \boxed{D} \end{bmatrix} \end{bmatrix} \end{bmatrix} \\
\text{NON-HEAD-DTRS} & \left\langle \begin{matrix} \begin{bmatrix} \text{PHON}\ \boxed{A} & \\ \text{SYNSEM}\ \boxed{1} & \begin{bmatrix} \text{LOCAL} & \begin{bmatrix} \text{CAT} & \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{noun} & \\ \text{CASE} & \textit{nom} \\ \text{AGR} & \textit{non-1sg} \end{bmatrix} \\ \text{SUBJ} & \langle\ \rangle \\ \text{SPR} & \langle\ \rangle \\ \text{COMPS} & \langle\ \rangle \end{bmatrix} \end{bmatrix} \\ \text{CONT} & \begin{bmatrix} \text{RELS} & \boxed{C} \end{bmatrix} \end{bmatrix} \end{bmatrix}, \\
\begin{bmatrix} \text{PHON}\ \boxed{B} & \\ \text{SYNSEM} & \begin{bmatrix} \text{LOCAL} & \begin{bmatrix} \text{CAT} & \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \text{PRED} & + \end{bmatrix} \\ \text{SUBJ} & \langle \boxed{1} \rangle \\ \text{SPR} & \langle\ \rangle \\ \text{COMPS} & \langle\ \rangle \end{bmatrix} \\ \text{CONT} & \begin{bmatrix} \text{INDEX} & \boxed{2} \\ \text{RELS} & \boxed{D} \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{matrix} \right\rangle
\end{bmatrix}
$$

Figure 3.2: Zero copula phrase

The description of the *zero-copula-phrase* goes beyond the information in (33) in several respects. The noun phrase is required to be nominative and non-1sg,[26] ruling out the sentences in (36).[27]

(36) a.*Him tired.
 b.*I tired.

Further, the SYNSEM value of the first daughter is identified with the subject requirement of the second daughter. Recall from Section 2.5 of Chapter 2 that *be* is treated as a raising verb. This entails that its complement is always subject-seeking, even when the complement is a predicative noun phrase. This construction takes those subject-seeking predicative phrases and satisfies that subject requirement directly.

Why not simply generalize the *head-subject-phrase* for AAVE to allow both finite VPs and predicative phrases as the predicate? Doing so would mean that even when the predicate is a finite VP, the so-called *head-subject-phrase* would not be a headed phrase. Further, the *zero-copula-phrase* is not possible with first person singular subjects, and thus is differently constrained from the *head-subject-phrase*.

3.4.2 The basic facts

This constructional analysis provides an immediate account for much of the data noted in Section 3.3.2. In particular, this analysis embodies the claim that copula absence is only possible in contexts where the subject immediately precedes the predicative phrase: It is only possible to make the copulaless sentences by putting the subject together with the predicative phrase, and there are no transformations to move one or the other away. From this, it follows that one will not find copula absence in any of the following environments:[28]

(37) Nonfinite contexts:
 *You got to ϕ good, Rednall!

[26] Note that this means that the subhierarchy of agreement types for AAVE is not the same as that given for Standard English in Figure 2.15 of Chapter 2.

[27] (36a) was only accepted by one consultant and then with the comment "Only because I know I've heard Southern folk say *Him is tired*." (36b) was accepted by that same speaker and identified by one other as something other speakers might say.

[28] The ϕ indicating the place in the string where the copula is expected is retained in these examples for clarity. However, it should be clear that this analysis posits no such empty element.

(38) Ellipsis:

*They said he('s) wild, and he ϕ.

(39) Tag questions:

*It ain't a flower show, ϕ it?

(40) Inversion triggered by *so*:

*I'm tired and so my dog.

(41) Subjectless imperatives:

*ϕ nice to your mother!

Note that copula absence is licensed in (42), as the subject is immediately followed by the predicate.[29]

(42) a. Where he going?

b. Who you talking to?

Copula absence is not possible with emphasis, because there's nothing there to emphasize:

(43) He a expert.

$\neq$ He IS a expert.

The remaining contexts require somewhat more explanation. Here, I will address imperatives with subjects and the issue of tense. Subject extraction will be discussed in Section 3.4.3 below.

Imperatives with subjects The example in (44) does have the subject immediately followed by the verb, so some other explanation is required for its unacceptability.

(44)*Y'all ϕ nice to your mother!

Recall that the mother of the *zero-copula-phrase* is a finite sentence. If imperatives are built with non-finite forms, the *zero-copula-phrase* will not be usable as an imperative. If, following Ginzburg and Sag (to appear), imperatives are built with finite but semantically distinguished verb forms, it would be sufficient to ensure that the mother here is of the wrong semantic type.

[29] Further, since the *zero-copula-phrase* is not [AUX +], it is suitable to head a matrix *wh* question even in those varieties that require inversion in case the clause is headed by an auxiliary.

Past tense As noted in Section 3.3.2 above, it is not clear whether copulaless clauses are specified as present tense or underspecified with respect to tense, or if different speakers' grammars indeed vary on this point. The constructional analysis is consistent with either conclusion: If copulaless clauses are unspecified with respect to tense, the description in Figure 3.2 will suffice. If copulaless clauses are specified as present tense, the construction itself can carry the present tense semantics. This is achieved by adding to Figure 3.2 the constraints shown in Figure 3.3.[30]

$$\begin{bmatrix} \textit{zero-copula-phrase} & \\ \textsc{synsem} & \begin{bmatrix} \textsc{local} & \begin{bmatrix} \textsc{cont} & \begin{bmatrix} \textsc{index} & \boxed{2} \\ \textsc{rels} & \boxed{C} \oplus \boxed{D} \oplus \left\langle \begin{bmatrix} \textit{t-overlap\_rel} & \\ \textsc{arg1} & \boxed{2} \\ \textsc{arg2} & \textit{now} \end{bmatrix} \right\rangle \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

Figure 3.3: Zero copula phrase — present tense only

Tag questions The fact that tags on copulaless sentences use forms of *be* would seem to pose a problem for this account.

(45) a. They best friends, ain't they?
b. They best friends, aren't they?
c. They not best friends, are they?
d.*They best friends, don't they?
e. They know you, don't they?

However, on the analysis of tags reviewed in Section 2.5.4 of Chapter 2, the choice of tag auxiliary is determined by the KEY value of the main clause. Since the *zero-copula-phrase* is similar in semantic effect to overt forms of the copula, it would not be surprising for it to have the same KEY value, predicting the pattern in (45).

[30] The index $\boxed{2}$ is identified with the index of the predicate daughter and eventually with the INDEX of the main semantic relation contributed by the lexical head of the predicate.

3.4.3 Subject extraction

The preceding subsection showed how much of the basic data on copula absence followed from one entailment of the *zero-copula-phrase* analysis: copulaless clauses are only possible when the subject immediately precedes the predicate. It follows from this, together with a traceless analysis of subject extraction, that the subject of a copulaless clause should not be extractable. Unfortunately, sentences such as (46) are perfectly fine:

(46) a. Tha's the man they say __ ϕ in love.
b. Tha's the man they say __ ϕ a crook.
c. Tha's the man they think __ ϕ famous.

In order to account for these sentences on the present analysis, one would need to allow a subject trace as the first daughter of the *zero-copula-phrase*. This runs counter to the original motivation for this analysis: to avoid positing an empty category.

3.5 Constructional analysis II

One way to avoid the problems raised by subject extraction while maintaining a constructional analysis is to effectively move the construction one node down the tree. The *zero-copula-phrase* proposed in the preceding section built a sentence by combining a noun phrase and a predicate. The new constructional analysis proposed here builds a finite VP out of a predicative phrase. This finite VP can then combine with a subject in the normal way. This is a non-branching construction, used to license trees such as the one in Figure 3.4.

