Exploring Temporal and Aspectual Reference in Anii
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1. Introduction and Research Question
Anii is an undocumented Niger-Congo (probably Kwa) language spoken by approximately 45,900 people on the border between Togo and Benin in West Africa (Lewis 2009). The data analyzed in this talk is from the Bassila dialect of Anii, gathered during fieldwork in Bassila, Benin in Autumn 2009.

Examine the English sentence in (1):

(1) Context: what were you doing yesterday when I saw you?
   I was going to the market.

Speakers of English know that this utterance has past time reference (the time interval the utterance is about, i.e. the reference time, is before the time of utterance) because the past tense form of the verb is used ('was'). Additionally, they know that the sentence has progressive aspectual reference (the reference time is included in the time interval of the eventuality in the utterance, i.e. the event time) due to the -ing added to the end of the verb 'go'. (Klein 1994, Reichenbach 1947, Hinrichs 1986)

In contrast to English, many clauses in Anii are not overtly marked for tense or aspect, and yet have specific temporal and aspectual reference. These types of clauses will be referred to here as “unmarked clauses”. An example is given in (2):

(2) Context: what did you do yesterday?
    n   tsı  güya            n
     I   go   cl.E.market to/in'
    I went to the market.

Note that there is no marking on the verb, but this clause can only have past temporal reference and perfective aspectual reference (the event time is included in the reference time), as will be demonstrated below. One question to be addressed in this talk, then, is what are the possible temporal and aspectual interpretations of unmarked clauses in Anii, and what temporal and aspectual markers are available in contexts where unmarked clauses are inappropriate.

Additionally, unmarked clauses in Anii where the verb in the clause is stative (Dowty 1986) have different available interpretations from unmarked clauses where the verb in the clause is eventive (either telic or atelic, including Dowty's (1986) activities and accomplishments/achievements), and this difference is due to dynamicity, as will be further explored in section 2.

As mentioned above, unmarked eventive clauses in Anii have perfective aspectual reference. Section 3 of this talk explores imperfective aspectual reference. In many languages, the progressive and the habitual are marked with a single marker, an aspectual reference which has been referred to as imperfective (Dahl 1985). This is a common cross-linguistic category (e.g. Hindi (Deo 2009), Georgian (Comrie 1976), Bambara (Tröbs 2004) and Arabic (Ryding 2005), etc.). This paper will also present data regarding

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1 Abbreviations used in the glosses: AGR = Agreement (based on noun class), cl = Noun Class (Anii noun classes are identified by letter), FUT = Future, IMPF = Imperfective
imperfective aspectual reference in Anii, where dynamicity also affects interpretation. A fuller analysis of the connection between progressive and habitual has been provided by Deo (2009), and her analysis will be discussed with relation to the Anii data in the analysis in section 4.

2. Unmarked Clauses in Anii
We can now return to the Anii data regarding the interpretation of unmarked clauses. It is important to note that the interpretation of these clauses depends on whether the verb in the clause is an event or a state (Dowty 1986).

2.1 Unmarked clauses with eventive verbs
We can now return to the sentence given in (2) (repeated below):

(2) Context: what did you do yesterday?
    n ts ɨ gʊya nɩ
    I go ci.E.market to/in
    I went to the market.

The unmarked clause in this utterance has past time reference and perfective aspectual reference. That is, the event of going to the market is interpreted as being included in the reference time.

An utterance of that sentence is not felicitous if the context requires progressive interpretation, with past time reference as in (3a), with present time reference, as in (3b), or with future time reference, as in (3c):

(3)  a. Context: what were you doing yesterday when I called?
    #n ts ɨ gʊya nɩ
    I go market to/in
    Intended interpretation: I was going to the market

    b. Context: what are you doing right now?
    #n ts ɨ gʊya nɩ
    I go market to/in
    Intended interpretation: I am going to the market

    c. Context: what will you be doing tomorrow at noon?
    #n ts ɨ gʊya nɩ
    I go market to/in
    Intended interpretation: I will be going to the market

In addition, the utterance in (4) is infelicitous with habitual aspectual reference:

(4) Context: what do you do on Monday mornings?
    #n ts ɨ gʊya nɩ
    I go market to/in
    Intended interpretation: I go to the market.

