'SIS, WE *BIN* KNEW': A SYNTACTIC ANALYSIS OF THE REMOTE PAST IN AFRICAN AMERICAN ENGLISH

by

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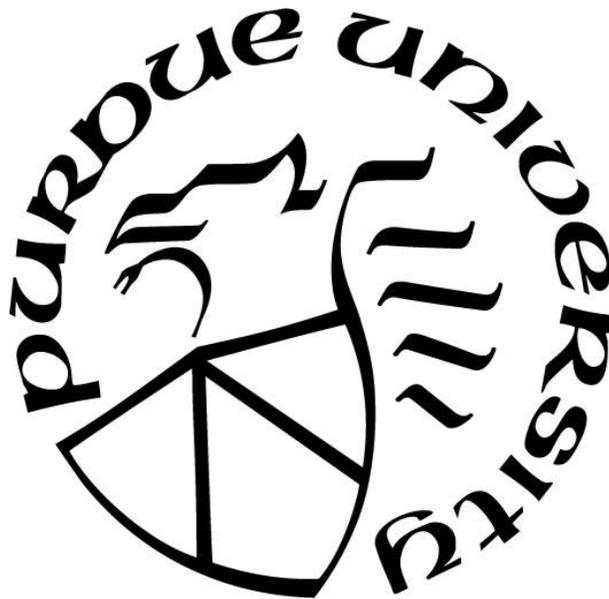
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For my mother, father, and baby sister

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ABSTRACT

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Studies of African American English (AAE) structure have historically placed significant emphasis on its system of tense and aspect, and have done so for good reason. In the interest of developing a comprehensive descriptive analysis of the variety's syntactic and semantic features, research on the syntactic constructions and functional grammatical items that distinguish it from other English varieties continues to bring about new insights into the different elements that make up a system of tense and aspect, as well as how these elements interact with other parts of the grammar—not only in AAE but crosslinguistically. One of these elements is the verbal marker *BIN*, which situates part of an event in the remote past, as shown in (1).

(1)   Jane *BIN* saw that movie.

'Jane saw that movie a long time ago.'

This paper further investigates both the function of and restrictions on the aspectual marker *BIN* in African American English (AAE) using acceptability judgment data collected in an online survey of AAE speakers. With this study, I aim to contribute to the theoretical description of the verbal system of AAE (L. J. Green, 1993) and its system of tense and aspect. The judgment task will identify patterns of acceptability surrounding the following two factors: event type and whether the verb receives progressive or past tense marking. Using a generative-constructivist semantic framework (Ramchand, 2008), I hypothesize that the semantic information represented by the aspectual marker BIN will either allow or disallow certain combinations of event structure and progressiveness, and these restrictions may be demonstrated to be systematic according to the

verb classes proposed by Ramchand (2008). Additionally, based on the survey data and the approach to the decomposition of event structure regarding Outer and Inner aspect proposed by (Travis, 2010), I will propose that restrictions on *BIN* and ambiguity between structures containing *BIN* can be accounted for syntactically based on the configurations of both grammatical and lexical aspect.

CHAPTER 1: INTRODUCTION

1.1. Goals of Project & Hypothesis

With this thesis, I aim to contribute to the comprehensive description of African American English tense and aspect by investigating whether the syntactic and semantic factors of event type and verbal morphology influence the grammaticality of structures which contain the verbal marker *BIN*. To do this, I designed an experimental study where I asked participants to give their grammaticality judgments on different sentences using *BIN*. The results from this data provide support for a generative-constructivist approach to AAE syntax and semantics along the lines of Travis (2010), which argues for two Aspect heads in the derivation of event structure: one within the inflectional domain of the clause, and one within the verb phrase (VP) that marks the edge of the event. Additionally, *BIN* functions as both an operator which binds the event variable and as a creator of predicate times related to that event. The verbs, inflectional morphology, and arguments that I selected as a part of the test items serve as factors that contribute to the research question. My hypothesis is as follows:

> Hypothesis: The aspectual marker *BIN* in African American English is sensitive to and carries syntactic information about the event structure that it precedes and dominates.
>
>> (a) The Aspect head which houses the lexical item *BIN* is separated from a lower Aspect head by an Event Phrase (EP) and a lexical Verb Phrase (VP)
>>
>> (b) These two Asp Heads, along with the internal temporal characteristics of the VP, must meet certain syntactic criteria in order to produce a structurally acceptable sentence.

1.2. Goals of the experiment

The experiment tests the effect of event type and morphology on the acceptability of *BIN*. Grammaticality judgments have been used for decades as a way to gain more concrete information about what "grammar" is and how we use it. The acceptability judgment task has been introduced as a method to gather more precise data from multiple participants, rather than intuitions solely from the researcher. I predict that the acceptability judgments for sentences with progressive marking will generally be dispreferred to sentences with past tense marking. For stative verbs, I anticipate this being due to the lack of boundaries on the event that is presupposed with *-ing* marking. Stative verbs generally are incompatible with progressive marking. For progressive verbs, I predict that participants will "dislike" (i.e. rate as less acceptable) certain verb types with progressive marking, and this pattern of acceptability will be systematic with respect to the first-phase syntax proposed by Ramchand (2008). Different verbs with different combinations of smaller VP structures (*init*, *proc*, *res*) have different temporal characteristics, and these temporal characteristics must agree with the boundaries that are set by the AspP head, which in this experiment, is BIN.

1.3. Implications of results

These results help to develop a theoretically grounded. empirical description of African American English grammar that can support proposals in the literature about aspect, verbal systems, and argument structure. This experiment may also serve as evidence that future experimental syntax studies on African American English can yield useful information about the structures that are allowed and disallowed in the variety. These may also serve as sources of information on the variation and change of the variety, as different participants of different ages and geographical background may have different intuitions about these structures.

CHAPTER 2: REVIEW OF THE LITERATURE

2.1 The Syntax-Semantics of Aspect and the VP

2.2.1 On Aspect

The primary goal of this thesis is to explore native speaker judgments related to the syntactic and semantic account of *BIN* previously observed and described, as will be discussed in later sections (L. Green, 1998). The claims that I will be making about *BIN*'s function and behavior are based on the generative-constructivist approach to the architecture of the grammar, and the following sections will serve as a background on this approach and other components of the theoretical framework that I use. This section will provide an outline of the theories that contribute to the current understandings of the derivation of the syntactic category of Aspect.

First, to preface this section's outline of the category of Aspect, I will discuss the category of Tense to highlight the ways that they are separate, but fundamentally connected. Tense is syntactically responsible for locating the time of a situation or eventuality relative to the time of the utterance (Comrie, 1976). The most common tenses in language are past, present, and future, indicating that the situation of interest occurs before, at the time of, or after the time of the utterance, respectively. In contrast to these, which focus on the reference time of entire situations with respect to the utterance time, Aspect's primary concern is internal to the situation. According to Comrie (1976), aspects are "different ways of viewing the internal temporal constituency of a situation". This distinction has also been described by Klein (1992), who states that Tense identifies a relation between the topic time of a sentence and the utterance time, while Aspect describes the relation between a sentence's situation time and topic time. Here, topic time refers

to the time that a sentence is about (e.g. two minutes ago, three days ago, twelve years from now), and the situation time refers to the smallest interval of time that can be mapped onto the occurrence of an eventuality or the endurance of a state. For example, for the statement *John ate an apple yesterday*, we know that the "eating" event occurred in the past, hence the use of past tense morphology. But, we are also able to compute information and derive meaning about the internal characteristics of that eating event thanks to Aspect. Aspect allows us to derive different meanings from *John ate an apple* and *John was eating an apple*. The progressive morphology in the latter removes the completive reading that we gain from the former. With the construction "was eating an apple," we do not know if the entire apple was eaten by the end of the situation, whereas "ate an apple" is completive. In what follows, I will describe contemporary theories of Aspect and what its function is in the syntax.

Carlota Smith's theory of aspectual meaning defines and provides an explanation for the relationship between the two components of a sentence from which we derive aspectual meaning: situation type and viewpoint (Smith, 1997). Smith distinguishes these situation types as: states, activities, accomplishments, semelfactives, and achievements. These types are adapted from Vendler's (1967) hypothesis regarding four main classes of verb. She also distinguishes three viewpoint types: perfective, which focuses on the situation as a whole; imperfective, which focuses on part of a situation; and neutral, which is flexible and can include the initial point of a situation and at least one internal stage (Smith, 1997). The interactions between these two sources of aspectual meaning give rise to the kinds of syntactic and semantics that we intuit about the sentences below in ((2).

(2)   Mary walked home.   (a)
        Mary was walking home.   (b)

Mary walked in the park.   (c)

The differences in aspectual meaning arise from the two components described by Smith, which give us information about the event being discussed. In (a), the viewpoint is perfective because we are presented with information about the walking event as a whole, including its endpoint. This contrasts with (2b) and (c) in that we are only discussing part of the walking event in (b), and we have no indication that there was an endpoint or goal in (c). Although each sentence describes what might ostensibly seem like the same thing, we compute those sentences differently because of aspect. Crucially, the works which comprise the theoretical framework used in this paper claim that this aspectual information is represented structurally in the grammar.

The two topics within Smith's discussion of aspect that are the most relevant to this thesis are the ways that situation types are realized and the interaction between aspect and the system of temporal location, which locates a situation in time. The temporal structure of a sentence's situation type has grammatical implications for the temporal characteristics of that sentence.