3.5.1 Formalization

The construction that builds the VP in Figure 3.4 is the *predicative-VP* shown in Figure 3.5. It is a non-headed construction with only one daughter. It must be non-headed as the HEAD values of the mother and daughter differ: the mother is a non-predicative finite verb phrase. The daughter is a (not necessarily verbal) predicative phrase. Since the construction has no semantic effect (except perhaps

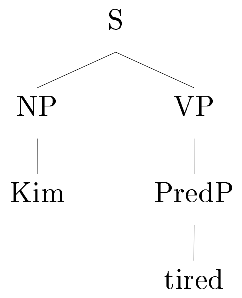

Figure 3.4: Constituent structure under constructional analysis II

$$\begin{bmatrix} \textit{predicative-VP} & \\ \text{PHON} & \boxed{A} \\ \text{SYNSEM} & \begin{bmatrix}\text{LOCAL} & \begin{bmatrix}\text{CAT} & \begin{bmatrix}\text{HEAD} & \begin{bmatrix}\textit{verb} & \\ \text{FORM} & \textit{fin}\\ \text{PRED} & -\end{bmatrix}\\ \text{SUBJ} & \langle \boxed{1}[\textit{non-1sg, nom}]\rangle \\ \text{SPR} & \langle\ \rangle \\ \text{COMPS} & \langle\ \rangle\end{bmatrix}\\ \text{CONT} & \boxed{2}\end{bmatrix}\end{bmatrix}\\ \text{NON-HEAD-DTRS} & \left\langle \begin{bmatrix}\text{PHON} & \boxed{A}\\ \text{SYNSEM} & \begin{bmatrix}\text{LOCAL} & \begin{bmatrix}\text{CAT} & \begin{bmatrix}\text{HEAD} & \begin{bmatrix}\text{PRED} & +\end{bmatrix}\\ \text{SUBJ} & \langle\boxed{1}\rangle\\ \text{SPR}&\langle\ \rangle\\ \text{COMPS}&\langle\ \rangle\end{bmatrix}\\ \text{CONT} & \boxed{2}\end{bmatrix}\end{bmatrix}\end{bmatrix}\right\rangle\end{bmatrix}$$

Figure 3.5: Predicative VP construction

to constrain tense, see below), it can simply copy the entire CONTENT value from the daughter to the mother. Similarly, the PHON values are identified. The SUBJ value of the mother and daughter are also identified, but the mother can add further constraints, such as the constraint shown in the figure that the subject be nominative and not first-person singular.

3.5.2 The basic facts

The explanation for the basic facts on this analysis differs somewhat from the previous analysis, but is still fairly straightforward for most cases.

Copula absence is not allowed in nonfinite contexts, as the *predicative-VP* construction is specified as [FORM *fin*].

(47)*You got to ϕ good, Rednall!

Copula absence is not allowed in ellipsis (48), inversion (49), or tag questions (50), as there is no silent auxiliary that could head the *ellipsis-phrase*, *sai-phrase*, or *tag-phrase* (cf. §2.5.3–§2.5.4 of Ch. 2).[31]

(48)*They said he('s) wild, and he ϕ.

(49)*I'm tired and so my dog.

(50)*It ain't a flower show, ϕ it?

Finally, in the remaining three environments, the explanation is the same as it was under the first constructional analysis: The contrast in (51) follows from the fact that there is no auxiliary to emphasize in the copulaless version.

(51) He a expert.
$\neq$ He IS a expert.

Copulaless clauses are disallowed in imperatives because the *predicative-VP* is of the wrong syntactic (FORM) or semantic type.

[31]As before, since the *predicative-VP* is not [AUX +], it would be suitable to head a matrix *wh* question even in those varieties that require inversion just in case the head of the clause is an auxiliary.

(52) a. *ϕ nice to your mother!
b. *Y'all ϕ nice to your mother!

The existence of forms of *be* in tags on copulaless clauses can be modeled by giving the *predicative-VP* the same KEY value as forms of *be*.

(53) a. They not best friends, are they?
b.*They best friends, don't they?

Finally, as with the previous construction, this construction can be specified as present tense or left underspecified for tense.

3.5.3 Further facts: Subject extraction

Because this new constructional analysis does not require the subject to be present in the phrase structure of a copulaless clause, subject extraction (54) can be handled in the usual way.

(54) Tha's the man they think __ ϕ famous.

But what is the usual way? Recall from the review of Bouma et al.'s (in press) analysis in Section 2.3 of Chapter 2 that, in cases of complement extraction, the bottom of an extraction dependency is provided for by the Argument Realization Principle, repeated here as Figure 3.6.

$$\begin{bmatrix} \textit{word} \\ \text{SYNSEM} \begin{bmatrix}\text{LOCAL}\begin{bmatrix}\text{CAT}\begin{bmatrix}\text{SUBJ} & \boxed{A} \\ \text{COMPS} & \boxed{B} \ominus \textit{list}(\textit{gap})\end{bmatrix}\end{bmatrix}\end{bmatrix} \\ \text{ARG-ST}\ \boxed{A} \oplus \boxed{B}\end{bmatrix}$$

Figure 3.6: Argument Realization Principle, repeated

The Argument Realization Principle states that the ARG-ST value of a *word* is its SUBJ list, followed by its COMPS list, plus some elements of type *gap* interleaved with the complements. Nothing in this constraint prevents the elements on the SUBJ or COMPS list from also being of type *gap*, however: The value of SUBJ and COMPS is always a list of *synsem*s, and *gap* is a subtype of *synsem*. What keeps elements of type *gap* from appearing on COMPS lists is that the resulting words would be unusable: *gap* is a subtype of *non-canonical*, and no *sign* may have a synsem of type *gap*, as all *sign*s are constrained to have *canonical* synsems. Since all COMPS members must be realized or otherwise canceled off, a word with *gap*s on its COMPS list could never be used in a grammatical sentence.[32] On the other hand, in the theory of clauses developed by Ginzburg and Sag (to appear), a word with a *gap* on its SUBJ list CAN be used in grammatical sentences. In particular, the complement of proposition embedding verbs like *think* may be [SUBJ $\langle\ \rangle$] or [SUBJ $\langle$ *gap* $\rangle$].[33]

Therefore, if a word like *famous* could have a *gap* on its SUBJ list, a *predicative-VP* with such a word as its daughter would also have a *gap* on its SUBJ list, and this whole thing could be the complement of *think*. This is sketched in Figure 3.7. The VP whose label is boxed in this figure is the mother of the *predicative-VP*.

[32] The *ellipsis-phrase* and *sai-phrase* allow COMPS elements to unify with the type *elided* and cancel such COMPS requirements off without realizing any corresponding sign in the phrase structure. However, *elided* is a sister type to *gap*, and therefore incompatible with it (cf. Figure 2.50, page 71). Therefore the addition of these phrase types to the grammar does not change the fact that a word with *gap*s on its COMPS list cannot be used in a grammatical sentence. The data are somewhat subtle, but they do support this conclusion. (i) does not involve ellipsis.

(i) Where is there a gas station?

[33] This is not in fact implemented by having verbs like *think* constrain their subject value. Rather, such verbs select for complements with clausal semantics, and a special construction turns VPs specified as [SUBJ *gap*] into clauses, with the appropriate semantic type. For details, see Ginzburg and Sag to appear.