From examples (3) and (4), then, we see that an unmarked eventive utterance cannot be imperfective, and cannot have present time reference.
In addition, the utterance in (5), with future time reference, is infelicitous:

(5) Context: what will you do tomorrow?
   #n tsi guya n1  
   I go market to/in
   Intended interpretation: I will go to the market.

'Going to the market' is an accomplishment (cf. Dowty 1986), in that it is an event that has an endpoint (and the clause containing this verb phrase cannot be considered to be true at any point before that endpoint, i.e. before arrival at the market). These types of verbs are also referred to as telic.

There is another kind of clause discussed in Dowty (1986). These clauses are still true at subintervals of the event time, down to a certain size, but not at smaller intervals (atelic verbs). An example is in (6) below:

(6) Context: what did you do yesterday?
   n tør
   I read
   I read

The utterance in (6), like that in (2), is only felicitous with past time reference (not present or future), and perfective aspectual reference (it cannot be interpreted as progressive or habitual):

(7) a. Context: what were you doing yesterday when I called?
   #n tør
   I read
   Intended interpretation: I was reading.

b. Context: what are you doing right now?
   #n tør
   I read
   Intended interpretation: I am reading.

c. Context: what will you be doing tomorrow at noon?
   #n tør
   I read
   Intended interpretation: I will be reading.

d. Context: what do you do on Monday mornings?
   #n tør
   I read
   Intended interpretation: I read.

e. Context: what will you do tomorrow?
   #n tør
   I read
   Intended interpretation: I will read.

Thus, it is clear that an unmarked eventive utterance in Anii, either telic or atelic, must have perfective aspectual reference and past time reference.
2.2 Unmarked clauses with stative verbs
A stative verb describes a continuous state of affairs (Dowty 1986). For example, in the English sentence in (8), the state of having is understood to be on-going:

(8) Context: what kind of pet do you have right now?
    I have a baboon.

Unmarked clauses in Anii that contain a stative verb have a bigger set of possible interpretations than unmarked clauses containing event verbs. For example, see (9):

(9) Context: what kind of pet do you have right now?
    n wùda ato
    I have cl.A.baboon
    I have a baboon

The reference time for (9), as shown by the context, is the utterance time (present time reference). In addition, because of the nature of stative verbs, the reference time in (9) is included in the event time, indicating imperfective aspectual reference.

The sentence in (9) is also felicitous with past time reference:

(10) Context: what kind of pet did you have when you were a child?
    n wùda ato
    I have baboon
    I had a baboon

In (10), the reference time precedes the utterance time, giving past time reference. Future time reference, however, is still not possible for this sentence:

(11) Context: what kind of pet will you have next year?
    #n wùda ato
    I have baboon
    Intended interpretation: I will have a baboon

Thus, unmarked clauses in Anii that contain stative verbs are interpreted with past or present time reference and imperfective aspectual reference.

2.3 Summary
The evidence presented here shows that in Anii, temporal interpretation and aspectual interpretation of verb clauses unmarked for tense or aspect is to some degree dependant on the context. However, the set of possible interpretations for these clauses is limited. A summary of possible interpretations of Anii unmarked clauses is given in Table 1 below:
3.0 The marker /tɩ/

Given Table 1 above, the natural question is, how are the interpretations not possible with unmarked verbs expressed? A partial answer to that question lies with the aspect marker /tɩ/ (which is pronounced as [ti] in front of certain verbs due to vowel harmony). This marker is inserted after the subject (and after noun-class agreement marking, where applicable), but before the verb. Possible interpretations for clauses marked with /tɩ/ are illustrated in this section.