The temporal characteristics that distinguish situation types from one another within this two-component framework are duration, dynamism, completion, agency, and detachability. These temporal characteristics are, in part, responsible for the structures that do and do not occur in natural speech, as well as the grammaticality judgments that we make about different sentences, particularly when we consider the fact that situation types may appear in more than one syntactic structure. Those different syntactic structures, then, express the event or scenario being discussed using different situation types, which have different temporal characteristics and compositional rules, which examine the linguistic unit of a verb and its arguments and give them a composite value (Smith, 1997). The possible combinations of values derived by the compositional rules and the temporal characteristics of the situation type form distributional patterns that reflect the

structures that we produce in natural language as well as our intuitions about what is ungrammatical, unacceptable, or semantically odd.

2.2.2 On Event Structure (The VP/vP/VoiceP)

This assertion that the distributional patterns which appear in natural language are reflections of syntactic structures is integral to many contemporary theories regarding the syntax-semantics interface, particularly in theories which deal with how language is used to represent events. Additionally, the frameworks that are developed under this assertion make their own claims about the interface between these structural and combinatorial aspects of language and the lexicon. For example, the two strategies for explaining and describing the ways that thematic information is implemented in the grammar are the lexical-thematic approach and the generative-constructivist approach. According to Ramchand (2008), with the former, the lexicon is a submodule of the language faculty with its own distinct primitives and combinatorial properties such that the thematic roles of potential arguments are defined within the lexicon and are projected into different places in the structure based on its role type. Most of the descriptions of *BIN*, and other AAE aspectual markers, have been done using an approach similar to this one. That is, the lexical entry for *BIN* will include structural information which is then connected to the syntactic module through linking principles.

In this study, I look at the architecture of the grammar under the generative-constructivist approach, where syntactic terminals are built freely, and general encyclopedic knowledge dictates whether a certain lexical item can be inserted into these syntactic terminals (Ramchand, 2008). Some more staunchly constructivist views, like that of Borer (2005), lexical roots like "√run" (the representative for the lexical entry for the activity of running) are simply bundles of encyclopedic information with no syntactically relevant information. Category information, then, is built on top

of the root in the functional structure. This view is often called the "naked roots" view (Ramchand, 2008). Its complement, the "well-dressed roots" view, claims that the lexical root does contain some syntactic information and some argument structure information. Generally, generative-constructivist scholars tend to land somewhere in between those two extremes and make up the wider decompositional view of functional structure. Ramchand, for example proposes that the syntax is built autonomously along with basic templatic semantics to provide one dimension of meaning while the lexicon provides the other. She demonstrates this concept in her proposal for an event structure syntax which directly connects its morphosyntax and the semantics.

This first-phase syntax contains three subevental components: a causing subevent, a process-denoting subevent, and a subevent corresponding to result state (Ramchand, 2008). These subevents are represented in the syntax with their own functional projections as shown in Figure 1. *Init*P, much like Kratzer's (1996) little-*v*, is responsible for introducing the causation event and licensing the external argument. *Proc*P represents the change through time in a dynamic event, while *res*P is responsible for introducing the result state of the event.
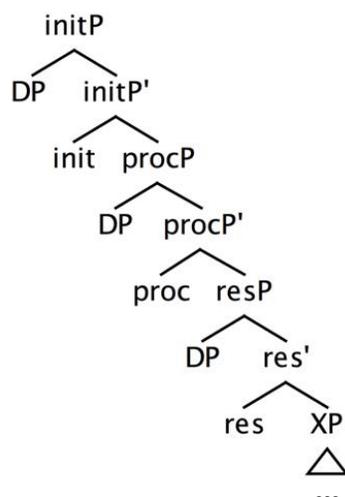
Figure 1: Ramchand (2008) First Phase Syntax

Ramchand's proposal that a general combinatorial semantics which interprets event structure from the syntax is directly connected to Smith's discussion of Aspect in that, within this framework, the internal dynamic structure of the event, along with its initiation and result state, is represented syntactically and read by the semantics. The aspectual head(s), which introduces a time variable that is anchored to an event, is also responsible for embedding the eventuality building component of the clause (Ramchand, 2008). The aspectual marker *BIN,* then, is formally related to the event structure shown above by a temporal trace function, which limits the reference time of a predication to one of the time moments in the event structure comprised of a combination of the functional projections *init*P, *proc*P, and *res*P.

Finally, Travis (2010) proposes a syntactic derivation where an inflectional domain appears within the phrase that has traditionally be known as the Verb Phrase (VP), or more appropriately, *v*P (the functional domain which, in some iterations of syntactic theory, houses the VP and whose Specifier position licenses the event's external argument or causer). She labels this inflectional domain "Inner Aspect," and it is responsible for determining the endpoint of an event, and thus for encoding telicity. This Inner Aspect corresponds with the situational aspect defined by Smith (1997). Viewpoint Aspect, she says, is typically realized as a functional category on a head within the inflectional domain of the clause (Tense). Her proposed structure can be seen below in Figure 2.

TP
T'
T OAspP
(Adv) AspP'
Asp EP
E V_1P
Agent V_1'
V_1 IAspP
DP AspP'
Asp [+/− Telic] V_2P
Theme V_2'
V_2 XP
...
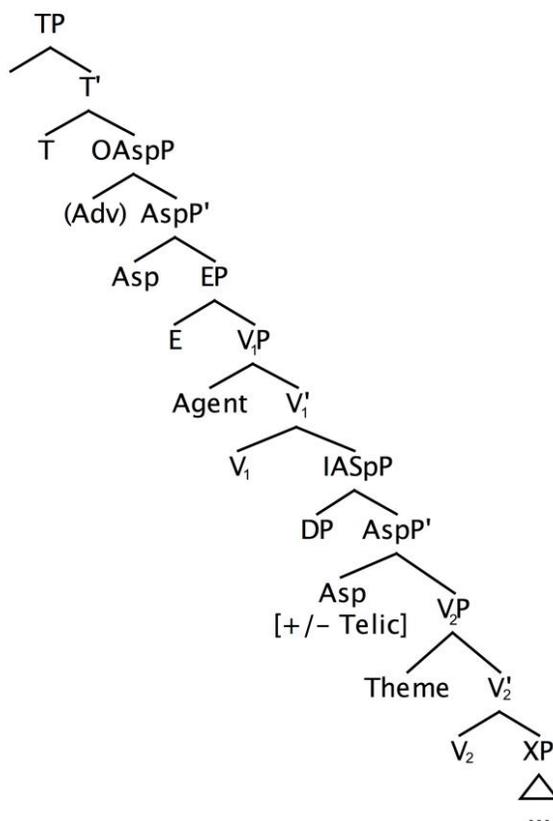
Figure 2: Travis (2010) Event Structure

In her model, the V_1P acts similarly to the *v*P in Kratzer (1996) and the *init*P in Ramchand (2008), except the projection is a lexical one, not a functional one. V_1P is a lexical V head within a layered VP (Larson, 1988) and is responsible for introducing the external argument (agent) into the syntax when there is one. If there is an external argument in the described event, V_1 has a similar meaning to CAUSE, a semantic operator which serves as a verbal head in some instances. For example, in the phrase "kill the plant," there is a CAUSE operator but that head is articulated as "kill" as a result of syntactic movement. However, in the phrase "cause the plant to die," that operator is still present and selects the lexical item that has the same meaning.

Instead of proposing that these heads are all functional, she places one functional projection, EP, between the two Larsonian VP shells. This Event Phrase marks the edge of an event. Finally,

the head of V$_2$P hosts the lexical verb and the theme is generated in the specifier position of that lower VP shell. Evidence for this configuration can be found in Travis (2010) with the following examples:

(3)   John caused the plant to die and it surprised me that he did so.   (a)

John caused the plant to die and it surprised me that it did so.   (b)

John killed the plant and it surprised me that he did so.   (c)

*John killed the plant and it surprised me that it did so.   (d)

In these examples, each time the phrase 'it did so' is used, it refers to the event of the plant dying. This allows for the grammaticality of (b) and the ungrammaticality of (d).

2.2 African American English Structure

To begin, I will offer two definitions of AAE. First, it is a rule governed variety of English that is autochthonous to the United States and has set phonological, morphological, syntactic, and semantic patterns. Second, as Claude Brown, author or *Manchild in the Promised* Land says, it is language used by many African Americans that "possesses a pronounced lyrical quality which is frequently incompatible to any music other than that ceaselessly and relentlessly driving rhythm that flows from poignantly spent lives" (Rickford, 2000). The first definition is more technically accurate and is the basis on which my own research is founded: the view that AAE has rules which can serve as the subject of linguistic inquiry. However, the second is one that I always try to keep in mind. Language use is so closely tied to identity, community, and belonging that it cannot— and should not—be observed as though it exists in a vacuum.

Although this thesis is concerned primarily with the structure of AAE and how that structure fits within the wider literature regarding generative grammar, it is important to note that by virtue of focusing on a variety which has historically been marginalized and viewed as "bad English," the endeavor of examining the rules which govern such a variety has wider implications in fields

such as education, sociolinguistics, literature, and history (Wheeler, 2016). There are still pressing issues outside of the fields of syntax and semantics which are inextricably connected to this variety, due to its history in a nation where its very existence has been called into question on many occasions. Confusion and ignorance about AAE (what, exactly, it is and how it fits into our wider sociolinguistic landscape) have real consequences: in classrooms, in workplaces, and within communities where AAE is spoken. These consequences can be observed in the case of *Martin Luther King Elementary School Children v. Ann Arbor School District Board (1979)*, where it was argued that by not taking into account the students' social, economic, cultural, and linguistic backgrounds when teaching them how to read in "standard English", those students were not receiving equal educational opportunities (Alim, 2005).