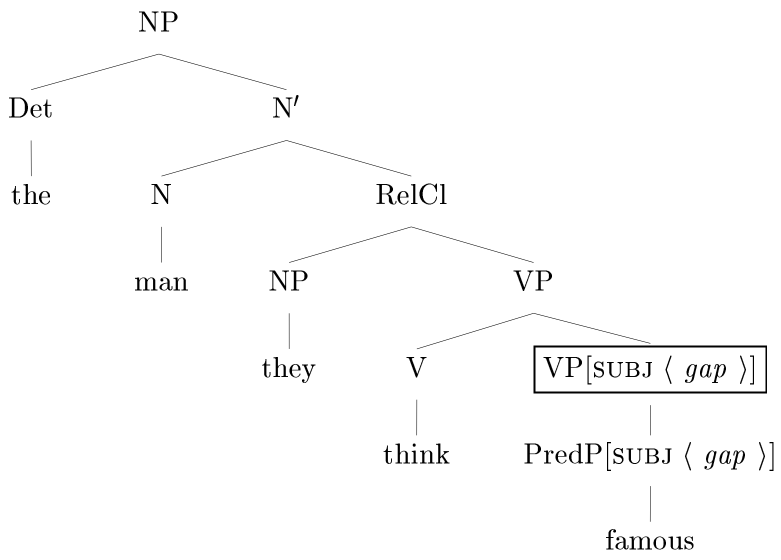

Figure 3.7: Subject extraction with *predicative-VP*

3.5.4 Existentials

This new constructional analysis seems promising: it can account for all of the basic facts plus the subject extraction facts that were problematic for the first constructional analysis. However, it is still insufficient. There are three kinds of facts that it cannot account for, or can account for only with difficulty. The first, to be discussed in this subsection, is the possibility of copulaless existentials. The second, discussed in Section 3.5.5, is a curious interaction of negation and ellipsis. The third, discussed briefly in Section 3.5.6, is the possibility of complement extraction.

The problematic existential sentences are those in (55).

(55) a. There a car blocking my way.
  b. I know there at least SOMEBODY happy about this.
  c. There a big crowd of people outside.
  d. There a book gone from my desk.

It should be noted that these sentences were not unanimously accepted. One speaker rejected all sentences with *there* and a zero copula. The three other speakers all accepted (55b), but each of the other sentences was rated as marginal (although not out) by one speaker, and only accepted by two. Only one speaker accepted all four sentences in (55). It is clear that the only problem for the other three speakers is the form of the copula. With overt *is*, they accept all four sentences.[34]

Nonetheless, it appears that copulaless existentials are a part of AAVE. Despite his claim that *it* is among the class of subjects that always appear with contraction, not deletion, Labov (1969) provides the attested example in (56).

(56) It always somebody tougher than you are.

(*It* is a variant form of the existential expletive in AAVE. (55) gives sentences with *there* because *it* was somewhat marginal for my consultants, especially in copulaless clauses.)

The problem that the sentences in (55) and (56) pose for the *predicative-VP* analysis has to do with their constituent structure. If, as argued below, the constituent

[34] The speaker who rejected all of the sentences in (55) also found the versions of (55d) questionable even with *is*.

structure of existentials is as in Figure 3.8, turning predicative phrases into finite VPs won't help generate these strings. In order for tree (b) of Figure 3.8 to be well formed, the VP *blockin my way* would have to select for two NPs, not the single NP subject that it does select for. Further, there would have to be some construction that realizes both of these NPs before the predicate. The picture is further complicated by sentences like (57), in which the putative head has been extracted:[35]

(57) I know where there a pot of gold.

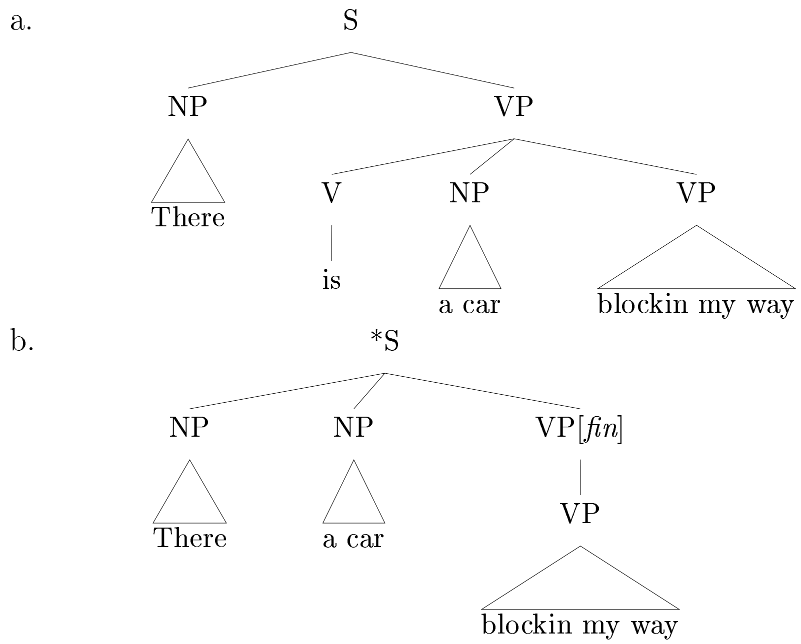

Figure 3.8: Constituent structure of existentials I

One possibility is to account for these sentences by positing instead the constituent structure in Figure 3.9. In this case, the VP *blockin my way* would be a modifier of the NP *a car*, and this whole NP would be the predicative daughter of the *predicative-VP*. This would still be unsatisfactory for a number of reasons. First, it would still require a separate type similar to the *predicative-VP* but distinct in that it selects an expletive subject (*there*). Second, that NP is not predicative: it is the existence

[35] Accepted by two speakers, rated marginal by one, and rejected by the fourth.

of the referent of the NP that is being asserted in such sentences. This semantic intuition is confirmed by the fact that it does not have the syntax of a predicative NP, as illustrated in (58) (cf. (25) on page 48 of Chapter 2).

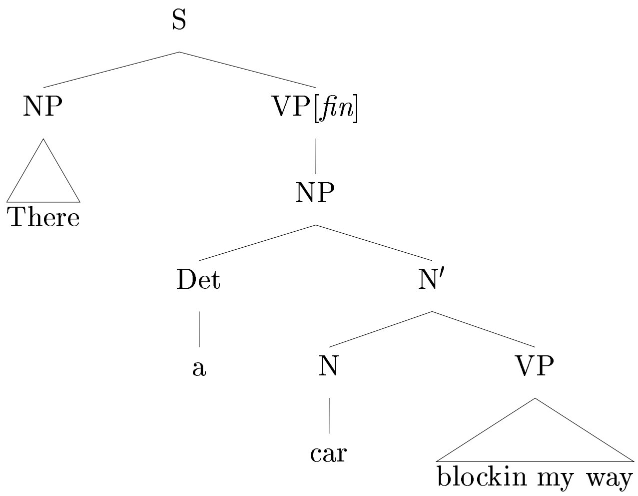

Figure 3.9: Constituent structure of for existentials, II

(58) a.*There was advisor to the committee (in the room).
b.*There advisor to the committee (in the room).
c.*There was too much of a fool to take seriously (in the room).
d.*There too much of a fool to take seriously (in the room).

Third, although this has been the subject of some controversy, there is a variety of evidence that the constituent structure in Figure 3.9 is incorrect: the NP and predicative phrase after the copula in existential sentences are two separate constituents. In the remainder of this subsection, I will review this evidence, principally by refuting each of the arguments that Williams (1984) puts forward for the constituent structure in Figure 3.10. I will call this structure the *be*-NP structure, in contrast to the structure in Figure 3.8 (a), which will be called the *be*-NP-XP structure. These arguments primarily concern the standard varieties studied in the literature cited.