3.1 /tɩ/-marked clauses with eventive verbs

One case of the use of /tɩ/ in is given in (12) below:

(12) Context: what are you doing right now?
  n ti tsi gʊya nɩ
  I IMPF go market to/in
  I am going to the market

The /tɩ/ here is glossed as imperfective, since clauses marked with /tɩ/ can have either progressive or habitual interpretation, depending on context, as will be demonstrated. From the context in (12), the reference time is 'right now', i.e. the time of utterance, and the event time is the time covered by the act of going to the market. It is clear, then, that the reference time is completely included in the event time. This is a present progressive interpretation of the sentence, indicating on-going action. It should be noted that the same sentence is felicitous in a past context, when the reference time precedes the utterance time, but the reference time is still included in the event time:

(13) Context: what were you doing yesterday when I called?
    n ti tsi gʊya nɩ
    I IMPF go market to/in
    I was going to the market

The sentence in (13) is not felicitous in a perfective context (where the event time is included in the reference time):

(14) Context: what did you do yesterday?
    # n ti tsi gʊya nɩ
    I IMPF go market to/in
    Intended interpretation: I went to the market.

It is also not felicitous with future time reference:
(15) a. Context: what will you do tomorrow?
    # n ti  tsi goya n
    \textit{I IMPF go market to/in}
    Intended interpretation: I will go to the market.

    b. Context: what will you be doing tomorrow when I arrive?
    # n ti  tsi goya n
    \textit{I IMPF go market to/in}
    Intended interpretation: I will be going to the market.

Crucially, the marker /tɩ/ is used in cases of habitual action, as well as progressive:

(16) Context: what do you do on Wednesday afternoons?
    n ti  tsi goya n
    \textit{I IMPF go market to/in}
    I go to the market.

Another example showing that /tɩ/ adds either progressive or habitual meaning (i.e. is an imperfective marker) is given in (17):

(17) a. Context: What does your brother do for a living?
    amuŋono a ti lee ntɔma biro n
    \textit{my.older.brother AGR.CL.A IMPF do work office in}
    My older brother works in an office.

    b. Context: What is your brother doing right now?
    amuŋono a ti lee ntɔma biro n
    \textit{my.older.brother AGR.CL.A IMPF do work office in}
    My older brother is working in an (or the) office.

It is clear, then, that in different contexts the /tɩ/ marker combined with a telic eventive verb can indicate either progressive or habitual action, meaning that it is an imperfective marker. It can also have past or present time reference depending on context. The same interpretations are possible with an atelic eventive verb such as 'read':

(18) a. Context: what are you doing right now?
    n ti  tor
    \textit{I IMPF read}
    I am reading

    b. Context: what were you doing yesterday when I called?
    n ti  tor
    \textit{I IMPF read}
    I was reading

    c. Context: what do you do on Wednesday afternoons?
    n ti  tor
    \textit{I IMPF read}
    I read ([i'd]).
Again, as with telic verbs, the marker /tu/ is infelicitous with past perfective and future time reference:

(19) a. Context: what did you do yesterday?
    #n ti tur
    I IMPF read
    Intended interpretation: I read (\[red\]).

b. Context: what will you do tomorrow?
    #n ti tur
    I IMPF read
    Intended interpretation: I will read.

c. Context: what will you be doing tomorrow when I arrive?
    #n ti tur
    I IMPF read
    Intended interpretation: I will be reading.

3.2 /tu/-marked clauses with stative verbs

Stative verbs are, by nature, incompatible with progressive interpretation (cf. Klein 1994). When used with stative verbs, then, the only possible reading for /tu/ as an imperfective marker is habitual:

(20) Context: how do snakes reproduce?
    ibu ba ti wuda asəla
    CL.W.snakes AGR.CL.W IMPF have CL.T.eggs
    Snakes have (lay) eggs.

The idea here is that normally snakes lay eggs. Without the /tu/, the sentence refers to particular snakes that have eggs:

(21) Context: What is special about the snakes in the garden?
    ibu ba wuda asəla
    CL.W.snakes AGR.CL.W have CL.T.eggs
    The snakes have eggs.