 Another often cited example is "the Ebonics" firestorm" of the mid-90s, where the Oakland Unified School District approved a resolution which, in an effort to address an achievement gap between African American students and their white peers, sought to "recognize African American Language/Ebonics as the primary language of many African American students," and "add African American Language/Ebonics to all district documents offering optional placement of students in classes or programs serving limited English proficient students" (Rickford, 2000). This resolution was met with criticism, laughter, and outrage.

 My hope is that building upon the foundation set by scholars like Lisa Green, J. Michael Terry, and Rickford & Rickford, this and future studies of AAE will move us toward a better understanding of what, exactly, it is that people know when they know AAE. In this section, I will highlight some of the works which have described AAE's system of aspect and tense, including the distributions of aspectual markers *be*, *BIN*, and *dən*; and the past tense verbal morpheme which

leads to a semantic ambiguity between the present perfect (*has eaten* in SAE) and past perfective (*ate* in SAE).

First, I would like to note that AAE shares many fundamental syntactic features with SAE and other varieties of English. For example, it embeds finite and infinitival clauses in very similar ways to Standard American English (SAE) and other varieties like Southern White English (SWE). However, beyond the structures that seem to be markedly different from Standard English like double modal constructions (4), which exists in other varieties of English like SWE, there are more subtle differences that demand to be teased apart and investigated.

(4)   He *might could* do the work.
        She *may can* do the work.

Some of these differences lie in the tense-aspect system under the purview of various aspectual markers like *be*, *BIN*, and *dən*. The following sections will provide analyses of each of these aspectual markers, as well as on the interaction of the verbal morpheme *-ed* on the aspectual system of AAE.

2.1.1 Aspectual be

As mentioned above, the aspectual marker *be*, henceforth referred to as be_2 to distinguish it from the auxiliary *be,* is used to indicate that an eventuality, state, or behavior is habitual. According to Labov (1972), the nature of the action determines whether the behavior is durative or iterative. This nature is itself determined by many factors, including the temporal characteristics and situation type of the event being discussed. When this marker precedes a VP, that verb typically takes progressive *-ing* marking. The discussed eventuality is taken to be a process and the function of aspectual *be* in some cases is to mark the recurrence of that process on particular occasions. In others, it marks the recurrence of processes with respect to specified times (L. J. Green, 1993).

When *be* occurs with a VP and the verb takes past tense marking V-*ed*, the verb has an adjectival passive reading (L. Green & Roeper, 2007). I would posit that these temporal characteristics are introduced in the event structure represented syntactically with the functional projections proposed by Ramchand (2008), and thus the functional relationship between this internal structure and the Aspect head dictates what can be read by the semantics. This phenomenon gives rise to the difference between (5a) and (5b) below, adopted from (L. J. Green, 1998).

(5)　　Those shoes expensive.　　　　　　　　(a)
　　　　'Those shoes are expensive.'
　　　　Those shoes *be₂* expensive.　　　　　　(b)
　　　　'Those shoes are always expensive.'

These examples indicate that there is a structural difference between sentences containing the auxiliary *be*, which is present in both Mainsteam American English (MAE) and in AAE, and *be₂*. It should be noted that the auxiliary *be* in (5a) is syntactically present but is null in the spellout of this particular example. I will not, however, further address the literature on the "zero-copula" feature of AAE in this paper as it is not an aspectual phenomenon but one of tense. Later sections in this thesis will further discuss the definitions and syntactic-semantic functions of both Tense and Aspect. I will note that one of the most common sources of evidence for describing *be₂* as an aspectual head rather than a tense head is that it does not participate in T-to-C movement in question formation, as shown in (6). The same is true for the other aspectual markers that will be discussed in this paper.

(6)　　*Be those shoes expensive?
　　　　'Are those shoes usually expensive?'

The sentences shown in (5) also demonstrate that *be₂* need not appear with verbal predicates; it can also select adjectival ones as well. As a matter of fact, it can appear with locative XPs as in

"The toy box *be₂* in the garage," as well as with NPs, as in "She *be₂* the substitute teacher." These eventualities, while not dynamic and thus not containing a *proc*P functional head, are still built up syntactically and are anchored to a time variable introduced by Aspect. Although Ramchand's verbal decomposition focuses primarily on dynamic events and very little on statives, I will take the XP *in the garage*, and the NP *the substitute teacher* as shown in the above examples to be stative under this framework, which are structured such that there is only an *init*P projection with rhematic material selected as its complement.

L. J. Green (1993) devotes a section on the semantic analysis of *be₂*, and in that section she seeks to address the following questions: How do *be₂* constructions differ from habitual and generic constructions in MAE? How should habituality and iterativity be characterized in *be₂* constructions? How can formal representations of *be₂* constructions be given? What is the semantic contribution of each part in the *be₂* sequence?

First, to highlight the distinctions between habituals and generics in AAE and in MAE, she defines *habitual* as referring to "a pattern of situations" (Smith, 1997) and a *generic* as referring to a regularity (Smith, 1997). In MAE, these kinds of eventualities are almost indistinguishable, but their differences can be seen in constructions like "birds fly" and "Beth reads," where the former is a generic and the latter is a habitual.

2.1.2 Remote Past BIN

BIN in AAE has most commonly been described as the remote past marker, and is analyzed as being responsible for binding the initial point of an eventuality into the remote (or distant) past. Rickford (1975) makes the generalization that, when *BIN* is followed by a verb in its *-ing* form, or by a stative verb, BIN is interpreted to mean "for a long time." In these environments, the construction is said to describe an eventuality in the "Remote Phase Continuative," meaning that

it has some process or duration that is lasting. It either has been continuous for a long time up to

and including the time of the utterance, or it was a continuous event that habitually recurs, and that

habit continues up to and including the time of the utterance. When BIN is followed by a nonstative

verb, it is interpreted as meaning "a long time ago," and the meaning is referred to as the Remote

Phase Completive. This distinction can be seen in (7) below.

(7)   Jane BIN_{RSTATE} saw that movie.   (a)
        'Jane saw that movie a long time ago.'
        Jane BIN_{STATE} living in Memphis.   (b)
        'Jane has been living in Memphis for a long time.'
        Jane BIN_{HAB} fixing electric scooters.   (c)
        'Jane has been fixing electric scooters for a long time.'

Because BIN appears to be responsible for the binding of some part of the internal event

structure in time, it is clear why it is an aspectual marker rather than a tense marker. Some of the

empirical evidence for this characterization of BIN comes from (L. Green, 1998), where AAE

speakers from Lake Arthur, Louisiana produced constructions in conversation, as well as the

comprehension task study that was discussed above in the section regarding *be₂*. Like *be₂*, *BIN* can

select the following predicate types as complements: VP, PP, AdjP, and NP. As is also the case

with *be₂*, PPs, AdjPs, and NPs are treated as being "state-like" by *BIN*. These different kinds of

predicates hold similar internal temporal characteristics and thus are built up similarly by the

syntax. Thus, all constructions which contain stative verbs and other such phrases are interpreted

as referring to something which began in the remote past and still holds to the time of the utterance.

I will note that Green (1998) does observe that with constructions containing *BIN*, the instantiation

of the event or state occurs at some unspecified time in the remote past, and cannot be specified

using an explicit temporal adverbial modifier, as in (8).

(8)   *Bruce *BIN* running for ten minutes.   (a)

'Bruce has been running for ten minutes.'

Bruce *BIN* running for ten minutes.   (b)

'Bruce started going on ten minute runs a long time ago.'

*That house *BIN* brown for five years.   (c)

'That house has been brown for five years.'

When duration adverbials are included in the syntactic structure containing BIN_{HAB}, as in "He *BIN* running around that track for an hour," the adverbial is presumed to situate the individual instantiations of the habit, rather than the beginning of the habit formation itself. It is still awkward, but the duration denoted by the claim that temporal adverbials cannot redundantly bind the eventuality in time is supported by evidence from multiple avenues, including the current study.

Additionally, for every event that culminates, there is a resulting state of affairs that holds forever after. This concept is reminiscent of Ramchand's event structure which places a syntactic functional head as responsible for licensing the existence of a resultant state for an undergoer to be in. In the sentence "John *BIN* running," where the interpretation is that John has been running for a long time and continues to run, there is a current state of affairs wherein the running event's IP state holds from the remote past to now. One logical representation of this can be seen below, as adopted from Green (1998). This logical representation follows Parsons's (1990) analysis, where he argues that the subevents that make up eventualities are concrete and perceptible entities. This representation means that there is some running event, and the theme of that event is Bruce. Beyond that, there is a long interval which began in the past and continues until the time of the utterance which binds that running event of which Bruce is the theme. During the time of this interval, there is an in progress state wherein Bruce is running.

(9)   Bruce *BIN* running.