Spurious ambiguity Williams's (1984) first argument is that, given the existence of sentences like (59), one needs to be able to generate existentials with the *be*-NP structure anyway.

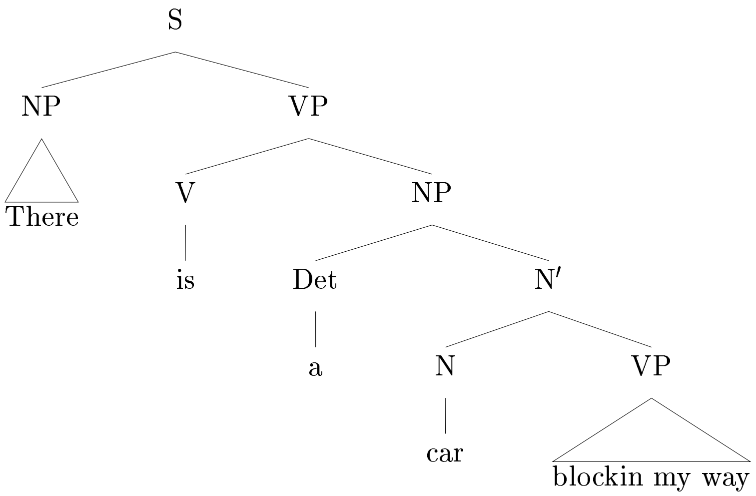

Figure 3.10: *Be*-NP structure for existentials

(59) There is a Santa Claus.

Williams further argues that all existentials could be generated this way. That is, he claims that the material following *be* in an existential is always a possible NP. If this is true, allowing the *be*-NP-XP structure alongside the *be*-NP structure would only lead to spurious ambiguity.

However, it is not the case that the material following *be* in an existential is always a possible NP, if to be a possible NP it must also appear in other NP positions. The following contrast has long been noted (Milsark 1974), and in fact, is noted by Williams (1984:146) himself:

(60) a. There are some people sick.
b. *I saw some people sick.
c. I saw some people sick as dogs.
d. *Some people sick are in the next room.
e. Some people sick as dogs are in the next room.

The generalization is that bare adjectives are not permitted as post-nominal modifiers in English, although they are permitted in existentials. The exception is cases like (61), with an indefinite pronoun:

(61) Someone sick is in the next room.

Further, even when the determiner, noun and following material do make up a possible NP, there are detectable differences in the semantics of this (putative) NP in existential and other sentences. This is illustrated by two sets of examples. In (62),[36] the string *a live fox drowned in a tub of water* is contradictory in (62b) but not in (62a).[37]

(62) a. During the demonstration there was live fox drowned in a tub of water.
b. Jack pulled out a live fox drowned in a tub of water.

To this observation, Lumsden (1988:51) adds the contrasting pairs like (63). The sentence in (63a) does not imply that there are any fish in the tank beyond the oddly colored ones referred to. In contrast, the sentence in (63b) does entail that there are other, less oddly colored fish in the aquarium.

(63) a. There are the most oddly colored fish in that aquarium.
b. The most oddly colored fish in that aquarium swam right at me.

It is plausible that these semantic differences could follow from the difference between the use of the various XPs as predicates and as modifiers. That is, in (63b), the phrase *in that aquarium* is a modifier of *fish*, and falls within the restrictor of the quantifier *most*. In (63a), on the other hand, *in that aquarium* is not part of the NP *the most oddly colored fish*. For whatever reason, this allows the idiomatic sense of *most* which lacks the entailment of a comparison set.

Extraction and the Complex NP Constraint Williams's (1984) somewhat involved second argument is that the impossibility of (64b) is best explained by the restriction on extraction from complex NPs, on a par with (65b).

(64) a. There was someone how happy? [Reprise question]
b. *How happy was there someone?

(65) a. You met someone how happy? [Reprise question]
b. *How happy did you meet someone?

[36] Lumsden (1988:51) attributes this type of example to Milsark (1974:45–46), but no such examples can be found there.

[37] Williams (1984) disputes these judgments, but gives no argument beyond intuitions.

However, this analysis requires him to suppose that examples like (66) are generated by extraposing the modifier *happy/available* from the NP after it is extracted:

(66) a. How many people were there happy?
b. How many unicorns are there available?

Further, extraposition must be constrained to follow extraction, so that it doesn't feed extraction and license sentences like (64b).[38]

In addition to problems of rule ordering, Pollard (1984:123) notes that Williams's (1984) system would require that extraposition is in fact obligatory just in case the postverbal NP of an existential is extracted:

(67)*How many unicorns available are there?

Thus it appears that the ungrammaticality of (64b) is not due to the complex NP constraint. Perhaps an explanation in terms of conflicting pragmatic functions of presentational sentences and *wh*-questions would be more successful. That is, presentational sentences serve to introduce new entities into the discourse. The question in (64b) appears to presuppose the existence of the referent of *someone*.

Heavy NP Shift Williams's (1984) next argument centers on the apparent failure of heavy NP shift in existentials. That is, if there are two constituents following *be* in (68a), one would expect the first to be able to shift over the second, as in the ungrammatical (68b), on the model of (69). Williams points out that the ungrammaticality of (68b) would follow directly if *sick* were in fact part of the NP.

(68) a. There are several of George's recent acquaintances sick.
b. *There are sick several of George's recent acquaintances.

(69) a. I consider several of George's recent acquaintances sick.
b. I consider sick several of George's recent acquaintances.

[38] Williams supposes sentences like (i) are grammatical because PPs can also be sentence modifiers.

(i) I know where there is a unicorn.

However, Quirk et al. (1985) note the grammatical examples in (70) and Thomas Wasow (p.c.) provides the attested examples in (71).

(70) a. There was in the vicinity a helpful doctor.
b. There'll be left open no single well-stocked shop.

(71) a. There was inside his body a feeling of such inevitable danger and ultimate doom that it damn near took his breath away. (John Treadwell Nichols, *The Milagro Beanfield War*, 1974)
b. There must be available no acceptable less discriminatory alternative which would accomplish the purpose as well. (Edward Chen, 'Language Rights in the Private Sector' in James Crawford, *Language Loyalties: A Source Book on the Official English Controversy*, University of Chicago Press, 1992)

Since these examples show that heavy-shift of the post copular NP in existentials is possible, the argument turns out to favor the *be*-NP-XP structure instead. Some other explanation must be found for the ungrammaticality of (68b).

Ellipsis Williams's (1984) argument from ellipsis centers on the apparent impossibility of eliding just the noun in sentences like (72).

(72)*There was someone sick, but there wasn't __ dead.

This contrasts with existentials with PPs after the NP:

(73) There was someone in the parlor, but there wasn't in the garden.

Williams explains this contrast by appealing to the fact that PPs can also appear as sentence modifiers, while APs cannot. However, Warner (2000:205–206) shows that examples such as (74) are only difficult to construct, not impossible. (See also (57–58) on page 69 of Chapter 2.)

(74) Are there any first-year students angry about their grades?
—No, but there are upset with their teachers.

As noted in Section 2.5.3 of Chapter 2, it is not at all clear that examples such as (74) actually involve ellipsis and not pseudo-gapping. Pseudo-gapping famously targets all kinds of strings (Levin 1986), but it does not appear to target initial substrings on NPs:

(75) a. I'm sure I would like him to eat fruit more than I would __ cookies. (Levin 1986:18)
b. *I'm sure I would like him to eat bread made from wheat more than I would __ made from rice.

Thus whether examples like that in (74) involve ellipsis or pseudo-gapping, they undermine Williams's argument.

Non-predicative *with* and cleft existentials Williams's (1984) final argument for the *be*-NP structure is the contrast in (76).