In (21), it is a one-time or rare event that the snakes have eggs, rather than something that happens all the time as a normal behavior of snakes. The opposite readings are not possible, i.e. the sentence with /tu/ cannot express on-going meaning, while the unmarked sentence cannot express habituality:

(22) a. Context: What is special about the snakes in the garden?
    # ibu ba ti wuda asəla
    CL.W.snakes AGR.CL.W IMPF have CL.T.eggs
    Intended interpretation: The snakes have eggs.

b. Context: how do snakes reproduce?
    # ibu ba wuda asəla
    CL.W.snakes AGR.CL.W have CL.T.eggs
    Intended interpretation: Snakes (normally) have (lay) eggs.
There are similar interpretations with singular subjects:

(23)   Context: what are the characteristics of this snake?
   ubu   a   ti   wəda   asəla
   CL.A.snakes  AGR.CL.A   IMPF   have   CL.T.eggs
   The snake (usually) has eggs.

The interpretation for (23) is that a particular snake generally has eggs (as opposed to a snake that does not generally have eggs). When /tɩ/ is not used, the interpretation is as was discussed for unmarked stative verbs in section 3.2, simply that a certain snake happens to currently have eggs, or to have had eggs in the past, but it cannot be considered a normal habit for that snake to have eggs. Example (24) illustrates:

(24)   Context: Why is the snake in her hole?
   ubu   a   wəda   asəla
   CL.A.snakes  AGR.CL.A   have   CL.T.eggs
   The snake has eggs

What is happening here seems to be an overlap of lexical meaning and aspectual marking. That is, when an imperfective marker is added to a verb that cannot have a progressive interpretation because of its lexical content (because it already expresses an on-going state), only the habitual reading is possible.

In a past context, /tɩ/ cannot be used with stative verbs (further marking is necessary):

(25)   Context: What was special about the snakes in the garden?
   # ibu   ba   ti   wəda   asəla
   CL.W.snakes  AGR.W   IMPF   have   CL.T.eggs
   Intended interpretation: The snakes had eggs.

Thus, clauses marked with /tɩ/ and containing stative verbs must have present temporal reference and habitual aspectual reference.

3.3 Summary

From the evidence presented in this section, it is clear that the marker /tɩ/ is an imperfective marker in Bassila Anii, expressing both progressive and habitual meaning. To complete the paradigm as discussed thus far, I note that there is also a future marker whose underlying form is /tə/, which is required in all clauses with future temporal reference, and cannot be used with past or present temporal reference:

(26)   a. Context: what will you do tomorrow?
   n tə   ma   tsi   gəya   n
   I   FUT   go  market  to/in
   I will go to the market

   b. Context: what did you do yesterday?
   #n tə   ma   tsi   gəya   n
   I   FUT   go  market  to/in
   Intended interpretation: I went to the market
c. Context: what are you doing right now?

\[ n \text{ tə }\text{ ma tsı goya }\text{ nı} \]
\[ I \text{ fut } I \text{ go market to/in} \]

Intended interpretation: I will go to the market

A summary of the aspectual interpretation for unmarked clauses and select aspectual markers in Anii is given below in Table 2:

<table>
<thead>
<tr>
<th>Temporal Reference</th>
<th>Aspectual Reference</th>
<th>Eventive Verbs</th>
<th>Stative Verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past</td>
<td>Perfective</td>
<td>unmarked</td>
<td>n.a.</td>
</tr>
<tr>
<td></td>
<td>Imperfective</td>
<td>/tu/</td>
<td>unmarked</td>
</tr>
<tr>
<td>Present</td>
<td>Imperfective</td>
<td>/tu/</td>
<td>/tu/ (habitual only)</td>
</tr>
<tr>
<td>Future</td>
<td></td>
<td>/tə/</td>
<td>/tə/</td>
</tr>
</tbody>
</table>

Table 2: A summary of the most common aspect markers in Bassila Anii and their interpretations

4.0 Analysis

The goal of the formal analysis presented here is to capture the empirical generalizations in Table 2, specifically that the important contrast in the temporal paradigm is between future and non-future, and the important contrast in the aspectual paradigm is between perfective and imperfective.