$(\exists I)$ [long(I) & Beg(I)<now & End(I)=now & $(\exists e)$ $(\exists s)$ [Running(e) & Theme (e,Bruce) & IP state (e,s) & Hold(s,I)]]

2.1.3 Completive dən

Dən has been defined as a completive aspectual marker, whose primary responsibility is to indicate that an eventuality is over. This marker also has the perfective meaning that distinguishes it from *BIN* in that it must refer to and bind the event as a whole, rather than only the initiation of it. Because it has both the perfective meaning and the completive meaning, there are many constructions where these two interpretations are equally available to a listener. An example of these environments can be seen in (10), which can be found in (L. J. Green, 1998).

> (10)   Bruce *dən* lost his wallet.   (a)
>
>   'Bruce just lost his wallet.'
>
>   Literally: 'It has just been realized that Bruce has lost his wallet.'
>
>   Don't talk to me like that—after I *dən* bought all these groceries.   (b)
>
>   'Don't talk to me like that—after I have just bought all of these groceries.

In these examples, we can see that although there is a difference between *dən* and *BIN* with respect to their different requirements for perfectivity, they are similar in that the described eventuality is now in a resultant state that is of relevance to the time of the utterance. The event described has culminated, leaving a resultant state which holds up to the time of the utterance where the event of interest is no longer occurring. This is an integral difference between these two aspectual markers and the semantic analyses of them.

These two are also similar in that, for many speakers, *dən* may not occur with temporal adverbials. The sentence "I *dən* went back to visit two months ago," as the literal meaning of that sentence is also not permitted in MAE: "I have gone back to visit two months ago." The visiting event may have occurred two months ago, thus culminating the event of interest occurred two months ago, but the time bound by Aspect includes all the time from two months ago until the time

of the utterance, making the visiting event currently relevant. Crucially, however, the visiting event has ended. This must be the case for *dən* to be used. As (11) shows, *dən* is incompatible with states for many speakers in many contexts (Green, 1998).

(11)   ?She *dən* knew that all her life.

             'She has known that all her life.'

Finally, *dən*'s compositional variability allows for constructions that contain *be₂* or *BIN* along with *dən*. When *dən* occurs with *be*, the resulting reading is habitual resultant state, where it is usually the case that an event has culminated. When it occurs with *BIN*, the resulting reading is remote past resultant state, where an event culminated in the remote past. Examples of these two constructions can be found in 12, respectively.

(12)   He *be dən* ate.   (a)
          'He has usually already eaten.'
          He *BIN dən* ate.   (b)
          'He had already eaten a long time ago.'

Ultimately, Green's presumed underlying structure of the AspP includes two aspect heads to allow for these constructions which contain two aspectual markers to work combinatorially. I take these heads to maintain the syntactic and semantic responsibilities as outlined by Ramchand (2008) and Travis (2010), and they have complex relationships with the event structures that they select and are embedded in, which bring about specific patterns of acceptability and grammaticality. The minimal structure, then, is as follows:
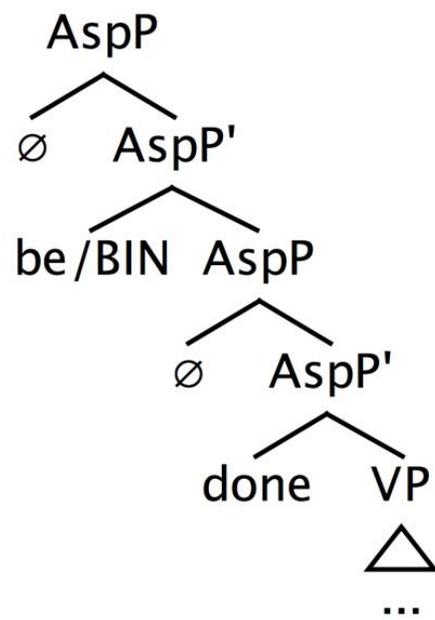
Figure 3: Proposed Derivation of AspP (Green, 1998)

CHAPTER 3: METHODOLOGY

3.0 Overview

This chapter provides background and motivation for using an experimental approach, including discussion of findings from a pilot study that informed the main experiment for this thesis. Following the explanation of methods for the main experiment, results are presented.

3.1 Background

In order to investigate the factors that impact grammaticality judgments of different constructions containing *BIN*, I conducted an acceptability judgment task where participants were asked to rate the acceptability of a set of sentences on a scale from the least to most acceptable. My decision to use experimental syntax methodology is, in part, an exploratory one so that I may see how future experimental studies of the syntax of AAE can be used to further our understanding of its grammar and of speakers' intuitions. A primary goal of experimental syntax is to use empirical evidence of introspective judgments from multiple speakers to make and support claims about the processes involved in language use (Myers, 2009). Schütze (2016) demonstrates that, although intuitive judgments are valuable and provide useful insights into language use, there are ways to collect and use these judgments which minimize bias and elicit reliable and stable results.

In his 2016 text on grammaticality judgments and linguistic methodology, Schütze (2016) gives four key reasons for eliciting grammaticality judgments, two of which are relevant to my own study and future studies of AAE syntax: first, eliciting judgments allows us to observe speakers' responses to sentence types which occur very rarely in spontaneous speech; second,

these judgments may provide information that we cannot gain from corpora, interviews, or spontaneous language use, namely negative information in the form of structures that are not generated by the grammar of a language (Schütze, 2016). It is not often that AAE speakers are asked what does and does not "sound good" to them in their variety, and their insights are invaluable in developing generalizations about syntactic phenomena in AAE. The following sections will discuss the procedure, results, and conclusions from the main experiment for this project, as well as the results from a pilot study that I conducted before designing the larger study.

3.2 The Pilot Study

3.2.1 Materials & Procedure

An initial pilot study was conducted to both explore relevant grammatical factors and test the field-based, online task procedure using audio files. The pilot survey was comprised of a judgment task designed to investigate the effects of three factors on the acceptability judgments of sentences containing the aspectual marker *BIN*. Those factors were: progressive aspectual marking on the predicate, the stativity of the predicate, and the presence of a durative prepositional phrase (PP). I predicted that progressive marking and stativity would affect the acceptability judgments because the temporal characteristics of situation types help to dictate which structures are allowable when calculating semantic meaning and understanding the syntax of a proposition. Adverbial PPs appear to serve the same semantic function as *BIN*, and so the inclusion of both BIN and a PP is likely to be regarded as redundant and thus judged as less acceptable. These factors each had two levels, creating a 2x2x2 factorial design, which is shown below in tables 1 and 2, with examples of some of the verbs used in the study.

Table 1: Pilot Study Factors & Groups (+Adverbial)

+PP		
	+Stative	**-Stative**
+Progressive	knowing	**driving**
-Progressive	**knew**	**drove**

Table 2: Pilot Study Factors & Groups (-Adverbial)

-PP		
	+Stative	**-Stative**
+Progressive	having	leaving
-Progressive	had	left

The verbs used in the test items were selected to include different situation types which are expected to have different durations based on our knowledge of the world. The stative verbs were *want*, *know*, and *have*, which were predicted to pattern similarly, as opposed to stative verbs like *live* and *love*, which appear more frequently in structures with progressive marking on the verb.

(13) I'm living in Denver right now. (a)
  I'm loving this season of *The Good Place*. (b)
  *I'm knowing Spanish. (c)

The non-stative verbs were *drive*, *leave*, and *buy*, which are members of different classes of verb and, as verbal lexical items, are specified for different temporal architectures (Ramchand, 1997). *Drive*, for example, enters the syntax and determines a time structure with many conceptual moments. The situation type, then, can be classified as an activity or an accomplishment depending

on whether there is a natural endpoint of the "driving event" present in the structure. This situation type is partly defined by the fact that it is composed of many conceptual moments along a temporal frame, and this composition is known as the atomic, or basic, temporal structure. This property distinguishes *drive* from *buy* and *leave* because those two verbs do not have the same atomic temporal structure. Whereas, *drive* and *buy* have two distinct conceptual moments. *Leave* and *buy* are distinct from one another in the relationships that they have with their arguments. These relationships are crucial contributors to our interpretations of aspect. By using these three different verbs, I hoped to be able to see, once examining the patterns of judgments for sentences containing each verb, how verb class might affect acceptability judgments and therefore inform a larger study.

Because this pilot experiment called for eight different sentence types to serve as test items, I had to be cognizant of the time that it would take informants to complete the survey. I constructed thirty- two test items so that each participant would rate each sentence type four times and to ensure that the survey was not excessively long so as to avoid fatigue on the part of the informants.

Rather than present the test items in their written forms to the participants, the online survey presented audio files for the participants to play, and a seven-point Likert scale where they recorded their acceptability judgments. This choice to use audio as the mode of delivery was motivated by my prediction that written forms of AAE sentences might garner lower acceptability judgments than recorded sentences due to unintentional prescriptive judgments about "proper language," particularly in writing.

The test items themselves also included context established by another speaker in order to bring the sentence of interest out of isolation and more representative of how it would appear in natural speech. Participants were asked to listen to exchanges between "Speaker A" and "Speaker

B," and to then rate the acceptability of Speaker B's response. An example of the mini-dialogues presented to the participants is shown below in (14).

(14)   Speaker A: I ain't know Jade was gonna apply to law school.
        Speaker B: Oh yeah, she *BIN* wanted to be a lawyer.

The participants for this pilot study were five adults between the ages of twenty and thirty nine, and each had at least a bachelor's degree. Three of the participants were from Baltimore, Maryland, while the other two were from Illinois. Four of the participants were women, and one participant was a man. All of the participants identified themselves as "Black or African American". The demographic background that the survey requests is "race/ethnicity" and what region of the United States the participant grew up in. By framing these questions in this way, I could distinguish people of African descent who would have grown up speaking AAE from other African descendants who might be culturally and linguistically Latinx, Caribbean, African, etc. Participants whose ethnic background is not "Black American" potentially grew up in communities where AAE was not primarily spoken.