(76) a. The man with a green coat is here.
b. *The man is with a green coat.
c. There is a man with a green coat.

(76a–b) show that PPs headed by *with* may be used only as modifiers and may not be used predicatively—that is, they may not appear as the complement of *be*. Therefore, it is surprising that (76c) doesn't appear to be an 'ontological' existential like (77).

(77) There is a Santa Claus.

Although Williams doesn't bring it up, one could say something similar about examples like (78) with relative clauses:[39]

(78) There's nothing you can do about it.

Note that in (78) the post-copular NP *nothing* is linked to the object of the following (bare) relative clause.

However, as Collins (1992) argues at length, examples such as (78) are best treated as a species of cleft sentences, which differ from standard existentials not only in syntax, but also in pragmatic function. As clefts, they contain two constituents after

[39](78) is an attested example from Collins's (1992) Australian English corpus.

the copula. This raises the possibility that one could get around the problems that the constituent structure of these sentences poses for the *predicative-VP* analysis by positing that copulaless existentials are all standard, and have a *be*-NP structure, while all of the counterexamples to that structure discussed here are in fact clefts. However, this won't do, as the copula can also be absent in cleft existentials:[40]

(79) There always somethin you can try.

As for the *with* examples in (76), perhaps they could be analyzed as clefts. However, even if they can't, they only show that the class of elements in the XP position of *be*-NP-XP is not the same as the class of elements that can follow *be* in non-existentials.

Summary These arguments have shown that existentials are best analyzed with a *be*-NP-XP structure. As argued above, this structure effectively rules out the *predicative-VP* analysis of copulaless existentials. Note that copulaless existentials are also problematic for the *zero-copula-phrase* analysis, as they require a separate (although perhaps related) construction, reducing the parsimony of that analysis. We now turn to another point that is problematic for both of the constructional analyses considered so far.

3.5.5 Ellipsis and *not*

As noted above, copula absence is not possible if the complements of the copula are elided, and this fact receives a natural account on both constructional analyses. However, it turns out that ellipsis is possible just in case it strands *not*, as in the following (attested) example:

(80) They say they're best friends and shit, but they not.

The only way for the constructional analyses to capture this fact is if *not* could be somehow parsed as the predicative phrase, as in Figure 3.11.

[40](79) was accepted by two consultants and identified as something others might say by a third. The speaker who rejected all copulaless *there* clauses also rejected this one.

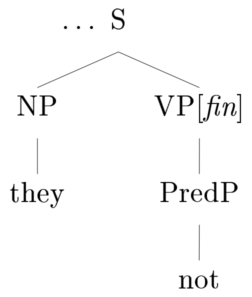

Figure 3.11: Predicative *not*

Not only would this *not* have to be predicative, it would in fact have to license the ellipsis itself, there being no auxiliary available to do so. Given the constructional analysis of ellipsis presented in Section 2.5.3 of Chapter 2, this means that *not* would have to take a predicative phrase as its complement. Such a grammar would produce two parses for all sentences like (81).

(81) They not best friends.

To summarize this brief section, sentences such as (80) can be modeled on either of the constructional analyses discussed so far, but not without the addition of an otherwise unmotivated lexical entry for *not* that would cause considerable spurious ambiguity.

3.5.6 Complement extraction

The second constructional analysis, like the first, predicts that copulaless sentences are only possible when the predicative phrase is in situ. On both analyses, the predicative phrase of a copulaless clause is not the argument of any head. On the traceless analysis of extraction assumed here (see Section 2.3.3 of Chapter 2), this means that it cannot be extracted.

The sentences in (82) show that the complement of the silent copula can, in fact, be extracted.[41] Further, the sentences in (83) show that this is a long distance

[41] There is some variation across speakers with respect to these sentences. See note 17 on page 90 for details.

dependency.[42]

(82) a. How old your baby?
b. How tall that basketball player?
c. Where your car?
d. When your birthday?

(83) a. How old you think his baby?
b. How tall you think that basketball player?
c. How old they say this building?
d. How old they told you his baby?

If these extraction examples could be analyzed a some kind of reduced question (i.e., a separate phenomenon from copula absence), then they could be treated as instances of some other construction. However, reduced questions only affect the matrix auxiliary, as illustrated for Standard English in (84).

(84) a. Who you talking to?
b. *Who do they think you talkin to?

Further, copulaless clauses with the predicative phrase extracted can serve as embedded questions.[43]

(85) a. I don't know how old his baby.
b. I don't care how old they say this building. I still ain't impressed.

Reduced questions, on the other hand, are a matrix clause phenomenon.

Thus the examples in (82) and (83) are bona fide examples of extraction of the predicative phrase in copulaless clauses. They cannot be treated in terms of a separate construction, but require instead a SLASH-based analysis. The only way to do this under the first and second constructional analyses is to revert to a trace-based analysis of extraction. Then a trace could occupy the predicative daughter of either construction and anchor the SLASH dependency. However, doing so would undermine the original motivation of both analyses: to avoid positing empty categories.

[42]Again, there is some variation. (83a) and (83b) were rated ?? by one consultant and accepted by the other three. (83c) was accepted by all four consultants. Three consultants responded for (83d), and they all accepted it, although one said that it would be better with the copula.

Interestingly, for some speakers, (83c) and (83d) appear to require falsetto intonation of the kind studied by Kortenhoven 2000.

[43](85a) was accepted by all four consultants, although two originally rejected it. (85b) was checked only with the two consultants who originally rejected (85a), and they both accepted it.

3.5.7 Summary

The second constructional analysis improves on the first in that it can handle the subject extraction examples. However, both analyses face problems in existential sentences and sentences with *not* and ellipsis. These facts can be handled, although not elegantly. The final blow is the complement extraction data, which can only be handled at the cost of reintroducing traces. Thus it appears that AAVE copula absence requires some sort of empty category to be posited. In the next section, we turn to an analysis that associates the empty category with the verb itself. This restricts the use of empty categories to a single lexical item (as opposed to traces for all extractions). Further, this silent verb analysis provides more elegant accounts of the existential and *not*/ellipsis examples.

3.6 A silent verb analysis

This section presents an alternative to the constructional analyses: an analysis in terms of a phonologically empty form of the copula. While this is still a syntactic analysis, it does share one of the claims of Labov's deletion account: that copulaless sentences have an underlying copula.

3.6.1 Formalization

On this analysis, the silent form of *be* is modeled as an inflectional type for *be*, on a par with *is*, *are*, etc.[44] The constraints on this type are given in Figure 3.12. As an inflectional type, this type is a subtype of *word*, and has a DAUGHTER feature. In writing the constraints on this type, I am assuming that all of the constraints on the daughter's synsem are carried up to the mother's synsem, except in cases where they conflict.

The PHON value is the empty list, that is, words of this type are phonologically empty. The daughter is constrained to be a *be-lxm*, assuming that all lexemes of the

[44]That is, it's a subtype of *complex-lexeme*, cf. the discussion of morphology in §2.5.1 of Chapter 2.

be family (including the ordinary copula and the *there* copula) are subtypes of this type.[45]

$$\begin{bmatrix} \textit{silent-be} & \\ \textsc{phon} & \langle\ \rangle \\ \textsc{synsem} & \begin{bmatrix} \textsc{cat} & \begin{bmatrix} \textsc{head} & \begin{bmatrix} \textsc{form} & \textit{fin} \\ \textsc{inv} & - \end{bmatrix} \\ \textsc{comps} & \textit{nelist}(\textit{canonical}) \\ \textsc{arg-st} & \langle\ [\textit{non-1sg}],\ \ldots\ \rangle \end{bmatrix} \end{bmatrix} \\ \textsc{daughter} & \textit{be-lxm} \end{bmatrix}$$

Figure 3.12: Silent *be* inflectional type

3.6.2 The basic facts

Somewhat surprisingly, the few constraints in Figure 3.12 are sufficient to account for all of the basic facts, as well as most of the facts that were troublesome for the constructional analyses. The exception is the complement extraction facts, the discussion of which will be postponed until Section 3.6.4.