Therefore, we assume (for the sake of a clear analysis) a null non-future marker in the temporal paradigm (contrasting with the future marker /tə/), and a null perfective marker in the aspectual paradigm (contrasting with /tu/, the imperfective marker), for both eventive and stative clauses. The difference in interpretation between the two types of clauses is assumed to lie in the lexical properties of stative verbs themselves.

This analysis is in the framework of Montague semantics (Dowty, Wall and Peters 1981), using higher-order predicate logic. The logical types used here are: \( i \) for time intervals and \( t \) for truth values.

I assume that the meaning of utterances is composed in the order in (27):

(27) \( \text{Tense, (Aspect} \langle i, <L, D> \rangle \text{ (sentence radical} \langle L, D \rangle \rangle) \)

To demonstrate this, I start with a simple sentence such as \( n \text{ tor}; \) 'I read ([red]).' The meaning of the concept of the speaker reading is given in (28), where \( e \) is a variable ranging over events, and \( sp \) is a contextually-determined variable denoting the speaker of the utterance. Note that this predicate is assumed to be of type \( <i, t> \) because I assume that some aspectual information is part of the meaning of Anii verbs (at least stative verbs) before they are aspectually marked. This assumption provides a plausible explanation for the difference in interpretation between stative and eventive clauses in Anii with the same aspectual marking. The meaning of the sentence radical \( n \text{ tor} \) is below:

(28) \[ [[n \text{ tor}]] : \lambda i[\exists e \text{ (read' (e, sp))} \wedge \tau(e) = i]_{<L, D>} \]

Thus, \( n \text{ tor} \) denotes a function from intervals \( (i) \) to truth values such that there is an event \( e \) of the speaker reading and the event time of \( e \) \( (\tau(e)) \) is \( i. \)
Since the sentence n tør is not marked for aspect, it is assumed to be marked with the phonologically null perfective aspect marker PERF, defined below. Aspect is assumed to be of type \( \langle \langle i, t \rangle, \langle i, t \rangle \rangle \):

\[
(29) \quad [[\text{PERF}_{\langle \langle i, t \rangle, \langle i, t \rangle \rangle}]]: \lambda P_{\langle \langle i, t \rangle, \langle i, t \rangle \rangle} \lambda i \exists j \left[ P(j) \wedge j \subset i \right]
\]

PERF, then, causes the event time of an event to be included in a certain contextually-determined time \( i \). That time is further specified by tense marking. Since this clause is not marked with the future marker /tə/, we assume the presence of the phonologically null non-future marker, which is defined with reference to a context-dependent variable assignment function \( g(i) \). This morpheme, which is labelled NONFUT, is defined in (30) (following Matthewson 2006), where \( t_u \) is the utterance time:

\[
(30) \quad [[\text{NONFUT}]]^{M_{g}}: \quad [[i]]^{M_{g}}\quad \text{only defined if } g(i) \leq t_u
\]

The assignment function will always assign the reference interval to be before or equal to the utterance time. Thus, the meaning of the sentence n tør, marked with phonologically null tense and aspect marking, is derived as in (31):

\[
(31) \quad \begin{array}{c}
\emptyset_1 \\
\text{PERF} (\lambda P_{\langle \langle i, t \rangle, \langle i, t \rangle \rangle} \lambda i \exists j \left[ P(j) \wedge j \subset i \right]) \\
\langle \langle i, t \rangle, \langle i, t \rangle \rangle
\end{array} \quad n \text{ tør} \quad \begin{array}{c}
\emptyset_2 \\
\text{NONFUT} \\
i
\end{array} \quad \lambda i \exists j \left[ \exists s (\text{have.baboon} (s, sp)) \wedge \tau(e) = j \wedge j \subset i \right]
\]

\[
(31) \quad \begin{array}{c}
\emptyset_1 \\
\text{PERF} (\lambda P_{\langle \langle i, t \rangle, \langle i, t \rangle \rangle} \lambda i \exists j \left[ P(j) \wedge j \subset i \right]) \\
\langle \langle i, t \rangle, \langle i, t \rangle \rangle
\end{array} \quad n \text{ tør} \quad \lambda i \exists j \left[ \exists s (\text{have.baboon} (s, sp)) \wedge \tau(e) = j \wedge j \subset i \right]
\]