To gauge whether participants would be considered speakers of AAE for the purpose of this study, the filler questions in the survey featured other common structures that are found in AAE, as well as some sentences that I would expect to be judged as highly unacceptable or predictably variable across and between speakers of AAE. These fillers, then, served the dual purpose of being fillers and control items. Examples of structures that I expected to be rated highly acceptable and very unacceptable are shown below in (15a) and (15b).

(15)   'Oh, do you know Cierra?'   (a)
        'Uh huh. She my sister.
        'I don't know where J is, do you?'   (b)
        'Oh, he be finna running home.'

3.2.2 Results & Discussion of Pilot Study

The adverbial PP used for each test item was *for a year*. This duration was chosen to render the habitual reading of sentence containing *BIN* unavailable in certain contexts, whereas a shorter duration indicted by an adverbial phrase, like *for four hours* would have allowed for a habitual reading in structures containing *driving*. I wanted to examine how closely participants' judgments of the various sentence types patterned across the different verbs, and I recognized that the ratings would likely be higher for *BIN driving* sentences, if the adverbial were able to refer to the individual occurrences of the habit, rather than the start of the habit. I predicted that, generally, the sentences containing adverbials would be rated as lower than those without, because these adverbials provide redundant information already given by *BIN*, occupying the head of the functional projection AspP. This proved to be the case. Table 4 – PP Results Pilot Study which shows the average ratings for each sentence type. This difference in ratings is also displayed in Figures 1 and 2, which demonstrate these averages in comparison to one another.

Table 3 +PP Results Pilot Study

	+PP		
	+Progressive	-Progressive	
+Stative	4.70	5.47	5.08
-Stative	3.75	4.35	4.05
	4.23	4.91	4.57

Table 4 – PP Results Pilot Study

	-PP		
	+Progressive	-Progressive	
+Stative	5.75	6.70	6.23
-Stative	6.27	6.07	6.17
	6.01	6.38	6.20

It may be important to note that although the ratings are lower for sentences containing adverbials, none of the average ratings were lower than 3.75. It is interesting that these averages are not lower, considering the inclusion of an adverbial is presumed to make a sentence very unacceptable. Another interesting finding was that the *BIN +V-ed* structures were rated lower than the *BIN+V-ing* in the cases where there is no adverbial phrase. I did not predict that the ratings for non-stative verb would be affected by progressive marking on the verb, but pattern is also borne out in the wider study, which I will explore in later sections. Ultimately, when designing the wider study, I wanted to examine whether different types of non-stative verbs would be affected differently by progressive marking on the verb, and so I categorized them further based on their internal temporal structure.

This difference in ratings for *BIN+V-ed* and *BIN+V-ing*, however, might be due to external factors that are not of interest to this study. As is the case with many experimental syntax studies, it can be difficult to isolate which factors are responsible for which patterns. For example, when I asked other AAE speakers who weren't participants in this study whether they were more likely to say *BIN knew* or *BIN knowin'*, they said they have heard *BIN knew* more frequently, and so it is possible that the participants' ratings are influenced by the frequency of a structure. As Figure 6 shows, the rating difference is quite small, as compared to the rating difference between +PP and -PP.

Figure 3 offers another perspective for the judgments on the non-stative progressives, as it shows that not only were the statives rated higher, but the non-stative progressives with an adverbial were rated the lowest within that set. The adverbial appears to allow for the reading that the argument entered the state a year ago and still holds now, but it is more difficult to derive a

meaning for an activity that occurred a year ago and still holds at the time of the utterance. Examples of sentences of these types are shown in (16).

(16)   ?Mary *BIN* wantin that car for a year.(a)
         ??Mary *BIN* drove that car for a year.(b)

In (16b), there is no *BIN_{STAT}* reading available because the situation denoted by the verb is not stative. Nor is there a *BIN_{HAB}* reading available without the *-ing* aspectual marking on the verb. Finally, the adverbial eliminates the resultant state reading because it establishes the initial point of the driving event as well as sequence of intermediate points in time along the course of the driving. The ratings for *BIN+V-ed* might prove to be interesting to investigate in future studies, as the situation type might affect the acceptability of these constructions. I posit that certain verbs' temporal characteristics make them more compatible with *BIN* than others. Although there were not many stark differences in ratings across all of the verbs, within the non-stative group, *BIN+bought* (with no adverbial) received a lower rating of 4.8 compared to its *BIN+buyin* counterpart. It is possible that the internal characteristics of a verb might impact the environments that it can appear in with *BIN*. For example, ((17a) is slightly less acceptable to me than (17b).

(17)   I *BIN* watched that movie.   (a)
         I *BIN* saw that movie.   (b)

Not only do *see* and *watch* typically refer to different situation types (the former a state and the latter an activity (Smith, 1997), but in (a), I believe that *BIN* is situating the watching event in the distant past, but the initial moment is the first in a series of moments within a process. With (b), however, *BIN* places the whole "seeing" event in the remote past, and the focus is on the achievement of having watched the movie. It will be interesting to see whether verb class or situation type impact these acceptability judgements.

Finally, as Figures 1 and 2 show, my prediction is supported that the stative progressive structures would be rated as less acceptable than their *stative+V-ed* counterparts. However, it is important to note that there are not enough participants or test items to draw any concrete conclusions from this result. The participants were fairly similar in age and from similar geographic backgrounds. By investigating the acceptability of various structures in the future, we may find patterns in the variability that we see across and between participants. With the wider study discussed in the following section, there were more participants, and the participants were from different regions of the country.

The preliminary results from this pilot study did, in fact, support my predictions about adverbials and stative progressive structures, though they needed to be further tested with a larger sample and with more categories for VP type. In the next section, I describe the main experiment that was built on these pilot data.

3.3 Main Experiment:

3.3.1 Materials

Based on the results from my pilot study and further discussion of how to best target the syntax and semantics on *BIN* in AAE, I developed a more extended survey that focused on the effects of two linguistic factors on the acceptability of constructions containing *BIN*: what I will call *event type* and *verb morphology*. I hypothesized that by manipulating these factors, a pattern would emerge that would indicate that *BIN*, while certainly being a morpheme concerned with Aspect as a syntactic and semantic category, depends on certain conditions being met for both Inner and Outer Aspect (Travis, 2010), rather than just Outer Aspect. By testing whether *BIN* is sensitive to the features within the domain of event type and morphology, I am, based on the decompositional

approach to event structure, examining different configurations of the syntactic elements within the EP (in Travis' model).

Table 5: Factorial Design for Main Experiment

Event Type	Morphology: Past (-) or Progressive (+)	
Activity	+	-
Accomplishment	+	-
Unaccusative	+	-
Stative	+	-

The online survey was a 4x2 factorial design, as shown above in . There was a total of thirty-two test items and seven filler sentences which also served as control questions. The test items themselves were sentences framed as a response to another speaker, as seen in (18).

(18)   Speaker A: Did Melissa leave already?
        Speaker B: Yeah, she *BIN* driving back up to New York.

The same was true for the filler questions, except those sentences contained other constructions in AAE that were unrelated to this study. These filler questions also served as diagnostic control questions; if an informant's responses to the control questions didn't indicate that their intuitions were reliable, their responses were not included in the analysis. Each of the filler questions had expected ratings of either good (ratings of 6-7), medium (ratings of 4-5), and bad (ratings of 1-3). If a participants' answers were significantly outside of the expected range for these questions, their responses were not used in this study.

This was a between subjects design, such that the test items were distributed across two different lists with each participant responding to a total of sixteen test items and all of the same filler items. Each participant responded to sentences containing all four event types and both verbal morphologies; however, for each verb, they only saw that verb with either past tense or progressive marking. For example, if a participant were to see "List X," that participant would give a rating for a sentence containing "*BIN* driving," but they would not see "*BIN* drove," because that sentence

would be in "List Y." The two test items on both lists were identical except for the marking on the verb. All test items appear in Appendix A.

3.3.2 Procedure

With approval from the Institutional Review Board of Purdue University (Protocol #190121570), the survey was distributed on Facebook using an anonymous link so that respondents were able to take the survey on their personal computers or smartphones. The survey opens with an introduction to the goals of the study and an explanation of what they will be asked to do. Following a set of demographics questions (gender, ethnicity, age, city of origin, and education level), participants were tasked with listening to embedded audio files containing the test items and then rating the acceptability of Speaker B's response on a scale from the least to the most acceptable, (1) being the least acceptable and (7) being the most acceptable. To minimize the effects of prescriptive ideas about language use, particularly with AAE, the instructions also clearly stated that their acceptability judgments should be based on what they perceive as "natural" or "able to be reasonably produced in their dialect," rather than what they perceive as sounding "more educated" or "closer to 'proper English'."

To ensure randomization and balance of the lists to respondents, Qualtrics software sent respondents to either List X or List Y, depending on the list that the previous respondent saw. Participants saw one item at a time, displayed in a randomized order, and had to respond with their judgment before moving on. The final question of the survey asked for a short answer about what the respondent thought the survey was about.