The failure of copula absence with first person singular subjects (86) follows from the agreement constraint that *silent-be* places on its subject. Although this is done in essentially the same way as in the previous two analyses, it is especially natural here: one of the main functions of verbal inflectional types is to place agreement constraints on the subject.

[45]Actually, this may need to be constrained further, as certain other uses of *be* appear to not take the silent form, including *be* in pseudoclefts (i) and other complementation patterns such as (ii).

(i) *A good long sleep what you need most.
(ii) *It because of the cold weather.

((i) and (ii) were rejected by three of the four consultants).

The identity copula, on the other hand, can take the silent form:

(iii) A: Ain't Lew Alcindor Mohammed Ali?
B: You wrong. CASSIUS CLAY Mohammed Ali.

Presumably, the type hierarchy of *be* lexemes can be arranged appropriately.

(86)*I the winner.

The constraint [FORM *fin*] will suffice to keep silent forms of *be* out of non-finite contexts:

(87)*You got to ϕ good, Rednall!

As before, this may account for the lack of copula absence in imperatives as well. If not, an appropriate semantic constraint can be added to the inflectional type.

(88) a. *ϕ nice to your mother!
b. *Y'all ϕ nice to your mother!

The constraint on the COMPS list accounts[46] for the lack of copula absence with ellipsis, tag questions, and inversion triggered by *so*. This constraint says that the COMPS list may not be empty, and it may not have any *non-canonical* synsem types on it.

Recall that on the analysis of ellipsis and tag questions, elements on the COMPS list are unified with the *non-canonical* synsem type *elided*. As this contradicts the constraint on the COMPS list of *silent-be*, (89) and (90) are out.

(89)*They said he('s) wild, and he ϕ.

(90)*It ain't a flower show, ϕ it?

It's not clear if the example in (91) involves ellipsis or an ARG-ST/COMPS mismatch, but either way it would violate the constraint on COMPS.

(91)*I'm tired and so my dog.

The constraint on the COMPS thus accounts for the lack of copula absence in two inverted contexts (tag questions and after *so*.) However, inasmuch as sentences like (92a) are acceptable in AAVE, the silent copula would have to be barred from inverted contexts to rule out (92b). This is achieved by the constraint [INV $-$] in Figure 3.12.

(92) a. Is he ever tall!
b. *ϕ he ever tall!

[46]Suggested to me by Ivan Sag (p.c.)

Forms of *be* in tag questions on copulaless sentences are unremarkable, as the copulaless sentences are headed by a form of *be*.

(93) They not best friends, are they?

As before, the tense facts can be accommodated by either specifying present tense (specifying a tense value being another well-known function of inflectional types), or leaving tense underspecified, according to how the data actually turn out.

Turning now to the last of the basic facts, something extra will need to be said about the fact that *silent-be* can't be emphasized. However, it's pretty clear what that something extra will be: a general (and natural) constraint against emphasizing phonologically empty words.

(94) He a expert.
$\neq$ He IS a expert.

3.6.3 Further facts

The silent verb analysis can also elegantly account for the further facts that were problematic for the constructional analyses.

First, subject extraction proceeds as with any verb, as this analysis posits a verb in the phrase structure.

(95) Tha's the man they think famous.

Second, *silent-be* is an inflectional type that can take different *be* lexemes as its DAUGHTER value, just like the inflectional types that produce *is*, *are*, etc. In particular, it is a possible inflection of the *there* copula, producing sentences such as (96).

(96) There a car blockin my way.

Finally, as an [AUX +] word, forms of *be* inflected with the *silent-be* type can unify as the DAUGHTER value of *not-arg* (Figure 2.42, page 61), the type that adds sentential *not* to the ARG-ST list of an auxiliary.[47] The presence of this *not* intuitively satisfies the constraint on the COMPS list of the auxiliary:

(97) They say they best friends and shit, but they not.

Technically, it is a little less straightforward. There are two ways to make sure that (97) is licensed. The first is to have the type *not-arg* not carry up the constraint on the COMPS list. The second is to change the constraint on the comps list to the one in Figure 3.13. This new constraint merely requires that some (initial) element of the COMPS list be canonical. In this case, *not* in (97) satisfies this constraint, and the second complement of *be* is free to unify with the type *elided*.

$$\begin{bmatrix} \textit{silent-be} \\ \text{SYNSEM} \mid \text{CAT} \mid \text{LOCAL} \mid \text{COMPS} \quad \textit{nelist}(\textit{canonical}) \oplus \textit{list} \end{bmatrix}$$

Figure 3.13: A further constraint on the silent *be* inflectional type

Note, however, that an intricate interaction of the facts presented so far actually poses somewhat of a problem for the silent verb account. Recall from Section 3.3 that, for one of the consultants in this study, matrix *wh* questions require inversion just in case the head is an auxiliary. The sentence in (97) shows that the silent verb must be an auxiliary, for only auxiliaries can license ellipsis. However, as shown in Section 3.6.2 above, *silent-be* must be barred from inversion contexts. Therefore, this analysis predicts that (98) should be ungrammatical for the speaker who requires auxiliaries to invert in *wh* questions, and they're not.

[47] It has to be excluded from unifying with the DAUGHTER of *n't-form*, given the ungrammaticality of (i), accepted by only one speaker. (This speaker added that it was good as a reduced form of *isn't*, but not as a reduced form of *ain't*.)

(i)*Bob ϕn't here.

This could be accomplished by leaving the value of $f_{n't}$ undefined for the empty string.
Surprisingly, (ii) and (iii) were accepted by all and all but one of the consultants, respectively.

(ii) They n't here.
(iii) He n't here.

Given the contrast with (i), it appears likely that *theyn't* and *hen't* are contracted forms of *they* + *ain't* and *he* + *ain't*.

(98) a. Where he goin?
b. Who you talkin to?

This problem may find its resolution once the properties of reduced questions in AAVE are properly understood.

3.6.4 Complement extraction

The constraint on the COMPS list in Figure 3.12 is meant as an encoding of the generalization that the silent verb requires at least one of its complements to be canonically expressed. However, as shown in Section 3.3.2 and 3.5.6, this generalization does not hold. The examples in (99) and (100) involve extraction of the (sole) complement of the silent copula—the same silent copula that supports ellipsis only when there is some complement left over.

(99) Where your car?

(100) How old you think his baby?

It might seem possible to save the generalization that the silent copula must appear with at least one complement by reverting to a subject-as-complement analysis of inversion (see, e.g., Sag and Wasow 1999). For example, in (99) *your car*, although notionally the subject of the silent copula, would appear on its COMPS list instead. However, as argued in Section 3.3.2 above the silent copula is systematically barred from inversion contexts. Analyzing the subject as a complement in (99) and (100) would predict that the sentences in (101) are also grammatical.

(101) a. *I'm tired and so my dog.
b. *It ain't a flower show, it?

Further, for some speakers at least, the embedding verb *care* in (102) doesn't take an inverted complement (103):[48]

(102) I don't care how old they say this building. I still ain't impressed.

[48](102) and (103) were only checked with two consultants. Both accepted (102). One rejected (103), and the other accepted it, noting that it sounds better if *say is* is more like *says*. Thus this could be interference from optional *-s* inflection on the verb.