\[
(31) \quad \begin{array}{c}
\emptyset_1 \\
\text{PERF} (\lambda P_{\langle \langle i, t \rangle, \langle i, t \rangle \rangle} \lambda i \exists j \left[ P(j) \wedge j \subset i \right]) \\
\langle \langle i, t \rangle, \langle i, t \rangle \rangle
\end{array} \quad n \text{ tør} \quad \lambda i \exists j \left[ \exists s (\text{have.baboon} (s, sp)) \wedge \tau(e) = j \wedge j \subset i \right]
\]

Thus, there is an interval \( j \) (the event time) such that there is an event of the speaker reading whose reference time \( i \) includes the event time, and the reference time is before or equal to now. The possibility of \( t_u = \text{now} \) is precluded by the fact that \( j \subset i \) and the fact that the utterance time is too short of an interval to allow full realization of an event included in it.

An analysis of the stative sentence n wöda ato (‘I had/have a baboon’) is similar except that it is assumed that PERF is conceptually (although not technically) incompatible with stative verbs, which already have an imperfective meaning. The meaning of the stative sentence radical is assumed to be:

\[
(32) \quad [[n \text{ wöda ato}]]: \lambda i \exists j \left[ \exists s (\text{have.baboon} (s, sp)) \wedge \tau(s) = j \wedge j \supseteq i \right]_{\langle \langle i, t \rangle, \langle i, t \rangle \rangle}
\]

That is, n wöda ato denotes a function from intervals \( i \) to truth values such that there is an interval \( j \) and a state \( s \) such that the speaker has a baboon at \( s \) and the event time of \( s \) is \( j \) and \( j \) is a superinterval of \( i \).

NONFUT still combines with the clause in the same manner it did with the eventive clause in (31):
Since $j \supseteq i$ in (33), there is no restriction on the temporal reference and stative clauses like this one can be interpreted with past or present temporal interpretation, depending on context. However, it is not clear how the translation here would express repeated actions (habitual interpretation), since there is only one interval $i$ and one interval $j$. The interpretation of a clause like this, then, is limited to progressive interpretation.

The imperfective marker, /tu/, expresses both imperfective and progressive meaning. Such markers are quite common cross-linguistically, as mentioned in the introduction, and I turn to Deo (2009) to explain how these two different meanings are combined within the meaning of one marker. She analyzes an imperfective marker as a universal quantifier whose domain is a regular partition of a future-extending interval, with the size of the partition cells being dependent on context.

The claim is that the contextually-given size of the partitions is what gives either progressive or habitual meaning to a clause. In progressive or stative clauses (on-going action), the domain of the quantifier is the reference interval, while in habitual clauses, it is a superinterval of the reference interval. For example, I take (17) above, repeated here:

(17) a. Context: What does your brother do for a living?

\[
\text{amunjono a ti lee n\text{oma} biro n} \\
\text{my\text{.older\text{.brother} AGR.CL.A IMPF do work office in}} \\
\text{My older brother works in an office (habitual).}
\]

b. Context: What is your brother doing right now?

\[
\text{amunjono a ti lee n\text{oma} biro n} \\
\text{my\text{.older\text{.brother} AGR.CL.A IMPF do work office in}} \\
\text{My older brother is working in an office (progressive).}
\]

In (17a), the speaker's brother regularly works in an office, regularly enough to make a living (as given in context), which could mean maybe once a day. Thus, there is one event of working in an office for every interval long enough to permit the brother to make a living, perhaps one event of the brother working per day.

In (17b), there is still one event of the brother working for each relevant partition, but here the partitions are of the reference interval (denoted by the Anii phrase meaning 'right now', as given in context). This is a very small interval, thus the partitions are extremely small as well, leading to an interpretation of continuous action, since there is an event of working for each very small time interval.