3.3.3 Results

In total, eighty two people completed the survey, but only twenty-eight of these responses were used for analysis. Participants were excluded if their responses to the filler/control questions did not reflect that their intuitions would reliably provide information about the phenomenon of interest. All of the informants whose responses were used self-identified as Black or African American and they all indicated that their hometown was in the United States. Keeping in mind that AAE is not a variety with rules that are completely identical across geographic regions, a factorial ANOVA was conducted to determine whether "Region" was a significant factor in respondent's acceptability judgments, and it was determined that it did not. Thus, the covariate *Region* did not have a significant effect on their acceptability ratings, $F(3,506) = 1.81$, $p = 0.145$. The distribution of region of origin can be seen below in , and it should be noted that a majority of respondents reported that they were from the South, as defined by the U.S. Census Bureau.

Table 6: Distribution of region of origin

Region	Frequency	Percent
Midwest	6	21.4
South	16	57.1
Northeast	3	10.7
West	3	10.7
Total	28	100.0

The same procedure was followed for the factors of *Age* and *Gender*, and these two factors were found to have a statistically significant influence on acceptability judgments. The distributions for them are shown in Table 7 and Table 8, respectively. Like the factor of region,

these both had unequal distributions amongst the respondents. Almost 60% of the respondents were between the ages of 21 and 29, and almost 80% of the respondents were women.

Table 7: Distribution of Ages of Respondents		
Age	**Frequency**	**%**
21-29	16	57.1
30-39	4	14.3
40-49	3	10.7
50-59	4	14.3
60+	1	3.6
Total	28	100.0

Table 8: Distribution of Gender		
Gender	**Frequency**	**%**
Man	5	17.9
Woman	22	78.6
Nonbinary	1	3.6
Total	28	100.0

To control for these factors, they were included as covariates in a factorial ANCOVA which was conducted to determine the effects of *event type* and *morphology* on acceptability. It was determined that *event type* did have a main effect on acceptability, as shown in Figure 4: Effect of Event Type on Acceptability ($F(3,500)=14.3$, $p < 0.05$). On average, Activity events (e.g. *running*, *driving*) were rated the highest, but there was no significant mean difference among the other event types.
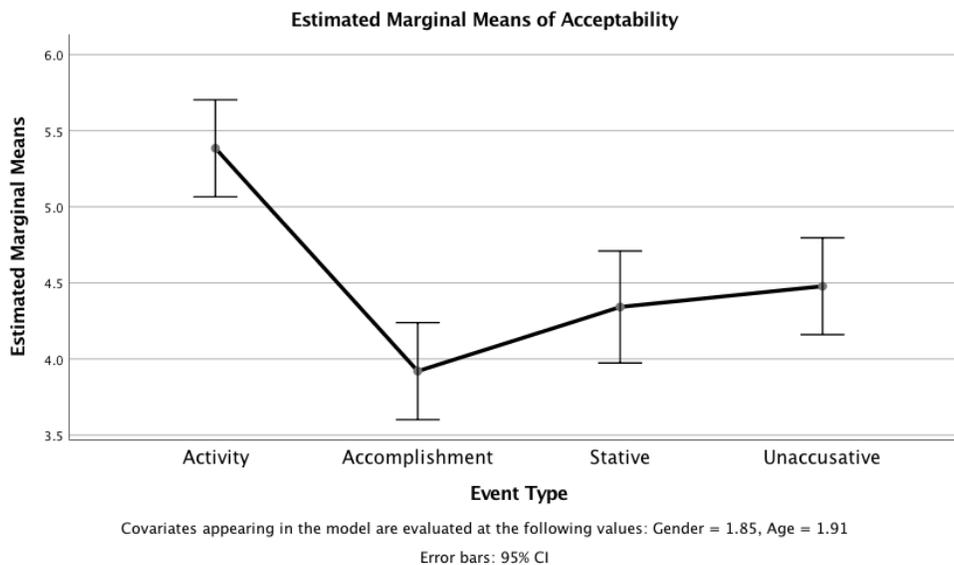
Figure 4: Effect of Event Type on Acceptability

There was also a significant mean difference between structures with V-*ed* morphology and with V-*ing* morphology ($F(1,500)=12.02$, $p < 0.05$). Structures with progressive morphology received lower acceptability ratings than those with past tense morphology. These differences are shown in Figure 5.
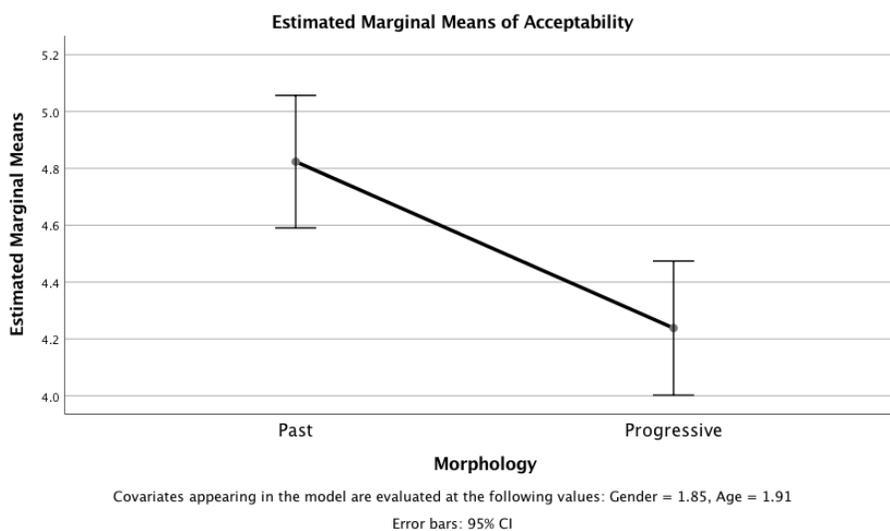

Figure 5: Effect of Morphology on Acceptability

Finally, there was a significant interaction effect for both *event type* and *morphology* ($F(3,500)=5.56$, $p < 0.05$). These differences can be seen in Figure 6. There was a significant difference between the acceptability of *activity* events with progressive marking and *activity* events with past tense morphology (e.g. *BIN* running vs. *BIN* ran). Additionally, there was a difference between *unaccusative* events with progressive marking and *unaccusative* events with past tense marking (e.g. *BIN* broke vs. *BIN* breakin'). There was not a significant difference of this type among *stative* and *accomplishment* events.

Estimated Marginal Means of Acceptability

Covariates appearing in the model are evaluated at the following values: Gender = 1.85, Age = 1.91

Error bars: 95% CI
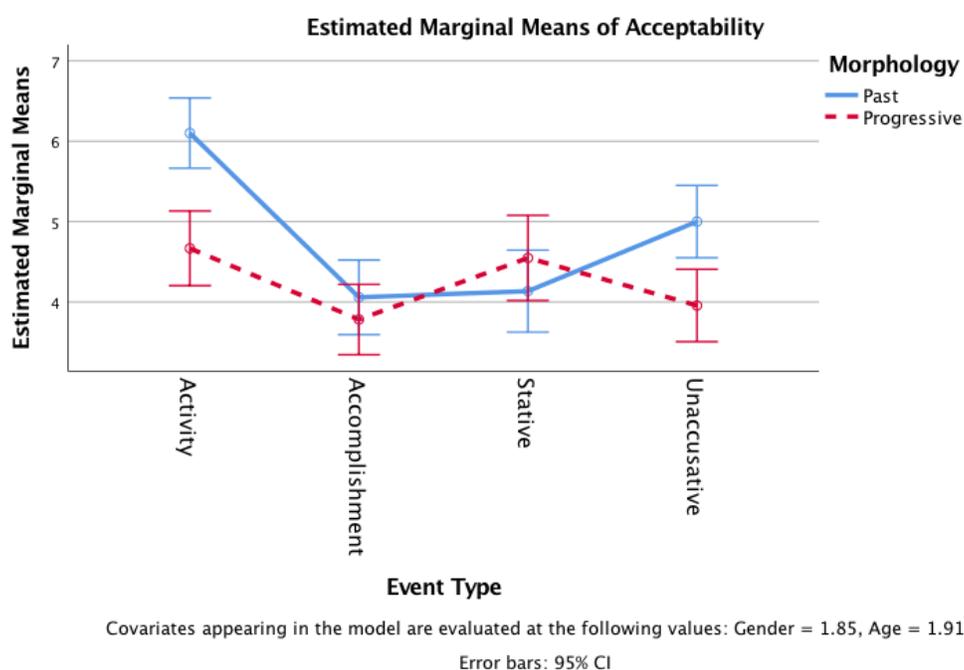
Figure 6: Effects of Event Type & Morphology on Acceptability

3.3.4 Discussion

Before I begin my discussion of the effects of the factors that I was interested in for this study, I will briefly discuss some interesting methodological findings from an acceptability judgment task of this nature for AAE. The control questions were very useful in narrowing down which informants would be helpful, as the demographic information was all self-reported anonymously.

They were also useful for screening responses that obviously fell into two categories that I immediately excluded: those that were based on very prescriptivist views of language use, and those that appeared to be based on an investment in "proving" the legitimacy of AAE as a variety.

For the former, many acceptability judgments were 2s or 3s no matter what grammatical features were being manipulated. Based on their responses to the final question about what they thought the study was about, they also had a generally negative view of AAE. For example, one participant said that they thought the study was about "the usage of statements that aren't grammatically correct but are culturally acceptable," while another said that it was about "the use of proper English."