(103)%I don't care how old they say is this building. I still ain't impressed.

We have seen that reverting to a subject-as-complement analysis of inversion won't do the trick. It is possible, however, to account for all of the facts by changing the constraint on the COMPS list. The new constraint needs to capture the facts that the COMPS list may be empty, and it may have some elements of type *elided*, but in the latter case it must also have some elements of type *canonical*. The constraint shown in Figure 3.14 expresses just that.

$$\begin{bmatrix} \textit{silent-be} & \\ \text{SYNSEM} \mid \text{CAT} \mid \text{LOCAL} \mid \text{COMPS} & \textit{elist} \vee (\textit{nelist}(\textit{canonical}) \oplus \textit{list}(\textit{elided})) \end{bmatrix}$$

Figure 3.14: Revised constraint on the COMPS list of silent *be*

On this analysis, (104) is bad because the COMPS list consists of one element of type *elided*. It thus satisfies neither possible value of the COMPS list: it is not an empty list (*elist*), nor is it a list which begins with some (non-zero) number of *canonical* elements.

(104)*They say he('s) wild and he ϕ.

The same line of reasoning applies to the tag examples like (105), on the ellipsis-based analysis of tag questions given in Section 2.5.4 of Chapter 2. In fact, tags are doubly ruled out, as the silent copula is barred from inversion contexts.[49]

(105)*It ain't a flower show, ϕ it?

(106), on the other hand, is good. In this case the COMPS list consists of one *canonical* element (*not*) followed by one *elided* element, and satisfies the second possible value of the COMPS list.

(106) They say they're best friends and shit, but they not.

[49]The lack of the silent copula in inversion contexts also accounts for the ungrammaticality of (i), even if it doesn't involve ellipsis.

(i)*I'm tired and so my dog.

Likewise, examples like (107) are good because the COMPS list is empty (satisfying the description *elist*). This is so because the Argument Realization Principle provides for *gap*s on the ARG-ST to be absent from the COMPS list (cf. page 38 of Chapter 2).

(107) Where your car?

Something more does need to be said to rule out the examples in (108).

(108) a. *I don't care what you.
b. *Who it?
c. *What it?

A first pass would be a constraint on *silent-be* that any complement *gap*s must not be [HEAD *noun*]. However, some speakers accept the sentences in (109).[50]

(109) a. Who he?
b. Who they?

I leave the investigation of the constraints on the type of complements which can be extracted to future research.[51]

3.6.5 Summary

This section has developed the silent verb analysis and shown that it can account for a wide array of facts. The next section develops a constructional analysis that encodes many of the same ideas. Indeed, the principle difference between the silent verb analysis and the third constructional analysis is the way they interact with the auxiliary constructions.

[50] (109a) was accepted by two speakers and reject by the other two. (109b) was accepted by one speaker, rated marginal (? or ??) by two others, and rejected by the fourth.

[51] A further complexity in this vein is the ungrammaticality of (ia):

(i) a. *When they told you the meetin?
b. When they told you the meetin is?
c. Where they told you the meetin at?

(One consultant rejected in (ib) with *told you*, but showed a similar pattern of contrast with *did they tell you* in all of the examples instead.)

As shown in (83d), complements of the silent copula can be extracted over *they told you*. (82d) shows that *when* can be extracted from the complement position of the silent copula. Thus it is not clear why extracting *when* over *they told you* should be bad.

3.7 Constructional analysis III

This third constructional analysis is a formalization of the intuition that in copulaless clauses, the valence of *be* is orchestrating the sentence, without *be* itself being present. In this way it is similar to the silent verb analysis (and Labov's deletion analysis) in positing, in some sense, an underlying copula.

3.7.1 Formalization

Technically, this analysis involves a slight reconceptualization of the daughters features.[52] Under this reconceptualization, there is no NON-HEAD-DTRS feature, but rather a DTRS feature listing all of the daughters. This list of daughters represents the words or phrases that are parsed by the construction. The HEAD-DTR feature then becomes a pointer to one member of this list. Under this reconceptualization, the *head-complements-phrase* is as in Figure 3.16. This is identical to the original version of the *head-complements-phrase*, except that the NON-HEAD-DTRS feature is replaced by the DTRS feature and the value of HEAD-DTR is identified with the first member of the DTRS list ($\boxed{1}$).

To simplify the presentation, I will assume that the *head-complements-phrase* inherits the constraints in Figure 3.15 from a supertype, such as *headed-phrase*. The version of *headed-phrase* in Figure 3.15 is somewhat simpler than the earlier version, since all of the daughters are now in one list. For example, the new version can identify the PHON value of the mother with the append of the PHON values of the daughters. Different subtypes will identify their HEAD-DTR value with different positions in the DTRS list. This *headed-phrase* also allows its subtypes to have constructionally introduced relations. The CX-RELS feature stores the semantic contribution of the construction, which is appended with the relations from the daughters to give the RELS feature of the mother.[53]

[52] This reconceptualization is due to Christopher Callison-Burch and inspired by the LinGO grammar's use of an ARGS feature listing all of the daughters, in addition to the usual HEAD-DTR and NON-HEAD-DTRS features. Its applicability was pointed out to be Ivan Sag, p.c.

[53] This is, of course, possible with the earlier *headed-phrase* as well. I've only introduced it just now because it is about to become relevant.

$$
\begin{bmatrix}
\textit{headed-phrase} & \\
\text{PHON} & \boxed{\text{C}} \oplus \ldots \oplus \boxed{\text{N}} \\
\text{SYNSEM} & \begin{bmatrix} \text{LOCAL} & \begin{bmatrix} \text{CAT} & \begin{bmatrix} \text{HEAD} & \boxed{2} \\ \text{SPR} & \boxed{\text{A}} \end{bmatrix} \\ \text{CONT} & \begin{bmatrix} \text{INDEX} & \boxed{3} \\ \text{RELS} & \boxed{\text{B}} \oplus \boxed{\text{M}} \oplus \ldots \oplus \boxed{\text{Z}} \\ \text{KEY} & \boxed{4} \end{bmatrix} \end{bmatrix} \end{bmatrix} \\
\text{CX-RELS} & \boxed{\text{B}} \\
\text{HEAD-DTR} & \begin{bmatrix} \text{SYNSEM} & \begin{bmatrix} \text{LOCAL} & \begin{bmatrix} \text{CAT} & \begin{bmatrix} \text{HEAD} & \boxed{2} \\ \text{SPR} & \boxed{\text{A}} \end{bmatrix} \\ \text{CONT} & \begin{bmatrix} \text{INDEX} & \boxed{3} \\ \text{KEY} & \boxed{4} \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix} \\
\text{DTRS} & \left\langle \begin{bmatrix} \text{PHON} & \boxed{\text{C}} \\ \ldots\ \text{RELS} & \boxed{\text{M}} \end{bmatrix} \ldots \begin{bmatrix} \text{PHON} & \boxed{\text{N}} \\ \ldots\ \text{RELS} & \boxed{\text{Z}} \end{bmatrix} \right\rangle
\end{bmatrix}
$$

Figure 3.15: Headed-phrase (revised)

$$
\begin{bmatrix}
\textit{head-comps-ph} & \\
\text{SYNSEM} & \begin{bmatrix} \text{LOCAL} & \begin{bmatrix} \text{CAT} & \begin{bmatrix} \text{SUBJ} & \boxed{\text{B}} \\ \text{COMPS} & \langle\ \rangle \end{bmatrix} \end{bmatrix} \end{bmatrix} \\
\text{HEAD-DTR} & \boxed{1} \begin{bmatrix} \text{SYNSEM} & \begin{bmatrix} \text{LOCAL} & \begin{bmatrix} \text{CAT} & \begin{bmatrix} \text{SUBJ} & \boxed{\text{B}} \\ \text{COMPS} & \mathbf{sts}(\boxed{\text{A}}) \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix} \\
\text{DTRS} & \langle \boxed{1} \rangle \oplus \boxed{\text{A}}
\end{bmatrix}
$$