The formalization of Deo's (2009) proposal would take too long to discuss here, but informally her theory can explain the facts of Anii if the meaning of /tu/ is assumed to be her imperfective marker.
Firstly, the sentence *n ti ṭor*,'I am reading/I read ([rid])' would have the possibility for both progressive and habitual interpretation, as demonstrated in (18) above. Additionally, with a stative sentence, the same two possibilities would in theory be possible.

In the case of stative sentences marked with */tu/*, however, only the habitual reading is possible. Dowty's Gricean Blocking Principle (used in Deo's (2009) work to explain data from languages which mark both the imperfective and the progressive) comes into play here to explain the difference in meaning between the sentences *n weśda a[to* (meaning 'I (currently) have a baboon', not a habitual state of affairs) and *n ti weśda a[to* (meaning 'I (normally) have a baboon', a habitual state of affairs). This principle (as quoted in Deo 2009) is as follows:

(58) **A Neo-Gricean conversational principle:** If a language has two (equally simple) types of syntactic structures A and B, such that A is ambiguous between meanings X and Y while B has only meaning A, speakers of the language should reserve structure A for communicating meaning Y (since B would have been available for communicating X unambiguously and would have been chosen if X is what was intended (Dowty 1979, 32)

In the case of Anii, this principle is clearly being applied even though the structures are not precisely of equal simplicity. A would be stative clauses marked with the imperfective marker */tu/*, which can be both progressive and habitual, and B would be unmarked stative clauses, which communicate only that the state in question is on-going, but not habituality. Hence, the state of affairs described in this talk where */ti/-marked stative clauses express habituality while unmarked stative clauses simply express the on-going nature of the state in the clause, can be straightforwardly derived from this principle.

### 6.0 Conclusions

From this analysis of the temporal and aspectual system of Anii, several conclusions can be drawn. First, it is clear that the temporal and aspectual interpretation of clauses in Anii is dependent on context and also on the lexical meaning of the verb in the clause (whether it is eventive or stative), and a method for formalizing this, including the intuition that stative verbs are inherently imperfective, has been proposed.

*This fact about statives has been noted for many other languages (e.g. Bittner 2008, Bohnemeyer and Swift 2004).

*Anii appears to be what Bohnemeyer and Swift (2004) call a “dynamicity-dependent” system, like English and Ewe. That is, the dynamicity of a verb affects the aspectual interpretation of unmarked clauses, but the telicity of the verb does not affect that interpretation.

*However, Bohnemeyer and Swift (2004, 277) suggest that such a system may be unlikely to have a true imperfective marker as Anii does, so Anii provides counter-evidence to that assumption.

Secondly, it appears that Anii is certainly an aspect-heavy language (aspect plays a more prominent role in the verbal system than tense does), and may even be tenseless, though if that is the case the analysis given here would have to be significantly changed.

*Tenselessness has been proposed for many languages around the world (e.g. West Greenlandic (Kalaalisut) (Shaer 2003, Bittner 2005), Chinese (Lin 2005) and Paraguayan Guarani (Tonhauser 2006)).

*The claim of tenselessness has thus far been made about another Kwa language spoken in Togo (Ewe, Ameaka 2008), after reanalysis of several morphemes previously analyzed as tense morphemes.

*Several Kwa languages that have not been analyzed as fully tenseless have been shown to be aspect-dominant (e.g. Tuwuli (Harley 2008), Foodo (Plunkett 2009) and Akan (Boadi 2008)).
*Additionally, where tense does play a role in Kwa languages, the most important distinction has been future versus non-future, as in Anii (cf. Harley 2008 for Tuwuli and Aboh 1998 for the Gbe languages)

Finally, the fact that unmarked verbs in Anii have been shown to have perfective interpretation with eventive verbs and imperfective interpretation with stative verbs provides a standard of comparison for other West African languages that may act similarly, but where the aspectual interpretations of the verbal system have not yet been described clearly (cf. Casali 1995 (Nawuri), and Nurse, Hewson and Rose 2010 (Obolo, Yoruba, Ejagham, Doyayo, Godié and Kisi)).

*This may be a common feature in the region, which would be important, if true, from a typological point of view. (cf. Winford and Migge (2007))

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