For the latter group, whose responses trended to the opposite extreme, the responses to the control questions and the test items were all 6s and 7s. These respondents also indicated in their answers to the final question that they thought the study was about attitudes toward language use, rather than grammaticality of individual structures. These two categories of response have further demonstrated to me that AAE structure has to be studied with consideration of its history and current social context. Many of the participants whose responses were included in the final analysis specifically guessed that the study involved "helping verbs" or mentioned "be" or "been" in their answers to the final question. These respondents, according to these last answers, might have approached the survey with the perspective that AAE is rule governed, and their task was to pick out which sentences weren't closely following those rules. The informants who either marked everything very high or marked everything very low may not have begun the survey with this mindset. In the future, if I conduct an acceptability judgment task like this one, I would like to do so in person so that participants have more of an opportunity to ask questions or perhaps explain why they gave something a low rating in the moment.

Regarding the responses that were included in the analysis of variance, the results support some of my predictions, but not others. To reiterate, based on theoretical arguments and on the results of my pilot study, I predicted that structures that included progressive marking would receive a lower rating than those with past tense marking, and this proved to be the case. The same was true for different event types in that activities were rated much higher than any other event type. However, I did predict that because stative verbs are typically incompatible with progressive marking, these constructions would be rated lower than those with past tense marking (e.g. *BIN knew* vs. *BIN* knowing). This contrast was not borne out in the results of this study because there was no significant difference between constructions of those types. It is very interesting that stativity seemed to have no bearing on the acceptability of sentences featuring different verbal morphology, but it would be interesting to test in the future if the two morphologies brought about slightly different readings. For example, in (19), it is possible that the *-ed* in (a) leads to a possible reading where Mary no longer wants to go and see the movie or perhaps has, at the time of the utterance, *already* seen the movie, and so the "wanting" ended at some point in the past. But in (b), the only available reading is one where she has wanted to see the movie for a long time and still does.

(19)   Mary *BIN* wanted to see that movie.   (a)
        Mary *BIN* wantin' to see that movie.   (b)

Here, there may not be evidence of a difference in acceptability because of the two available semantic readings for (a). The second reading, where Mary still wants to see the movie, is interestingly identical to that in (b), despite the addition of the progressive *-ing*. In the future, it would be interesting to hear from informants if all of these readings are indeed available for them, and whether there are factors that contribute to their availability.

Overall, I believe that these results demonstrate that *BIN* is sensitive to the internal event structure that is responsible for constructing syntactic and semantic meaning in AAE sentences. In environments where the only difference can be syntactically represented by differences in telicity and internal temporal structure, AAE speakers' judged sentences systematically, presumably based on these syntactic and semantic differences.

CHAPTER 4: STRUCTURAL ANALYSIS OF *BIN*

4.1 Introduction

With this thesis, I wanted to approach the syntax and semantics of AAE from a perspective that I have not explicitly seen before. Perhaps some of the more salient differences between AAE and other varieties of English are easily seen in the aspectual heads which have been analyzed in the past; but with these aspectual heads being representative of underlying structures that, in fact, connect them to other varieties of English. I am interested in investigating whether the judgments that AAE speakers make about the distribution of aspectual markers like *BIN* can be systematically represented in the syntax. The acceptability judgment task aimed to find out if there are patterns in the ways that speakers determine the appropriateness of *BIN* in contexts with different situational durations and with different values for telicity, perfectivity, definiteness and completeness.

It was apparent that *BIN* is very versatile in the structures that it can be found in, but I wanted to find out where the boundaries are on that versatility, if any. On the list of environments where we expect *BIN* to be acceptable, I found that there were some that, to myself and to other speakers, simply sounded off or odd or not quite right. One explanation for these feelings could be outside the realm of syntax-semantics, but I wanted to find out if it could have been due to the interactions between those two linguistic systems.

To probe into this question, I chose to look at these possible differences in grammaticality not from the perspective that it was necessarily the lexical item *BIN* itself that was causing certain structures to be preferred over others, but that the underlying structure gives rise to a number of possible options for derived meaning, in tandem with the semantics which further limits those

options. Thus, one possible source for that response of perceived unacceptability may be that the syntax and the semantics underlying the sentence are incompatible with the inclusion of *BIN*. This section will first describe what I propose that underlying structure to be, and then provide evidence from the results of my acceptability judgment task and from *BIN*'s incompatibility with temporal adverbial PPs.

4.2 Proposal

As I have mentioned previously, I believe that a useful and informative way of looking at how we compute syntactic meaning is by formally presenting the layered functional and lexical heads which might contribute to what can or cannot be derived by the grammar. If we notice that the relationship between a lexical verb, an event's telicity, and the verb's argument gives rise to patterns of acceptability, it is worth it to express them explicitly in the syntax and see how they interact. Based on Travis's (2010) model, I have proposed the tree as shown in Figure 7 to further examine some of the ways that those elements (telicity, grammatical aspect, verb, and argument) determine the grammaticality of structures in AAE. To reiterate what has been discussed in earlier sections, previous analyses of aspectual markers in AAE have placed *be₂* and *BIN* in the same aspectual head which dominates another aspectual head that houses *dən*. One possible configuration which can derive sentences like that in (12), repeated below, is that *be* and *BIN* occupy the Outer Aspect position while Inner Aspect is spelled out by *dən*.

(12)   He *be dən* ate.   (a)
            'He has usually already eaten.'
            He *BIN dən* ate.   (b)
   'He had already eaten a long time ago.'
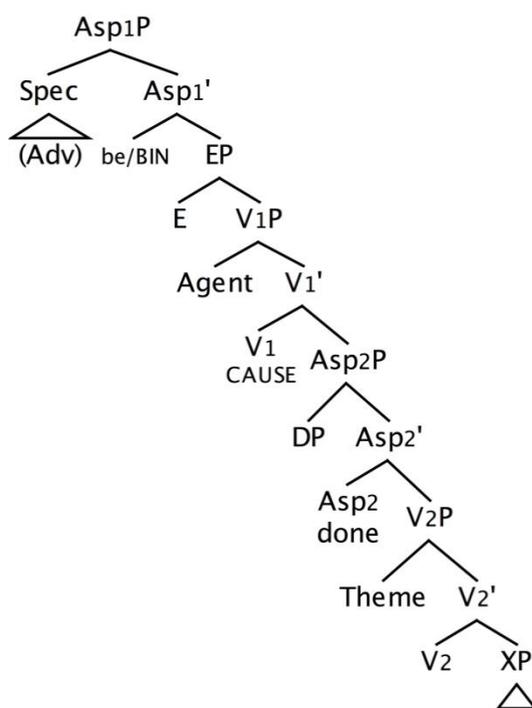
Figure 7: Proposed Structure for AAE Aspect (Based on Travis (2010) and Green (1998))

With the structure proposed in Figure 7 applied to the example sentences in (12a) and (b), we can see the structure as follows in (20).

(20)   He *be dən* ate.   (a)

[TP Hea {+PRES OP} [OAsp1 *be* [OAsp2 *-ed* [EP E [VP1 *t*agent {CAUSE} [IAsp

dən [VP2 √eat]]]]]]]

It should be noted that in the above derivation, I take Terry's (2005) analysis of the *-ed* marker in AAE, which is to say that in contexts where "past tense" morphology (*-ed*) interacts with a covert present tense operator higher in the structure as the head of TP, the past tense morphology is interpreted as perfect aspect, rather than as simple past tense, as is the case when the past tense marker is the highest marker in the sentence. The existence of this present tense operator and its

interactions with *-ed* in AAE is supported by the ambiguity between the present perfect and the past perfective, as is shown in (21), which has been adapted from Terry (2005).

(21)	John ate the rutabagas.	(AAE)
	'John ate the rutabagas.'	(SAE)
	'John has eaten the rutabagas.'	(SAE)

4.3 Evidence

The source of evidence that is the most central to this project is from my main study which determined that the syntactic position that *BIN* occupies is sensitive to the internal characteristics of the event structure beneath it. This was proven by three different results from that study: the effect of verbal morphology (*-ing* for imperfective aspect) on acceptability, the effect of event type (Inner Aspect and internal functional first phase syntax proposed by Ramchand (2008)) on acceptability, and the interaction effect of the two combined. The event types that were factors in my main study had differences that necessitate them being built differently in the syntax and computed differently in the semantics.

For example, motion predicates like *drive*, where the event always includes an agent and a path (as well as an implied theme) have different restrictions on how they can be bound temporally and how we can interpret causation and result than those on an event like *break* or *die*. If *BIN's* primary syntactic responsibility is to place at least one boundary (an initial boundary) on an event or state, then we should expect to see that different kinds of eventualities will respond to that boundary marking differently, depending on how those situations and eventualities are constructed in the syntax. This is one possible source of the variation in acceptability between event types in this study: different eventualities respond differently to attempts at temporal binding, and these responses show up in the acceptability of *BIN* constructions. Additionally, when speakers are

computing syntactic meaning from the structure provided by all of the aspectual heads and the rest of the event structure, there are expectations that must be met by that structure and by the temporal characteristics that make up the semantics of that sentence. When those expectations aren't met, there is a chance that the derivation fails and we get a rating that a sentence is very unacceptable; there is also a chance, however, that there is another reading available. These two possibilities may contribute to the apparent gradience in acceptability (Wasow, 2007). Nonetheless, I take these gradient responses to be evidence of a real grammatical phenomenon which can be represented in the syntax in the tradition of generative grammar.