Figure 3.16: Head-complements phrase (revised)

The *silent-copula-phrase* (Figure 3.17), another subtype of *headed-phrase*, is similar to the new *head-complements-phrase*, except that its head daughter is constrained to be a *be-word*,[54] and the construction fails to identify its head daughter with any element of the DTRS list.[55] It also differs in the relationship it posits between the COMPS value of the head daughter and the other daughters. This constraint is written so as to allow complement extraction and partial ellipsis, but ellipsis of all of the complements (for details, see below). Finally, in order to incorporate the relations introduced by the (unexpressed) head daughter, the *silent-copula-phrase* identifies its CX-RELS value with the RELS value of the head daughter ($\boxed{C}$).

$$
\begin{bmatrix}
\textit{silent-copula-phrase} & \\
\text{SYNSEM} & \begin{bmatrix}\text{LOCAL} & \begin{bmatrix}\text{CAT} & \begin{bmatrix}\text{SUBJ} & \boxed{B}\\ \text{COMPS} & \langle\ \rangle\end{bmatrix}\end{bmatrix}\end{bmatrix}\\
\text{CX-RELS} & \boxed{C}\\
\text{HEAD-DTR} & \begin{bmatrix}\textit{be-word} & \\ \text{SYNSEM} & \begin{bmatrix}\text{LOCAL} & \begin{bmatrix}\text{CAT} & \begin{bmatrix}\text{HEAD} & \begin{bmatrix}\text{FORM} & \textit{fin}\end{bmatrix}\\ \text{SUBJ} & \boxed{B}\langle\ [\textit{non-1sg}]\ \rangle\\ \text{COMPS} & \textbf{sts}(\boxed{A}\textit{elist}) \vee \\ & (\textbf{sts}(\boxed{A}\textit{nelist}) \oplus \textit{list}(\textit{elided}))\end{bmatrix}\\ \text{CONT} & \begin{bmatrix}\text{RELS} & \boxed{C}\end{bmatrix}\end{bmatrix}\end{bmatrix}\end{bmatrix}\\
\text{DTRS} & \boxed{A}
\end{bmatrix}
$$

Figure 3.17: Silent copula phrase

[54] Where *be-word* is assumed to be a supertype to all of the *be* inflectional types.

[55] A similar effect could be achieved under the normal interpretation of HD-DTR and NON-HD-DTRS by positing a construction that was unusual in not incorporating the phonology of its head daughter. However, in that case, one would wonder why there wasn't a similar construction that suppressed the phonology of an arbitrary non-head daughter.

3.7.2 The basic facts

The agreement restriction on the subject is handled by the by-now familiar agreement constraint, encoded by this construction as with the previous constructions.

(110) *I the winner.

Similarly, the lack of copula absence in non-finite contexts is ruled out (as usual) by the [FORM *fin*] specification.

(111)*You got to ϕ good, Rednall!

Again, the failure of copula absence in imperatives is explained either by the FORM value, or by a semantic incompatibility.

(112)*ϕ nice to your mother!

Tags with forms of *be* are again unsurprising, as *silent-copula-phrase*s are headed by a form of *be*.

(113) They not best friends, are they?

The examples involving missing complements are handled in much the same way as in the silent verb analysis. (114) is out because the COMPS value of the head daughter would be the list containing a single *elided* element. This doesn't meet either half of the disjunctive constraint in Figure 3.17: it is neither an empty list, nor a non-empty list beginning with a *canonical* element.

(114)*They say he('s) wild and he ϕ.

In (115), the COMPS value of the head of the *silent-copula-phrase* would be a list containing the (*canonical*) *synsem* of *not* and a single *elided* element. This satisfies the second half of the disjunctive constraint.

(115) They say they're best friends and shit, but they not.

Finally, the complement extraction examples (e.g., (116)) are allowed because they result in an empty COMPS list, satisfying the first half of the disjunctive constraint.

(116) Where your car?

In the remaining contexts, however, the explanations begin to differ. Since copulaless clauses are built by a construction (and not a silent verb), there is once again no auxiliary to head a tag question or an inverted clause. (There is also no subtype of the *silent-copula-phrase* that shares the properties of the *tag-phrase* or *sai-phrase* constructions.)

(117)*It ain't a flower show, ϕ it?

(118)*I'm tired and so my dog.

As for the past tense examples, in this case there is no way to leave copulaless sentences underspecified for tense. The construction can allow either past or present forms of *be* as its head, giving both past and present tense examples, or restrict its head to being present tense only.

3.7.3 Further facts

Subject extraction examples like (119) also pose no problem. Versions of ordinary *be* with a *gap* on their SUBJ list can unify with the *silent-copula-phrase*, and the SLASH value will get passed up in the ordinary way.

(119) Tha's the man they say in love.

Finally, copulaless existentials are also permitted, as the value of the HEAD-DAUGHTER of the construction is defined so as to unify with any *be* lexeme.[56]

(120) There a car blocking my way.

[56] In fact, as noted in footnote 45 on page 119, this may be too general: some *be* lexemes do not participate in this construction. However, given the hierarchical organization of the lexicon, it should not be a problem to find an appropriate type to use to constrain the value of HEAD-DTR in the *silent-copula-phrase*.

3.7.4 Summary

The *silent-copula-phrase* is unusual for a constructional analysis in that the construction will have no phonological content in certain instances. In particular, the complement-extraction example (116) is assigned the structure in Figure 3.18. The boxed node is the mother of the *silent-copula-phrase*. It has no daughters, as the head daughter (*be*) is not included in the DTRS list, and the complement is extracted, but a traceless analysis of extraction is assumed. Thus it is not clear if this constructional analysis really differs from an empty category analysis.

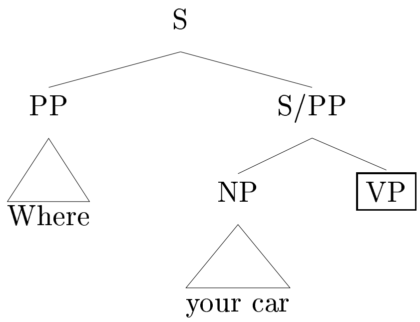

Figure 3.18: Instance of *silent-copula-phrase* with no daughters

3.8 Conclusion

This chapter has reviewed five possible analysis of copula absence in AAVE: a phonological deletion analysis, a silent verb analysis, and three distinct constructional analyses. Each of the first three analyses highlighted new data on copula absence in AAVE. These data show that AAVE copula absence is a syntactic, not phonological, phenomenon. They further show that AAVE copula absence constitutes a case that requires an empty category of some sort in its analysis: either a phonologically empty verb, or a potentially phonologically empty construction. This is an interesting result, given the general success of lexicalist grammars in avoiding empty categories. Nonetheless, I believe that the presence of one necessary empty category does not entail that empty categories should be available as a general tool in syntax. The psycholinguistic evidence cited in the motivation of surface-oriented, performance-plausible grammars (see e.g., Sag 1992) is not invalidated by one linguistic phenomenon that requires an empty category. Rather, it militates against the proliferation of empty categories, for surface-orientation is a matter of degree. The further grammars are removed from surface strings, the more complicated it becomes to embed them in theories of performance.

With this view of grammar in general and of copula absence in particular as background, we now turn to the issues raised by the use of copula absence in AAVE as a sociolinguistic variable.