I also posit that *BIN*'s classic incompatibility with adverbial PPs offers evidence for a layered view of the composition of Aspect and event structure. The reason that, for many speakers, the use of a temporal adverbial with *BIN* is not permitted, is that the PP is trying to accomplish something that it cannot—either *BIN* has already completed that function, or the situation time and topic time of the event does not allow it.

(22)   ?John *BIN* runnin' for an hour.   (a)
        'John has been running nonstop for an hour.'
        John *BIN* runnin' for an hour.   (b)
        'John has been in the habit of running for an hour for a long time.

The phrase that will come to speakers' minds is that we don't need to say how long John was running because we already have *BIN*. In general, redundancy by itself in syntax doesn't necessitate an ungrammatical or unacceptable judgment. For example, the sentence *She usually be at home by now* is perfectly fine, even though the habituality of the "being" was spelled out by both *be* and by the adverb *usually*. In that case, the adverb is occupying the specifier position above the Asp_1 head that *be* occupies (Cinque, 2004). This structural relation clearly is allowable in AAE, as is the time adverbial *on Tuesdays* in the sentence *She usually be home on Tuesdays*. The

semantic information carried by this adverbial is also allowed by the aspectual marker *be*. The difference in structural relation between (22a) and (b) may be shown syntactically, as well as semantically, why (a) is less acceptable than (b).

The introduction of an EP, to the syntactic representation, I believe, is a helpful look into this structural difference. In (b), the functional head *BIN* has both syntactic and semantic scope over the adverbial phrase, and thus that PP must exist within the C-command domain of *BIN*, and in fact within the EP to indicate that the duration of the running event is an hour. However, these conditions are not met in (a). One configuration that would disallow (a) but allow be is an adjunction of that PP onto the EP, so E has minimal scope over the phrase that indicates the duration of the event. In this structure, the duration of the running is already marked on the EP itself. If *BIN* is concerned with placing boundaries on the situation time of an eventuality, then adjunction poses a problem for the derivation of such a sentence. Ultimately, *BIN*'s behavior of probing into the event structure of a sentence has proven to have significant implications for its distribution patterns in AAE.

CHAPTER 5: CONCLUSION, LIMITATIONS, & FUTURE DIRECTIONS

Conclusion

With this thesis project, I have proposed an analysis of the remote past marker *BIN* in AAE that combines the syntactic and semantic analyses posed by Green (1993, 1998) with the generative-constructivist approach to event structure modeled by Ramchand (2008) and Travis (2010). Using the findings from both a pilot and more extended acceptability study, I propose that a comprehensive syntactic and semantic analysis of AAE can include functional and lexical information that is explicitly embedded in the event structure of an AAE sentence.

I set out to investigate the hypothesis that there is more to the story of *BIN* than what we have at this point, and a possible future approach to AAE tense and aspect can include event structure in a formal way. I hypothesized that *BIN* is sensitive to and carries syntactic information about the event structure that it dominates, and that certain syntactic criteria must be met within that event structure for a derivation with *BIN* to be acceptable in AAE. The findings from my studies provide evidence for the possibility that *BIN* functions as an operator which binds the event variable as well as a creator of predicate times related to that event.

Limitations & Future Directions

Some of the limitations on this study are present in all experimental syntax studies, while others I believe are specific to studies on marginalized varieties and on AAE specifically. First, even though acceptability studies that use Likert scales have been shown to be reliable and stable measures (Langsford, Perfors, Hendrickson, Kennedy, & Navarro, 2018), acceptability judgment studies run into similar problems that other quantitative grammatical studies do: metalinguistics,

frequency, context, coercion, etc. For example, in corpus studies, a conclusion that can be drawn about a structure that shows up very infrequently is that it is less acceptable than other ones like it, but it is also possible that the structure is simply that: infrequent. When informants are making judgments, they may be influenced by the frequency of the structure itself or the frequency of the lexical items used in the sentence. The inclusion of many informants mitigates this effect, of course, but it is always possible that those factors come into play. In the future, my studies will likely include an acceptability judgment task like this one, but another qualitative layer might prove to be useful. As I discussed above, it would have been nice to be in the room with the informants, and a second layer of more interview-style data may provide more insight into why people make the acceptability judgments that they do. Data collection of that type, with in person responses and interview questions, I believe, would gather very useful information that might get lost in an online survey. Although my study didn't highlight the effects of language attitude on acceptability, it was inevitable that attitude would play a part in participants' responses about such a stigmatized dialect. With a remote survey, it is difficult to know how much these attitudes affected responses, but an in person interview or survey would allow for more insight into the various sociological factors that come into play when speakers are giving their acceptability ratings.

Additionally, with respect to AAE, there are different sources of variability that were not taken into account in this study. For example, there are individual and regional variations that may prove to be impactful in future studies of AAE tense and aspect that were not discussed here. Wolfram (2007) argues that the belief that AAE is a homogenous entity with minimal regional and individual variation has brought about some myths or overgeneralizations about the variety which do not accurately reflect the way it is used. In the future, I plan on focusing data collection in one

region and potentially getting more than one judgment at different points in time from informants to see what variability might exist in this syntactic phenomenon. Ultimately, this project has served as a springboard for future studies into the study of AAE syntax using an approach that I will continue to fine tune in the future.

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APPENDIX

Qualtrics Survey Items

Item No (List X).	Speaker A	Speaker B
1	I thought I saw Jason on the track just now?	Oh yeah, he BIN running around that track
2	Did Melissa leave already?	Yeah, she BIN driving back up to New York
3	Did she just start looking at that article I gave her?	She BIN readin that article
4	I could have sworn there was a nice mural on this wall here	They BIN painting over that mural.
5	Have they been playin outside a long time?	They BIN throwin that ball around
6	Are those apartments new? I ain't never seen them before	Oh no, they BIN built those
7	I thought Jimmy worked at Amazon, don't he like it there?	Jimmy BIN left that job at Amazon.
8	Hm. I haven't seen Mira and Shay here yet, have you?	Oh yeah, they BIN arrived
9	I ain't know Jade was gonna apply to law school	Oh yeah, she BIN wanted to be a lawyer
10	Did you hear? My cousin got engaged, but her fiance live all the way out in Texas	We BIN knowin she was gonna move out there with him
11	Are those new earrings that Lisa's wearing? They're nice	No, she BIN having those earrings
12	Have you hear him talk about all that conspiracy theory "flat earth" stuff?	He BIN believing all that crazy stuff
13	Can we eat some of that ice cream now? It's hot.	That ice cream BIN melted in this heat
14	What happened to that beautiful vase from Greece?	That vase BIN breakin.
15	Your flowers look like they really need to be watered soon.	Don't worry, those flowers BIN died.
16	Did you ever put those popsicles in the freezer?	Uh huh, those popsicles BIN freezin

17	Oh, do you know Cierra?	Uh huh. She my sister.
18	You got any plans for the future?	I'm finna buy a house in 10 years
19	Do you remember what dress she wore to that party?	Yeah, she having that yellow dress
20	Why you don't have nothin in your pantry?	They den ate all my snacks!
21	Dora don't never come up with new ideas for her Halloween costumes	Right, she always be Wonder Woman for Halloween.
22	I don't know where J is, do you?	Oh, he be finna running home.
23	What do they usually do for fun on weeknights after work?	Roger be playin the game, and actually Becky do be too
Item No (List Y)	Speaker A	Speaker B
1	Did Melissa leave already?	Yeah, she BIN drove back up to New York
2	I thought I saw Jason on the track just now?	Oh yeah, he BIN ran around that track
3	Did she just start looking at that article I gave her?	She BIN read that article
4	I could have sworn there was a nice mural on this wall here	They BIN painted over that mural.
5	Are those apartments new? I ain't never seen them before	Oh no, they BIN building those
6	I thought Jimmy worked at Amazon, don't he like it there?	Jimmy BIN leaving that job at Amazon.
7	Have they been playin outside a long time?	They BIN threw that ball around
8	Hm. I haven't seen Mira and Shay here yet, have you?	Oh yeah, they BIN arriving
9	I ain't know Jade was gonna apply to law school	Oh yeah, she BIN wanting to be a lawyer
10	Have you hear him talk about all that conspiracy theory "flat earth" stuff?	He BIN believed all that crazy stuff
11	Did you hear? My cousin got engaged, but her fiance live all the way out in Texas	We BIN knew she was gonna move out there with him
12	Are those new earrings that Lisa's wearing? They're nice	No, she BIN had those earrings
13	Your flowers look like they really need to be watered soon.	Don't worry, those flowers BIN dying.

14	What happened to that beautiful vase from Greece?	That vase BIN broke.
15	Can we eat some of that ice cream now? It's hot.	That ice cream BIN melting in this heat
16	Did you ever put those popsicles in the freezer?	Uh huh, those popsicles BIN froze
17	Oh, do you know Cierra?	Uh huh. She my sister.
18	You got any plans for the future?	I'm finna buy a house in 10 years
19	Do you remember what dress she wore to that party?	Yeah, she having that yellow dress
20	Why you don't have nothin in your pantry?	They den ate all my snacks!
21	Dora don't never come up with new ideas for her Halloween costumes	Right, she always be Wonder Woman for Halloween.
22	I don't know where J is, do you?	Oh, he be finna running home.
23	What do they usually do for fun on weeknights after work?	Roger be playin the game, and actually Becky do be too